Research article

Predictors of health preventive behavior among university students in the post-COVID-19 era in Wuhan via TikTok journeying

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A B S T R A C T

TikTok has become increasingly popular among young people in China and there is growing number of young people who start to pay great attention to their health through this platform. Wuhan is a significant location for this study, since it was the initial epicenter of COVID-19. However, little is known about the extent to which university students in Wuhan, China, rely on TikTok for health-related information and how this affects their preventive health actions in the post-COVID-19 era. Therefore, it is crucial to look into the direct effects of TikTok users' search for health information and their actions to protect their health, as well as the mediating functions of e-health literacy and COVID-19 risk perception. The impact of TikTok as a social media platform on the health-related behaviors of university students was examined using the Media Dependency Theory which explains how media use can have significant effects on individuals' attitudes, beliefs, and behaviors. 426 questionnaires were gathered by cluster sampling from a sample of Wuhan university students. Mplus8 was used to perform structural equation modelling, which looked at the relationships between these variables. The results showed a positive correlation between users' TikTok health information seeking and their health preventive behavior ($\beta = 0.303$, $p < 0.001$). Furthermore, it was discovered that this relationship is mediated by e-health literacy and COVID-19 risk perception in series ($\beta = 0.029$, $p < 0.001$). The findings demonstrate how TikTok functions as a platform that supports university students' efforts to protect their health. The results also imply that students' post-COVID-19 preventive measures for health in search of health information on TikTok are significantly influenced by their e-health literacy as well as their perception of COVID-19 danger. By obtaining more accurate health-related information, university students are equipped with more health skills and have correct attitude towards the disease. In summary, these results advance the knowledge of how TikTok, a social media platform, affects the health-related behaviors of university students.

1. Introduction

TikTok stands out among the short video apps in terms of its number of users and their time spent on this platform. Unexpectedly, over 30.4 billion visits were made to TikTok in China in August 2021 across all streams [1]. Furthermore, prior studies have demonstrated that an increasing number of young adults are depending on new media, including TikTok, for communication,

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entertainment, and educational purposes. More recently, they frequently use it to obtain knowledge [2] and health information [3]. Research has shown that young adults are more prone than any other group to ask questions about their physical and mental health on the Internet. Over the last few years, a significant portion of young adults have been involved in this type of health information-seeking behavior. This is due to the fact that they usually use social media sites and user-generated content to get the support and guidance [4].

After the COVID-19 epidemic had devastated the majority of nations worldwide [5,6], people started paying more attention to post-COVID-19 preventive measures for health, and to improve their health, a number of steps have been taken, including their online health information-seeking activity [7]. However, in the wake of COVID-19, many people lack sufficient knowledge on healthy behaviors, which might cause fear and panic due to the COVID-19 information overload [8]. TikTok is still considered a reliable source of health information even after the COVID-19 epidemic [9]. In order to safeguard themselves, many people are dependent on TikTok to look for health-related COVID-19 information [10]. Social media users often turn to online support for mental health services and have been found to have an increased quality of life and overall better outcomes. However, generally speaking, there is a lack of academic research on post-COVID-19 health-protective behavior, while limited existing studies are mostly on the basis of western countries and have explored health-protective behavior among other group of people [11]. In order to fill in these research gaps, this study examines the connections between Wuhan university students' searching for health information, digital health literacy, their actions to protect their health, and COVID-19 risk perception on the basis of Media Dependency Theory.

2. Literature review

2.1. TikTok users' behavior of health information-seeking and health prevention

The term of health information-seeking behavior describes how a person looks for information on diseases, hazards, and preventive measures for their health [12] while preventive health behavior refers to any effort conducted by an individual who feels himself to be well for the intention of preventing or detecting sickness [13]. According to earlier studies, social media use has improved the exchange of health information in society, which supports individuals' health precautions against the pandemic [14] and educates the public [15]. Moreover, social media platforms enable users to search for and locate readily available related information, which is becoming an essential source of information [16].

Recently, due to its convenience, more and more people began to utilize social media channels to communicate and exchange health information [17]. It is noteworthy that social media platforms enable people instantly and in real-time to communicate information connected to diseases. Therefore, it is now widely admitted that social media has a major impact on influencing people's attitudes toward adopting COVID-19 preventive measures [18]. Individuals tend to take preventive measures especially when they find health related information on the social media platform which informs them how to protect themselves from the disease [19]. Furthermore, it can be seen there are many ways adopted by individuals to protect their health. In order to stop the transmission of COVID-19, they often wash hands with soap and water, cover mouth and nose when they cough or sneeze, avoid touching their nose, mouth, or eyes, use face masks, avoid close contact with others, and have adequate ventilation [20]. Therefore, it is anticipated that use of social media for seeking health information on TikTok will have a favorable impact on people's behavior that protects their health. As a result, the following hypothesis is put forth.

H1. TikTok users' behavior of health information seeking favorably influences their health protective behavior.

2.2. E-health literacy

According to Nutbeam (2008), health literacy is the capacity and knowledge of an individual locate, understand, and evaluate resources about health as well as the willingness to seek out the necessary information to make decisions about one's health that will improve it and fend off diseases [21]. This kind of context-specific health literacy refers to searching the Internet for health-related information and applying that information to make decisions on one's health [22]. Increased health information-seeking behavior and more frequent usage of social media demonstrate that users of social media can search for health-related information, demonstrating a greater level of e-health literacy [23]. Additionally, people tend to adopt preventive measures when they learn that COVID-19 causes a range of bodily symptoms, from minor to severe [24].

Hsu, Chiang, and Yang (2014) have also noted that their prior research has emphasized the mediating function of e-health literacy in the correlation between personal variables and health-related behaviors [25]. Specifically, college students who possess a higher level of critical e-health literacy also practice many beneficial health behaviors, such as eating, exercising, and sleeping well, and their overall health condition is improved. The prior literature review suggests that e-health literacy could act as a mediating factor in the connection between university students' health preventive behavior and their behavior in obtaining health information on TikTok [26]. TikTok users are inclined to search reputable information about their health due to their increased critical evaluation abilities and higher degree of e-health literacy, which encourages them to take preventative measures. Consequently, the following are the hypotheses.

H2a. TikTok users' behavior of health information seeking favorably influences E-health literacy.

H2b. E-health literacy favorably influences TikTok users' health preventive behavior.

H2. E-health literacy mediates the connection between users' behavior of health information seeking and health preventive behavior.

2.3. COVID-19 risk perception

This type of perception describes how individuals view the degree of risk connected to the COVID-19 virus and the illness it causes and it is a subjective evaluation that can vary from person to person based on factors such as personal experiences, knowledge, and the information available to them [27]. People's mental health can be impacted by risk perception, but it can also be used as a preventative measure against infectious disease [28]. It is believed that higher levels of health knowledge seeking on social media provoke higher levels of risk perception. Frequent health knowledge seeking indicates that people pay great attention to their health, and when they obtain the COVID-19 health-related information, knowing the severity of the disease, their perception of risk is likely to be higher while people with lower risk perception tend to form unhealthy behaviors [29]. Meanwhile, according to Lio et al. (2021), elevated risk perception is frequently linked to heightened compliance with preventive actions, like donning masks, physically separating oneself from others, and maintaining proper hand hygiene [30]. Occurrence of high levels of COVID-19 risk perception positively influences COVID-19 preventative behaviors [14,31].

Previous research has shown COVID-19 risk perception as a mediator. Specifically, it has been mentioned that the perception of COVID-19 risk mediates the link between attachment anxiety and perceived stress amid the global health crisis [32]. Similar studies have also stated the mediating role of COVID-19 risk perception that helps explain how other factors impact individuals' attitudes, intentions, or behaviors [33]. Besides, as mentioned by previous researchers that on TikTok, influencers with a great following can play a role in shaping users' health information and risk perception. Accurate and reliable information shared on the platform can positively impact risk perception, promoting people's protective measures [4]. Furthermore, individuals having higher e-health literacy are inclined to know the severity of the disease which may lead to their higher future anxiety [34]. Therefore, it is anticipated that e-health literacy will affect people's perceptions of risk in this study. There are still some people who have the virus in the post-COVID-19 era, but not much research has been done on how university students are protecting themselves against it and how their use of TikTok to seek health information may have an impact on this behavior. Consequently, the following are the hypotheses.

H3a. TikTok users' behavior of health information seeking is favorably connected with COVID-19 risk perception.

H3b. COVID-19 risk perception is favorably connected with post-COVID-19 protective behavior.

H3. COVID-19 risk perception mediates the connection between TikTok users' behavior of seeking health information and their preventive behavior.

H4a. E-health literacy is positively connected with COVID-19 risk perception.

H4. E-health literacy and COVID-19 risk perception sequentially mediates the connection between TikTok users' behavior of seeking health information and their preventive behavior.

2.4. Theoretical framework

Ball-Rokeach and DeFleur's book *A Dependency Model of Mass-Media Effects* introduced the media dependency theory. It is a communication theory that clarifies how people interact with media [35]. The strength of mass media and its direct and indirect influence on public opinion are also explained by the media dependency theory [36]. It also proposes that media can have significant effects on individuals' attitudes, beliefs, and behaviors [37]. The theory suggests that individuals who are highly dependent on TikTok users are more prone to be affected by media messages and adopt the values, opinions, and behaviors depicted in media content. Based on the theory, in light of the COVID-19 aftermath, people who seek out health information because they have a greater level of e-health literacy, and the knowledge they find on TikTok may affect how they perceive their COVID-19 risk, allowing them to take post-COVID-19 preventive measures. The conceptual framework for this study was integrated on the basis of the hypothesis that was put out (see Fig. 1).
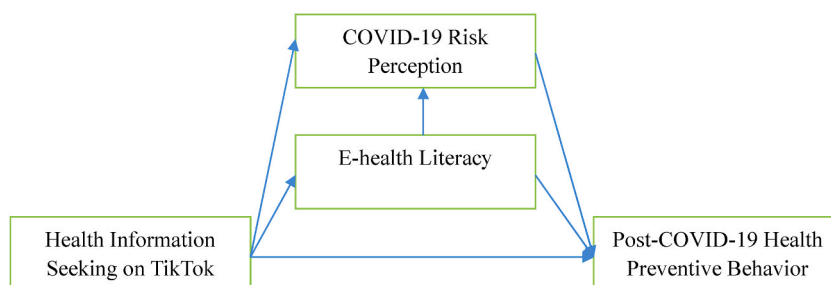
Fig. 1. Conceptual framework.

3. Methodology

3.1. Measurement development

A five-point Likert scale was utilized in this study's self-completed questionnaire (from 1 = strongly disagree to 5 = strongly agree). Four constructs were the main emphasis of its contents: (1) Scale of TikTok users' health information-seeking behavior based on Reinfeld-Kirkman et al. (2010) with Cronbach's alpha = 0.740 [38]. Previous researchers have developed this scale and this developed health information-seeking behavior scale aims to measure people's behavior of searching information about health. (2) Scale of e-health literacy (Cronbach's alpha = 0.891), derived from Wong & Cheung (2019) [39]. It was developed to examine the level of people's knowledge about their digital health. Seven items are included in the five-point Likert-type scale. By obtaining the answer from university students, their literacy about digital health can be measured. (3) Scale of risk perception (Cronbach's alpha = 0.820). This scale is on the basis of previous empirical scale of COVID-19 risk perception which derived from Dryhurst et al. (2020) [27]. (4) Scale of preventive health behavior based on Schneider et al. (2021) with Cronbach's alpha = 0.830 [40]. Previous researchers have developed the health protective behavior scale, aiming to measure people's health protective behavior. By obtaining the answer from university students, their preventive health behavior can be measured.

Furthermore, Mandarin is the primary language used by people in China. Hence, if an English-language questionnaire is given to some Chinese university students, they may not be able to fully understand it. Therefore, in order to gather the credible data, it is essential that the researcher translate the questions into Chinese and the answers into English. Furthermore, it is imperative to guarantee precise translation of the questions from English to Chinese while maintaining the intended content and clarity. Proper grammar and suitable language usage are also crucial. Chinese specialists confirmed that there were no translation errors in order to comprehend the content's meaning effectively.

3.2. Survey administration

In this research, the target population is university students in Wuhan and the target population is all individuals within different districts in Wuhan because students in this place represent a diverse population about their educational background, socio-economic status, and cultural backgrounds, and compared to students in other places, they have developed different severity of the disease and risk perceptions [41]. Hence, the questionnaire was made by Sojump and the link was distributed via Wechat to the university students who have a TikTok account in Wuhan of China. The reason why the social media platform TikTok was chosen in this study is because TikTok is the most downloaded short video app with the highest number of users in China while other social media sites such as Facebook and Twitter are not available in China. Hence, TikTok has become pivotal in disseminating health information. The short, engaging video format has proven highly effective in reaching younger demographics. Given that university students are among the primary users of TikTok, it is essential to explore how this platform influences their health preventive behaviors.

Besides, cluster sampling was used. Initially, the researcher selected one university at random from each district in order to include all Wuhan students, with the exception of Jianghan district, which has no universities. As a result, twelve universities in all are chosen at random from each district of Wuhan. Then, the researcher first selects one faculty member from each university using the random sample technique. Next, using random number generators, a class member is chosen at random from each faculty member at each university. Hence, this study finally involved 12 classes and totally 426 university students who use TikTok in China Wuhan. It is considered adequate based on Krejcie and Morgan's (1970) formula [42]. It is time-saving for the researcher to reach the participants readily by cluster sampling and participants all voluntarily completed the self-report questionnaires within normal class time. Because people inside the same cluster is likely to be similar to one another than to people from different clusters, cluster sampling may have a sampling error when compared to ordinary random sampling. More clusters in this study are chosen so that the sample more accurately reflects the university students' diversity and lowers the sampling error.

In order to investigate the reliability of the questionnaire, this research carried out a pilot study. This internal consistency reliability of the research is assessed by looking up its Cronbach alpha value. To evaluate the reliability, the Cronbach's alpha approach is commonly utilized [43]. Specifically, when the Cronbach's alpha value is larger than 0.7, the internal consistency reliability of the items of the scales is considered reliable. The researcher conducted the pilot test with 50 respondents who met the criteria in this current study. The findings regarding the study's pilot test are shown in Table 1. It can be seen that every Cronbach's alpha value has a high rate and is greater than 0.7. Thus, the questionnaire has internal consistency reliability [44].

Table 1
Results of reliability (N = 50).

Variables	Cronbach's alpha
HISB	0.868
EHL	0.879
RP	0.857
PHPB	0.888

HISB: Health information-seeking behavior; **EHL**: e-health Literacy; **RP**: COVID-19 risk perception; **PHPB**: Post-COVID-19 health preventive behavior.

Table 2
The participants' demographic details (N = 426).

Variable	Frequency	Percentage (%)
Sex		
Men	190	44.6
Women	236	55.4
Age		
18-20	176	41.31
21-23	122	28.64
24-26	72	16.9
26 and above	56	13.15
Marital status		
Single	385	90.38
Married	41	9.62
Background in Education		
Diploma	112	26.29
Bachelor	235	55.16
Postgraduate	79	18.55
Daily time Spent on TikTok?		
< 1 h	25	5.86
1–3 h	98	23
4–6 h	221	51.89
> 6 h	82	19.25
How long have you used TikTok?		
< 10 weeks	6	1.41
10–29 weeks	15	3.52
30–50 weeks	60	14.08
>50 weeks	345	80.99

3.3. Data analysis

This study conducted descriptive analysis and assessed the structural equation model (SEM) of interactions among study variables. The former was achieved by Statistical Package for the Social Sciences 25.0 while the latter was achieved by Mplus 8.0. Through the application of the statistical tool, SEM, which combines factor analysis and multiple regressions, allows for answering research questions involving the direct or indirect observation of independent variables as well as dependent variables [45]. Table 1 provides specific details of the participants' data on demographics.

3.4. Scale validation: the measurement model

Three criteria are employed to assess the measurement model: reliability, convergent validity, and discriminant validity.

Table 3
Measurement model results.

Construct	Items	Indicator Loading	CR	AVE
HISB	HISB2	0.763	0.841	0.570
	HISB3	0.757		
	HISB4	0.751		
	HISB5	0.752		
EHL	EHL2	0.703	0.843	0.473
	EHL3	0.689		
	EHL4	0.651		
	EHL5	0.713		
	EHL6	0.687		
	EHL7	0.682		
RP	RP2	0.718	0.839	0.510
	RP3	0.713		
	RP4	0.696		
	RP5	0.713		
	RP6	0.730		
PHPB	PHPB2	0.698	0.855	0.496
	PHPB3	0.722		
	PHPB4	0.728		
	PHPB5	0.677		
	PHPB6	0.697		
	PHPB7	0.703		

HISB: Health information-seeking behavior; **EHL**: e-health Literacy; **RP**: COVID-19 risk perception; **PHPB**: Post-COVID-19 health preventive behavior.

Furthermore, standardized factor loading, according to Bhattacherjee (2001), should normally be greater than 0.60 [46]. Table 3 displays acceptable outcomes and the results of measurement model are also shown by Fig. 2. The researcher deleted four low-loading items: HISB1 ($\beta = 0.302$), EHL1 ($\beta = 0.221$), RP1 ($\beta = 0.203$), and PHPB1 ($\beta = 0.475$). This led to an increase in the average variance derived from the data and the composite reliability.

Composite reliability (CR) values were employed to assess reliability [47]. Table 2 demonstrates that all CR values, which range from 0.839 to 0.855, are deemed satisfactory, and surpass the 0.70 requirement. An average variance extracted (AVE) of more than 0.5 shows convergent validity. But according to Fornell & David (1981), a value of 0.4 is acceptable if the CR value is over 0.6 and the AVE
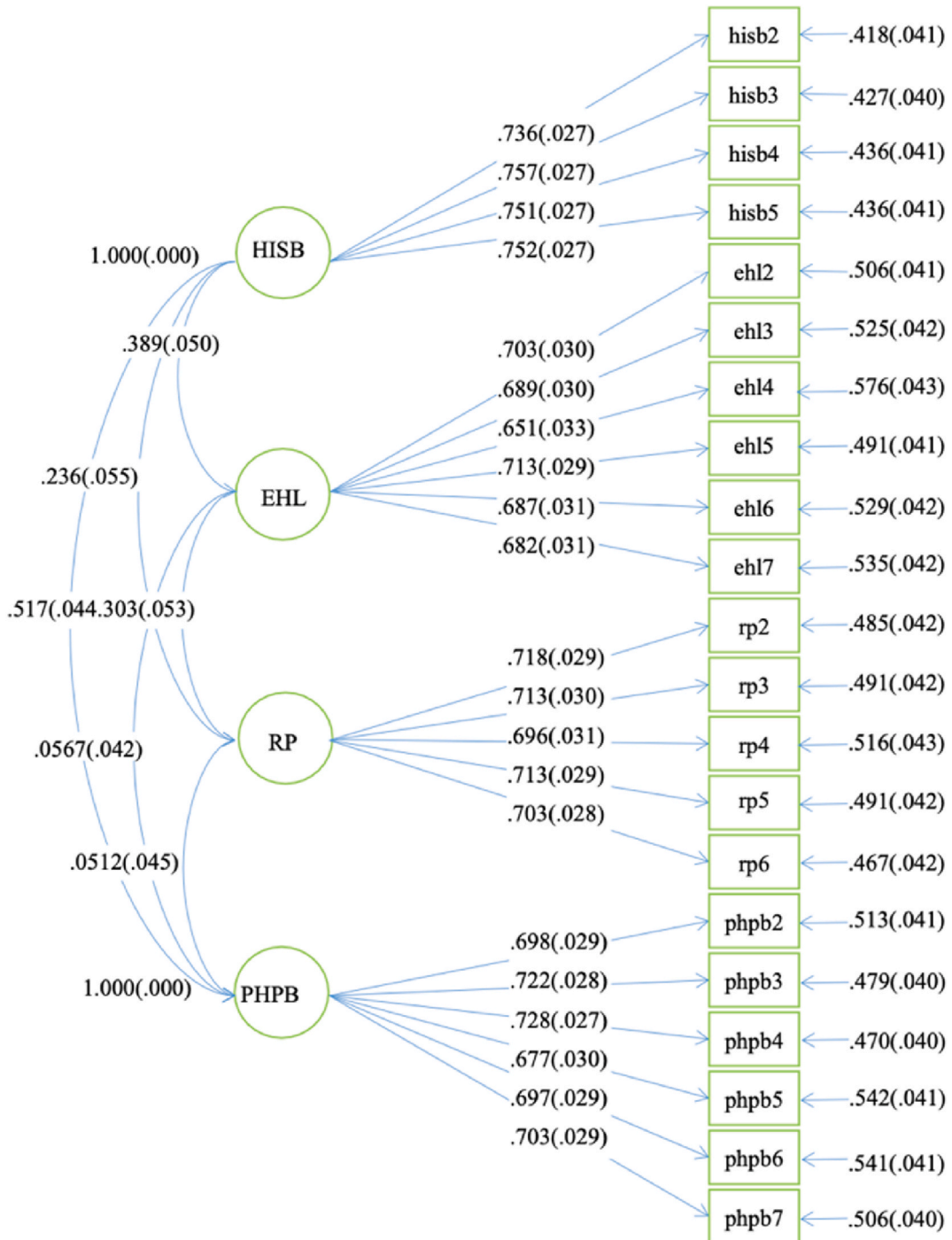

Fig. 2. Measurement model.

value is less than 0.5 [48]. Hence, convergent validity of the construct in this study is deemed adequate.

In a correlation matrix, compared to off-diagonal elements, diagonal members must have greater values in order to support discriminant validity. The results of our research, as shown in Table 4, support strong discriminant validity.

3.5. Scale validation: the structural model

Table 5 reveals the results and Fig. 3 also shows the specific path analysis result, indicating that a good fit was obtained by the measurement model: ($\chi2 = 188.466$, df = 183, p < 0.001; SRMR = 0.031; TLI = 0.998; CFI = 0.998; RMSEA = 0.008). It was discovered that there is support for hypothesis H1, which claims that TikTok usage for health-related information is favorably correlated with behavior of health protection ($\beta = 0.303$, p < 0.001). It was discovered that both hypothesis H2b and H3b, which suggested a favorable association between COVID-19 risk perception and protective behavior ($\beta = 0.335$, p < 0.01) and E-health literacy and preventive health behavior ($\beta = 0.348$, p < 0.01), were validated. Furthermore, the hypothesis H2a was confirmed as valid, suggesting a positive relationship between the search for health information on TikTok and E-health literacy ($\beta = 0.389$, p < 0.001), and the hypothesis H3a was confirmed as valid, suggesting a positive relationship between the search for health information on TikTok and the perception of COVID-19 risk ($\beta = 0.139$, p < 0.01). Simultaneously, hypothesis H4a was validated, positing a positive correlation between COVID-19 risk perception and e-health literacy ($\beta = 0.249$, p < 0.001).

Additionally, Table 5 shows that 52.5 % of the variance in the health protective activity was explained by the following factors: e-health literacy, health information-seeking behavior, and COVID-19 risk perception. The variance in e-health literacy was explained by health information-seeking behavior in 15.2 % of cases, while the variance in COVID-19 risk perception was explained by both health information-seeking activity and e-health literacy in 24.9 % of cases.

Additionally, to find out how one variable and another relate to one another, mediation analysis is used in this study. According to Baron and Kenny (1986), it discusses how changes in independent variables affect dependent variables [49]. The outcomes of the Mplus8 bootstrapping test are displayed in Table 6. The 95 % confidence interval of e-health literacy between health information-seeking activity and health preventive behavior is [0.067, 0.182], and the mediation effect is 0.120, p < 0.001. Consequently, the H2 hypothesis was validated. However, it has no significant mediation effect of COVID-19 risk perception between health protective behavior and health information seeking activity. Thus, there is no evidence to support hypothesis H3. Furthermore, the 95 % confidence interval is [0.011, 0.055] between users' seeking health information activity and their protective behavior, and the mediation effect of e-health literacy and COVID-19 risk perception is 0.029, p < 0.001. As a result, hypothesis H4 was validated.

4. Discussion

This study revealed that students in Wuhan who sought health information, also engaged in health protective activity. This study's positive correlation reveals that college students are inclined to adopt post-COVID-19 health protective behaviors if they actively search for health information on TikTok. This is consistent with earlier studies that demonstrate how people's attitudes and behaviors about health protection are greatly influenced by their availability to timely and pertinent health information [50]. The results align with the Media Dependency Theory, as proposed by previous researchers [51]. Based on the theory, people who depend on social media platforms for health information are prone to have specific behaviors aimed at protecting their health in the recent years. Increased exposure to health-related content on social media fosters students' awareness and knowledge towards individuals' health, subsequently leading to the adoption of protective behaviors.

The study also emphasized the significance that e-health literacy played in moderating the relationship between seeking health information and health protective behavior among Chinese university students. People depend on social media platforms for information, social contact, and entertainment, which might influence their attitudes and behaviors, according to the Media Dependency Theory [35]. It can be concluded that people with higher e-health literacy are inclined to seek out health information, which leads to more frequent protective behavior. This finding is in line with previous studies emphasizing the critical role that e-health literacy plays as a mediator [25,52].

However, risk perception has no mediation effect between the relationship health information seeking and health preventive measures. It is inconsistent with previous studies indicated that COVID-19 risk perception can motivate people's behavior because when they perceive risks, they tend to activate protection motivation in order to prevent negative outcomes [53]. There are two plausible explanations. First, it is possibly because after China's COVID-19 pandemic policy control measures have been loosened, some individuals are not willing to wear masks and they go out more often which may lead to lower risk perception and it might also
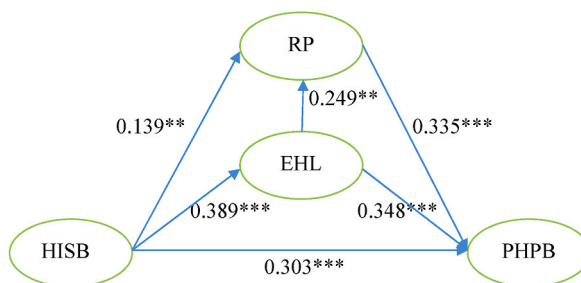
Table 4
Results of discriminant validity.

DIM	Discriminant Validity			
HISB	*0.755*			
EHL	0.389	*0.688*		
RP	0.303	0.236	*0.714*	
PHPB	0.567	0.517	0.512	*0.704*

HISB: Health information-seeking behavior; **EHL**: e-health Literacy; **RP**: COVID-19 risk perception; **PHPB**: Post-COVID-19 preventive behavior.

Table 5
Statistical results of structural model.

DV	IV	Path coefficients	S.E.	Est./S.E.	P-Value	R^2	Test Results
PHPB	HISB	0.303	0.049	6.223	***	0.525	H1Supported
	EHL	0.348	0.049	7.024	**		H2bSupported
	RP	0.335	0.046	7.228	**		H3bSupported
EHL	HISB	0.389	0.05	7.711	***	0.152	H2aSupported
RP	HISB	0.139	0.061	2.26	**	0.108	H3aSupported
	EHL	0.249	0.06	4.133	***		H4aSupported

Note: ***$p < 0.001$, **$p < 0.01$. **HISB**: Health information-seeking behavior; **RP**: COVID-19 risk perception; **EHL**: e-health Literacy; **PHPB**: Post-COVID-19 health preventive behavior.

Fig. 3. Path analysis result. Note: ***$p < 0.001$, **$p < 0.01$. **HISB**: Health information-seeking behavior; **EHL**: e-health Literacy; **RP**: COVID-19 risk perception; **PHPB**: Post-COVID-19 health preventive behavior.

Table 6
Bootstrapping results.

Path	Estimate	Bias-corrected 95 % CI		Test Results
		Lower	Upper	
HISB→EHL →PHPB	0.120***	0.067	0.182	H2Supported
HISB→RP →PHPB	0.041 NS	0.002	0.089	H3Not Supported
HISB→EHL→RP →PHPB	0.029***	0.011	0.055	H4Supported

***$p < 0.001$; NS Non-significant; **HISB**: Health information-seeking behavior; **EHL**: e-health Literacy; **RP**: COVID-19 risk perception; **PHPB**: Post-COVID-19 health preventive behavior.

because the health-related information is perceived as clear and trustworthy [3]. Individuals tend not to misinterpret the information and their risk perception would not be heightened.

However, this study also demonstrated that the association between TikTok users' searching for health information and their preventative actions is sequentially mediated by e-health literacy and COVID-19 risk perception, underscoring the important knowledge of e-health. Risk perception and e-health literacy together can affect people's protective and health information-seeking behaviors, even though COVID-19 risk perception has no mediation impact. In agreement with previous study, higher e-health literacy may lead to individuals' higher risk anxiety [34]. University students, as digital natives, are generally more comfortable navigating online platforms [54]. Their familiarity with digital environments may contribute to an increased ability to assess and understand health information online, thereby enhancing e-health literacy. TikTok is a social platform, and users with higher e-health literacy tend to share the content within their social circles. Peer discussions and sharing of health information may influence users' perceptions of COVID-19 risks and contribute to the adoption of protective behaviors.

5. Conclusion

Based on this study, college students are more likely to participate in protective actions if they look for health information on TikTok. It can be seen that TikTok is becoming a notable resource for health-related content, according to this result. The links between using TikTok to search for health information, COVID-19 risk perception, e-health literacy, and health protective behavior are examined, which broadens the scope of the existing literature. Through incorporating Media Dependency Theory into the examination of these factors, this research offers significant understandings into the fundamental processes and workings that impact people's health-related actions about TikTok usage.

Additionally, this research offers insightful information on the practical implications. To encourage post-COVID-19 protective

behavior, policy makers must enhance university students' e-health literacy, health information-seeking behavior, as well as perception of COVID-19 risk. The connection between behavior of health information seeking on the platform and protective behavior is further supported by the identification of e-health literacy and risk perception as sequential mediators. This underscores the necessity of educational initiatives that focus on digital skills and health literacy. Policy makers can help to develop e-health literacy programs that enable individuals to know better about COVID-19 risk perception, critically evaluate online health information, differentiate between reliable and unreliable sources, and make informed decisions about their health. These initiatives can contribute to enhancing TikTok use and promoting relevant health information consumption on TikTok by improving the overall digital literacy of individuals.

CRediT authorship contribution statement

Yang Yang: Writing – review & editing, Writing – original draft, Visualization, Validation, Software, Resources, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization. **Hamedi Mohd Adnan:** Writing – original draft, Supervision. **Mumtaz Aini Alivi:** Writing – review & editing, Supervision, Methodology, Formal analysis.

Data availability statement

The data will be available upon request addressed to the main author.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.heliyon.2024.e39092.

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