ORIGINAL ARTICLE

The Effect of Knowledge on Attitudes and Behavior of Nursing Students About Multivitamin Consumption During the Covid-19 Pandemic

Zahrah Maulidia Septimar[1], Jaenudin Saputra[1], Febi Ratnasari[1], Faridah Binti Mohd Said[2], Bibi Florina Abdullah[2]

[1] Faculty of Nursing STIKes Yatsi Jl. Aria Santika No.40A, RT.005/RW.011, Margasari, Kec. Karawaci, Kota Tangerang, Banten 15114, Indonesia
[2] Lincoln University College, Wisma Lincoln, No, 12-18, Jalan SS 6/12, 47301 Petaling Jaya, Selangor, Malaysia

ABSTRACT

Introduction: This study aims to determine the effect of knowledge on attitudes and behaviour of nursing students about multivitamin consumption during the covid-19 pandemic. **Methods:** This study uses a cross-sectional approach. The populations in this study were consisted of 1538 nursing students in Tangerang City, Banten, Indonesia and a sample of 316 respondents was obtained. **Results:** Therefore, it was seen that there is a simultaneous and significant relationship with knowledge along with the attitudes and behaviour of nursing students in consuming multivitamins during the Covid-19 pandemic ($p < 0.05$). **Conclusions:** There is an effect of knowledge on attitudes and behavior among nursing students with regards to intake of multivitamins during the Covid-19 pandemic. They considered knowledge and attitude of health students about multivitamin consumption is classified as good and is effective in preventing Covid-19 transmission in Indonesia.

Keywords: Knowledge, Behaviors, Multivitamins, COVID-19

Corresponding Author:
Zahrah Maulidia Septimar, MSc
Email: zahrahmaulidia85@gmail.com
Tel: +6287774518828

INTRODUCTION

At the beginning of the year 2020, Covid-19 the epidemic that appeared in Wuhan (1) spread in a frightening and turbulent way to several continents and turned into a pandemic. As a result, a health crisis is currently upsetting the world balance (2). This pneumonia, whose symptoms are mainly reminiscent of acute respiratory infections, but can cause heavy death toll in severe forms, to this day (3).

With the detection of the first transmissions outside China, in Japan and Germany, WHO declared an international emergency state, without considering it necessary to limit travel and trade with China, which cut itself off from the world after the death toll reached 170 by the end of January. Unfortunately, this had negative repercussions on the pandemicafterwards, which spread more and more rapidly throughout the world (4).

Based on current data, on April 13, 2020, according to the World Health Organization, the total number of confirmed cases worldwide is 1,696,588, with the number of deaths recorded from around the world being 105,952. In Banten, 161 were recorded under treatment, recovered 19, and deathsamong 29 cases. The city of Tangerang recorded 61 under treatment, recovered 7, and eight patients died (5).

The transmission of Covid-19 can be prevented with knowledge and a good attitude among common people; one of the members in the society are the students of nursing. As a pioneer in health facilities services, nursing students must participate actively in following trends in ongoing health problems. Nursing students as individualslead a life that has high health risk impact; it becomes vital for them to increase self-awareness and it is essential to enrich themwith accurate health information. Health problemsand the best health solutions for them are necessary to understand and use them as health information to improve (and maintain) their health (6). Using supplements and multivitamins is one way to prevent transmission of covid-19. When a person is engaged in many activities, supplements and multivitamins help to increase your stamina (7). One of the vitamins recommended for protection against the coronavirus is Vitamin C. Vitamin C can increase the production of white blood cells, which play an essential role in increasing the body's resistance to fighting

infections (8).

MATERIALS AND METHODS

The data were collected using a measuring instrument in the form of a knowledge questionnaire consisting of 9 questions, to measure the attitude there were 5 questions, and behaviour questionnaire consisted of 5 questions. The inclusion criteria of this research are Nursing Students who are currently studying as an active student in Banten Province. Sampling was done using the random sampling technique.

The number of samples was 316 people. Univariate data are used to describe the characteristics of each respondent. The method of analysis in this research is that univariate along with statistical analysis used in the frequency distribution to see knowledge of behaviour and attitudes of nursing students in taking vitamins. Bivariate analysis using the Kolmogorov Smirnov normality test was done using a significance value $p<0.05$.

This research has gone through ethical clearance conducted at STIKesYatsi (Nomor: 030/LPPM-STIKES YATSI/VII/2021).

RESULTS

The results showed the frequency distribution based on gender found Males were 40 (12.7%) and Females 276 (87.3%) (Table I). The results of the study show that the frequency distribution is based on the level of education,most of the students wereeducated as Undergraduate Nursing as much as 232 (73.4%) respondents and minorities completed Nursing Diplomas education as many as 84 (26.6%) of respondents (Table I).

Table I: Gender and Education Level Distribution Frequency (n=316)

Variable	frequency	%
Gender		
Male	40	12.7
Female	276	87.3
Level of Education		
Undergraduate Nursing	84	26.6
Nursing Diplomas	232	73.4

The results showed that nursing students' frequency distribution of knowledge was highest in a Good category, namely 310 respondents (98.1%), while the lowest was in the Not Good category, namely 6 respondents (1.9%) (Table II). The highest frequency distribution of nursing student attitudes was in a Good category, namely 299 respondents (94.6%), while the lowest was in a Not Good category as many as 17 respondents (5.4%) (Table II).

Table II: The Frequency Distribution of Knowledge and Behavior (n=316)

Variable	Frequency	%
Knowledge		
Good	310	98.1
Not Good	6	1.9
Behavior		
Good	299	94.6
Not Good	17	5.4

The probability value (Sig. F change) = 0.888 is obtained based on the Model Summary table. The sig. F change value is 0.888> 0.05. So, the decision is that Ho is rejected, and Ha is accepted. Thus the results showed that knowledge is simultaneously and significantly related with the attitudes and behaviour of nursing students in consuming multivitamins during the Covid-19 pandemic (Table III).

Table III: Hypothesis Test

Model	R	R Square	Sig.F.change
1	0.008	0.000	0.888

DISCUSSION

The results showed that the frequency distribution of the nursing students' knowledge level about the attitudes and behaviour of consuming vitamins during the Covid-19 pandemic in Banten Province obtained the highest knowledge in the excellent category as many as 310 (98.1%). The dominant respondents in this study were graduates of nursing. The results of this study were supported by research on the knowledge of Chinese students related to Covid 19 with good knowledge outcomes of 82.3% (9).

Knowledge of the students in Pakistan are associated with expertise in the prevention of Covid 19showed that they have a good understanding (10). Comparative research on student knowledge at one of the Bangladeshi universities showed that students' learning was primarily inadequate (11). It is similar to medical student knowledge in India, who has lousy knowledge related to Covid-19 (12). Another study revealed that nurses have good knowledge, practices and the care of COVID-19 patients in India (13). In contrast to the research results on students in the Philippines, related knowledge is obtained with covid-19 prevention, with results showing that nursing students have sufficient knowledge(14).
Based on research on the knowledge, attitudes, and practices of health professionals regarding COVID-19, it can be said that knowledge is satisfactory. However, some misconceptions (modes of transmission, precautions, medication, and vaccines), misperceptions (some foods or

plants can cure or prevent COVID-19), and malpractices (breathing ethics, hand hygiene and use of face masks) need attention to combat the COVID-19 pandemic effectively (15). So, appropriatemanagementpolicies can support the leadership style that can be applied to the guidelines and requirements regarding COVID 19 among nurses which in turn can help to overcome the stress related to this problem (16).

CONCLUSION

A strong immune system is of utmost necessity for every single individual. According to the above discussion, the authors concluded that knowledge among nursing students'attitudes and behavior is positive regarding the intake of multivitamins during the Covid-19 pandemic and that knowledge and attitude of health students about multivitamins consumption is classified as good. This in turn can prevent Covid-19 transmission in Indonesia. Vitamins are essential in the maintenance and regulation of the immune responses. Deficiency in one or more of these vitamins effects immune response and makes an individual vulnerable to viral infections and perhaps worse disease prognosis. Though Vitamins improve the body's defense mechanism against COVID-19 infection, more detailed randomized trials are necessary to understand the use of these supplements in preventing or reducing the severity of the COVID-19 infection.

ACKNOWLEDGEMENTS

The authors are thankful to the study participants who took time from their busy schedules to fill the research questionnaire virtually. The authors are also thankful to the Institute for Research and Community Service STIKesYatsi, for providing the funding for this study.

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