

## CORRELATION OF HEALTH LITERATURE WITH CLEAN AND HEALTHY LIVING BEHAVIOR IN THE EFFORT TO BREAK TRANSMISSION OF THE COVID-19

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### Abstract

*The application of disease prevention behavior is influenced by the level of health literacy, which consists of information, knowledge, understanding, and decision making. This study aimed to determine the relationship between health literacy and a Clean and Healthy Lifestyle to break the chain of transmission of the Covid-19 pandemic in STIKES Hang Tuah Surabaya students. The research design used was analytic observational with a cross-sectional approach. A simple random sampling technique took samples. The results of the study showed most of the students' health literacy was in the excellent category, and the students' clean and healthy living behavior was in the high class. The analysis of health literacy related to Clean and Healthy Living Behavior to break the chain of transmission of the Covid-19 pandemic in STIKES Hang Tuah Surabaya students was mainly adequate. The implication The research implies health literacy will increase students' abilities on Clean and Healthy Life Behavior (PHBS) to break the chain of transmission of the Covid-19 pandemic in STIKES Hang Tuah Surabaya students.*

**Keywords:** Health literacy, Clean and Healthy Lifestyle (PHBS), Covid-19

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### Introduction

The Covid-9 pandemic is still infecting the country of Indonesia with a chain of spread that is so fast. The Coronavirus can spread through the air through droplets, contaminated surfaces, and fecal-oral or human waste (Alam, 2020). Of the various efforts to break the Corona transmission chain, the virus is by implementing a Clean and Healthy Lifestyle (PHBS) (Makruf & Farhan, 2021).

There is an "infodemic" associated with the Covid-19 pandemic, where valid and invalid information is so abundant that the ability to access, understand, assess, and apply health information makes it essential to navigate the Covid-19 information environment (Widiantara, 2020). Literacy during the Covid-19 pandemic was widely circulated through various media ranging from obtained from learning and teaching activities in the world of education, television, cellphones, books, magazines, and also posters installed in multiple places that can provide health information such as understanding about covid-19, prevention of virus transmission, information on the curve of increasing deaths, and recovering from covid-19 in Indonesia (Sutisna, 2020).

There are 548 regular nursing students at STIKES Hang Tuah Surabaya, starting from Diploma nursing and undergraduate nursing study programs (data from BAAK STIKES Hang Tuah Surabaya). Based on interviews with 20 students of the STIKES nursing study program, Hang Tuah Surabaya stated that they had not fully implemented Clean and Healthy Lifestyle Behavior during the Covid-19 pandemic. For example, they still often hang out / get together with friends without maintaining a safe distance, do less exercise, play cell phones more often or spend more time playing social media, and often sleep late at night, reducing endurance.

This data shows that there is still a lack of implementation of a Clean and Healthy Lifestyle (PHBS) to break the chain of transmission for STIKES Hang Tuah Surabaya students during the covid-19 pandemic. Changing a person's behavior can be done with health literacy, so health literacy is an important variable to empower health in individuals and society. Health literacy has been recognized as one of the factors of health variables and has become one of the goals of public health development (Rohman & Nurhayati, 2021).

Health literacy is essential for every individual, especially during the current covid-19 pandemic, supported by the Indonesian government's efforts to improve health literacy among the community, including efforts to improve health, disease prevention, treatment, and health restoration (rehabilitative). The role of literacy is vital in a vital of information, one of which is about fitness and how to maintain it through Clean and Healthy Living Behavior, especially during the current covid-19 pandemic (Akhmad & Suyadi, 2021).

Good health literacy will increase a person's knowledge about a healthy lifestyle so that individuals, groups, and communities can improve their quality of life during the Covid-19 pandemic (Lingarjati & Parmitasari, 2021). Benchmarks in health literacy should not only be understood but need to be applied in everyday life. Therefore, researchers are interested in researching "The Relationship of Health Literacy with Clean and Healthy Living Behaviors to break the chain of transmission in Hang Tuah Stikes Surabaya, Students During the Covid-19 Pandemic Period.

**Research methods**

The research design used was analytic observational with a cross-sectional approach, namely the type of research in which data collection of independent and dependent variables was carried out in one period simultaneously. The population in this study were regular Diploma nursing students at 1,2,3 and graduated levels at 1,2,3,4 at STIKES Hang Tuah Surabaya for the 2020/2021 academic year, totaling 584 people.

The samples used in this study were average nursing students with Diploma levels 1,2,3, and graduated levels 1,2,3,4 Surabaya, who met the sample requirements of 237 people. The sampling technique used is probability sampling with a simple random sampling approach. The study's independent variable was health literacy, and the dependent variable was clean and healthy living behavior to break the chain of transmission of covid-19 in Stikes Hang Tuah Surabaya students. The data collection instrument used a structured questionnaire developed based on the lattice of the research variable components. The Health literacy questionnaire uses a research instrument developed by the HSL-EU Consortium, The European Health Literacy Survey Questionnaire (HLS-EU-Q) HLS-EU-Q. During the pandemic, the Clean and Healthy Life Behavior Questionnaire contains Clean and Healthy Life Behaviors to measure a student's clean living behavior.

The data were analyzed using the Spearman Rho test with a 95% confidence level and the significance level of P-Value = 0.05, which means that if P-Value is 0.05, then H1 is accepted, which means that there is a relationship between health literacy and Clean and Healthy Living Behavior (PHBS) to break the chain of transmission of Covid 19 in STIKES Hang Tuah Surabaya students.

**Results**

**Health Literacy**

Table of characteristics of health literacy for regular nursing students of Diploma study program levels 1,2,3 and Graduate groups 1,2,3,4 (n = 237) on July 8, 2021 – July 10, 2021.

Health literacy	Frequency (f)	Percentage (%)
Adequate	226	95.4%
Adequate Enough	11	4.6%
Inadequate	0	0%
Total	237	100%

The table shows that most of the students' health literacy was adequate, amounting to 211 people (89%), and the rest in the quite category, as many as 26 people (11%).

**Clean and Healthy Life Behavior**

Table of Characteristics of Clean and Healthy Life Behavior in regular nursing students of Diploma and Graduate study programs (n = 237) on 08 July 2021 – 10 July 2021

Clean and Healthy Life Behavior	Frequency (f)	Percentage (%)
Good	162	68.4%
Enough	75	31.6%
not enough	0	0%
Total	237	100%

The table describes the Clean and Healthy Life Behavior (PHBS) in nursing students, mainly in the high category with 162 people (68.4%) and the rest in the intermediate class with 75 people (31.6%).

## The relationship between health literacy and a Clean and Healthy Lifestyle

Table of the relationship between health literacy and Clean and Healthy Living Behavior to break the chain of transmission of covid 19 in STIKES Hang Tuah Surabaya students (n = 237) on 08 July 2021 – 10 July 2021.

Health literacy	Clean and Healthy Life Behavior				Total	
	Good		Enough		F	%
	F	%	F	%		
Adequate	152	64.1%	74	31.2%	226	100%
Adequate Enough	10	4.2%	1	0.4%	11	100%
Inadequate	0	0%	0	0%	0	100%
Total	162	68.4%	75	31.6%	237	100%

Statistic test *Spearman's Rho* 0.047 ( $p = 0.05$ )  
 Value R = 0.129 (*Very weak correlation*)

The table depicts 226 students who have health literacy in the excellent category. As many as 152 (64.1%) have a clean and healthy life behavior (PHBS) in the high class (64.1%), and 74 respondents (31.2%) have a clean and healthy lifestyle (PHBS). ) medium category. Regarding health literacy, 11 respondents have a high level of clean and healthy behavior, and 10 (4.2%) students and 1 (0.4%) students have moderate clean and healthy behavior.

The Spearman Rho statistical test showed a value ( $p$ -value = 0.047), meaning that statistically, there was a relationship between health literacy and Clean and Healthy Life Behavior in Hang Tuah STIKES students in Surabaya. The correlation coefficient value is 0.129, meaning the relationship between health literacy and Clean and Healthy Life Behavior is fragile.

## Discussions

### Health Literacy in Students

Data on student health literacy shows that from 237 students, 226 people (95.4%) have adequate health literacy and 11 (4.6%). These results indicate that most students with health literacy are in the proper category. The findings of this study illustrate that students accommodate in terms of meeting the needs of a healthy life. Health literacy is a person's ability to obtain, process, and understand basic health information and services needed to make appropriate health-related decisions. From the concept above, it can be said that health literacy has a significant role in the health sector. Hence, achieving health literacy is a shared responsibility at the individual and social levels. Nursing students are individuals with a high level of education who are likely to be more exposed to health information from the curriculum studied and through seminars or training (Veddayana et al., 2020).

This condition supports that an adequate level of health literacy in students comes from access to health information which is an achievement, transition, or acquisition of knowledge with or without going through the media, which is a source of liaison between individuals and information (Ul Haq & Sri Sadewo, 2021). Measurement of a person's health literacy is carried out on knowledge, attitudes, motivation, behavioral intentions, personal skills, and self-efficacy related to health so that it leads to a new understanding, more positive behavior, greater self-efficacy, positive health behavior, and better health (Yojana, 2022).

For an individual, health literacy is determined by the level of education, culture, and language, besides that, it also requires communication skills and assessing interactions with others related to health and the ability of the media, market, and government to provide correct health information (Moreen Toar, 2020).

The result of the highest score data distribution is the ease with which students find and receive information regarding covid 19. It is easiest for students to access information related to the symptoms of the Covid-19 disease because Hang Tuah STIKES Surabaya students are health-based students. Hence, access to health information is easy to teach and learn activities, seminars, and health posters in the campus environment.

This condition supports an adequate level of health literacy in students. It shows that the factors that influence health literacy are access to health information which is the achievement, transition, or acquisition of knowledge with or without going through the media, which is a source of liaison between individuals, and report if someone does not get access. Information will have an impact on knowledge because of the low literacy they have.

The lowest score from the literacy questionnaire answers was student compliance with government policies, namely "I comply with government regulations regarding policies during the covid 19 pandemic". This shows that students lack in applying existing health information related to government policies during the covid 19 pandemic. And this condition can support an adequate level of health literacy.

One of the government's policies during the Covid-19 pandemic is that the implementation of health protocols and the implementation of health protocols must be based on self-awareness even though they already know various knowledge related to health protocols or the Covid-19 pandemic. Still, they have not been able to implement it in daily life (Fitri et al., 2020).

### **Student's Clean and Healthy Life Behavior**

Clean and Healthy Life Behavior (PHBS) of students as many as 166 people (70%) in the high category and as many as 71 people (30%) in the medium category. The research findings explain that most students have Clean and Healthy Behavior in the high class. Most students have a clean and healthy lifestyle which is a good thing because it can prevent them from being exposed to the coronavirus pandemic. Lawrence Green explained that a person's health could be influenced by several factors, namely behavioral factors and factors outside of behavior (Dewi, 2020).

Clean and Healthy Life Behavior in STIKES Hang Tuah Surabaya students has the highest score, among others, is the behavior of brushing teeth 2-3 times regularly every day. The covid 19 virus is found in the oral and oropharyngeal cavity, so dental and oral hygiene is necessary to maintain overall body health (Azizah et al., 2021).

In addition to maintaining dental and oral hygiene during the covid 19 pandemic to avoid toothache or dental problems to minimize the transmission of covid-19 in dental practice. This data illustrates that students' level of clean and healthy living behavior can maintain personal hygiene in dental and oral health during the Covid-19 pandemic.

The second-highest score for student health behavior was the use of masks. This data is in the questionnaire "I wear a mask when meeting other people and when leaving the house." The availability of infrastructures such as medical masks, government policies, and regulations is one factor in increasing compliance with health protocols. According to (Sianipar et al., 2021), infrastructure is all types of work equipment and facilities that function as tools to assist in work implementation. So the health protocol will be implemented if there are supporting infrastructure facilities, for example, the availability of clean water for washing hands and masks for activities and others.

The lowest student health behavior score was lack of activity during the pandemic, namely the answer to the questionnaire "I prefer to lie down than do physical activity during home," which means that respondents lie down more than doing physical activity during school from home. Lack of physical activity in students during school from home does not support good health behavior. Research (Zata et al., 2020) states that there is a decrease in physical activity in the community for fear of contracting the covid 19 virus. In actual health, humans must carry out physical activity, which can be done in and around our homes. Based on the study's results (Firmansyah et al., 2021), health protocol implementation in public places during the Covid-19 pandemic is still relatively low. As a public place visited by many people, public facility providers must implement health protocols to break the chain of transmission of the Covid-19 virus.

### **The Relationship Between Health Literacy and Clean and Healthy Life Behavior**

The results of the Spearman's Rho statistical test obtained a p-value = 0.047 (P-value 0.05), meaning that there is a relationship between health literacy and Clean and Healthy Life Behavior in STIKES Hang Tuah students in Surabaya. The findings of this study can explain that students with high literacy will be able to carry out Clean and Healthy Life Behavior activities.

Every human being has basic needs, namely the need for health information, the need for disease prevention, and the need for treatment when sick. Moreover, it supported the pandemic factor to save their lives and their families. In addition to these factors, health workers, in this case, one of them is that students will be encouraged to seek as much information as possible for professional purposes or be prepared if there are questions from the public to ask students about it. Health information is one of the needs to make individuals know about health so that individuals can apply clean and healthy living behaviors in everyday life to achieve optimal health degrees.

Health literacy is an individual's capacity to access, understand, assess and apply information and essential health services to improve health (Joint Committee on National Health Education Standards). Health literacy is evaluated by the HLS-EU-Q16, which includes three indicator domains spread over 16 question items: health care, disease prevention, and health promotion (Wahjuni, 2020).

## Conclusions

Health literacy in STIKES Hang, Tuah Surabaya students, is mainly in the excellent category. Clean and Healthy Living Behavior to prevent the chain of transmission of covid 19 in STIKES Hang Tuah Surabaya students are primarily in the high class. There is a relationship between Health Literacy and Clean and Healthy Living Behavior to break the chain of transmission of Covid 19 in STIKES Hang Tuah Surabaya students.

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