



**KNOWLEDGE OF PREVENTION OF COVID-19 AND RELATED FACTORS
OF STUDENTS IN TAN TRAO UNIVERSITY 2021-2022**

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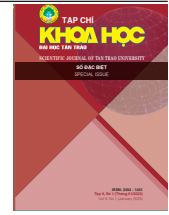
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*Knowledge, COVID-19,
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Abstract:

The COVID-19 pandemic is a top concern in the world as well as in Vietnam. To ensure effective COVID-19 prevention, students' knowledge is very important in COVID-19 prevention related to the implementation of government policies. Therefore, we studied Knowledge on COVID-19 prevention and related factors of students at Tan Trao University 2021-2022. Then, proposing recommendations on COVID-19 prevention at Tan Trao University. The method was cross-sectional descriptive research, conducted from November 2021 to March 2022. We interviewed 216 students, selected by random sample using a structured questionnaire. Results: 24,5% of students have sufficient knowledge. Ethnicity and Training about COVID-19 prevention were related to students' knowledge of COVID-19 prevention ($p < 0.05$).



KIẾN THỨC VỀ PHÒNG COVID-19 VÀ CÁC YẾU TỐ LIÊN QUAN CỦA SINH VIÊN TRƯỜNG ĐẠI HỌC TÂN TRÀO NĂM HỌC 2021 – 2022

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Thông tin bài viết	Tóm tắt
Ngày nhận bài: 20/9/2022	Dịch COVID-19 đang là mối quan tâm hàng đầu trên thế giới cũng như ở Việt Nam. Để đảm bảo công tác phòng COVID-19 hiệu quả, kiến thức của sinh viên rất quan trọng trong việc phòng COVID-19 liên quan đến việc thực hiện các chính sách của Nhà nước. Do đó, chúng tôi nghiên cứu kiến thức về phòng COVID-19 và các yếu tố liên quan của sinh viên Trường Đại học Tân Trào năm học 2021-2022. Từ đó đề xuất các khuyến nghị trong công tác phòng COVID-19 của nhà Trường. Nghiên cứu bằng phương pháp nghiên cứu mô tả cắt ngang, được thực hiện từ tháng 11 năm 2021 đến tháng 3 năm 2022 thông qua phỏng vấn 216 sinh viên, chọn ngẫu nhiên đơn bằng bộ câu hỏi có sẵn. Kết quả: 24,5% sinh viên có kiến thức đạt. Dân tộc và tập huấn về phòng COVID-19 có mối liên quan với kiến thức của sinh viên về phòng COVID-19 ($p < 0,05$).
Ngày sửa bài: 18/10/2022	
Ngày duyệt đăng: 30/12/2022	
Từ khóa: <i>Bệnh COVID-19, sinh viên, Đại học Tân Trào</i>	

1. Introduction

The COVID-19 pandemic is a top concern in the world as well as in Vietnam. The disease is transmitted directly from person to person through respiratory (such as through droplets, aerosol particles, and air) and contact. The virus is also constantly mutating creating many different variants all over the world making it more contagious and more difficult to control [1].

To ensure effective COVID-19 prevention, there are not only the government's regulatory policies and health measures, but communication with the people is also very important so that people to be proactive in the prevention of the pandemic. In particular, students' knowledge is very important in the prevention of COVID-19 related to the implementation of government policies.

Scientists in the world and Vietnam have conducted studies on the compliance with pandemic prevention measures by students at universities. In Tuyen Quang, there has been no research to study the state of knowledge on COVID-19 prevention. Tan Trao University is an institution for training, scientific research and international cooperation, providing services to improve learning quality. According to the list of the Student Management Department, the University has nearly 1500 full-time university students with 18 different majors such as: animal husbandry, politics, information technology, social work, nursing, pharmacy, accounting, preschool, primary school, math pedagogy, biology.... The school not only trains students with professional knowledge and skills but also cares about students' social knowledge, especially is for COVID-19 prevention.

Therefore, we conducted a study: “Knowledge on COVID-19 prevention and related factors of students in Tan Trao University 2021 - 2022”. Then, we propose recommendations on COVID-19 prevention at Tan Trao University, help students have sufficient knowledge to protect themselves during the pandemic, and communicate to everyone about COVID-19 prevention measures, as well as dangerous infectious diseases.

2. The current situation

2.1. Objective

1. Description knowledge on COVID-19 prevention of students in Tan Trao University 2021-2022.

2. Determining some related factors to knowledge on COVID-19 prevention of students in Tan Trao University 2021-2022.

2.2. Research subjects

Full-time undergraduate students of all disciplines in Tan Trao University.

2.3. Time and Place

Time: from November 2021 to March 2022.

Place: Tan Trao University

2.4. Research design

Cross-sectional descriptive research method.

2.5. Sample size

Sample size formula:

$$n = Z^2_{(1-\alpha/2)} \times \frac{p \times (1-p)}{d^2}$$

Including:

n: study sample size

Z: reliability coefficients, choose reliability 95% -> Z = 1,96

D: Acceptable absolute error = 0,07

p: sufficient knowledge rate on COVID-19 prevention of students. Many studies give different sufficient knowledge rates so choosing sufficient knowledge rates estimated p = 0,5 to get the optimal sample size.

Substituting in the sample formula: $n = 1,96^2 \times 0,5 \times (1 - 0,5)/0,07^2 = 196$

10% are expected to decline to participate in the study:

$$n = 196 + 196 \times 10\% \sim 216$$

2.6. Sampling method

- Select a simple random sample, make a list of 1361 full-time undergraduate students in Tan Trao University from the Student Management Department, and randomly select 216 students.

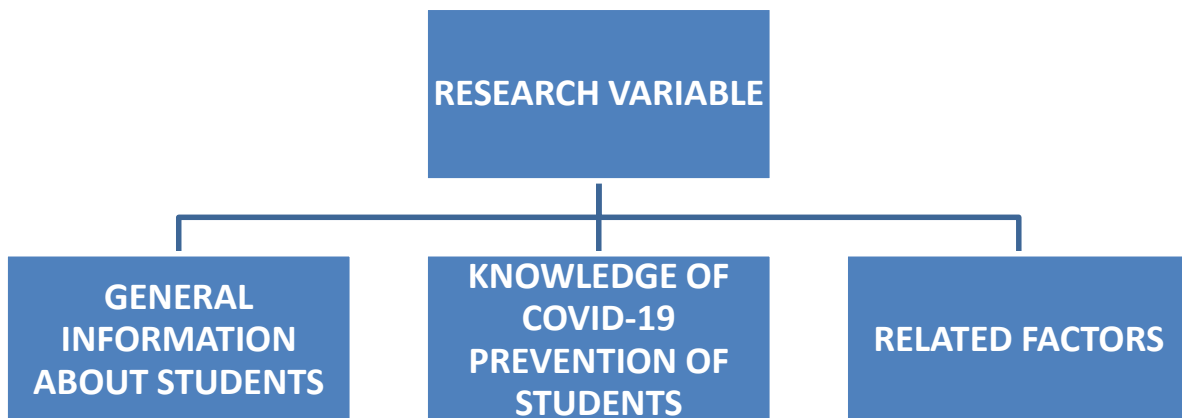
- Interview with structured questions.

2.7. Data collection

Collected from Student Management Department: see student list of about 1361 full-time university students studying at the University.

Building questionnaire -> Interview -> Collect information

2.8. Research variable



2.9. Method of data analysis

Data entry using Epidata 3.1; Data analysis using SPSS 22.0

2.10. Research ethics issues

- Students are explained about the research and choose whether to participate in the research voluntarily or not.

- The study was carried out with the permission of Tan Trao University.

2.11. Error and remedy

There is no standard scale to assess students' knowledge, so the classification is only relative and somewhat subjective. The research team based on the scoring of several implemented studies.

3. Result and Discussion

3.1. General information of students

We interviewed 216 students of 1361 full-time undergraduate students in Tan Trao University.

Table 1. General information of students

		N	%
Gender	Male	51	23,6
	Female	165	76,4
Majors	Primary education	80	37
	Preschool education	39	18,1
	Nursing	25	11,6
	Pharmacy	6	2,8
	Accountant	29	13,4
	Information technology	13	6
	Others	24	11,1
Number of years study	First year student	109	50,5
	Second year student	57	26,4
	Third year student	18	8,3
	Fourth year student	32	14,8
Ethnic	Kinh	96	44,5
	Tay	78	36,1
	Cao lan	30	13,9
	Others: Dao, Mong, Han, Thai...	12	5,5
Religion	No religion	100	46,3
	Buddhism	104	48,1
	Christian	12	5,6

Out of 216 students, two-thirds of students are female, accounting for 76,4%, this is the general situation of Tan Trao University because the largest concentration of students is in preschool education and primary education. The field of study that accounts for the most is primary education 37%, the field that accounts for the lowest rate is Pharmacy 2,8%, this is a new major that enrolls 2 courses with high entrance scores, so the number of students is not much. About half of the students participating in the study were first-year students, accounting for 50,5%, followed by the second year (26,4%), fourth year (14,8%), third year (8,3%). In the process of collecting information at

the right time of the COVID-19 epidemic, it is quite stressful, students studied online mainly, so there is an uneven distribution of the number of students in the courses.

Tuyen Quang is a mountainous province in the North, and students of the University live in different areas. Results show that nearly half of the students are Kinh ethnic group, accounting for 44,5%, Tay (36,1%), Cao Lan (13,9%), other ethnic groups such as Dao, Mong, Han, Thai... accounted for a very low percentage of 5,5%. In which, 48,1% follow Buddhism, 46,3% students do not follow religion.

3.2. Knowledge on COVID-19 prevention of students

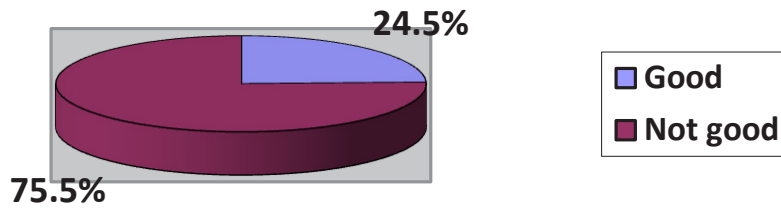


Chart 1. Knowledge on COVID-19 prevention of students

Total correct knowledge answer is 23 (Failed < 17, Passed \geq 17). After calculating the total score of knowledge of students who answered correctly, 2/3 of students with knowledge about COVID-19 did not pass, accounting for 75,5%, only 24,5% of students with sufficient knowledge.

The research team conducted direct interviews and relied on documents of the Ministry of Health to give the scores, so the student scores were quite accurate. The percentage of students with sufficient knowledge of the study is much lower than Yaling Peng’s study in 2020 indicating that 82,34% of students with sufficient knowledge [2]. Dao Thi Ngoc Huyen and colleagues (2020), the percentage of students with sufficient knowledge is 43,1% [3].

Students’ knowledge in the study has a lower rate than Asuka Hatabu’s study (2020), 100% of all respondents answered about avoiding enclosed spaces, crowded areas and close contact [4].

The study shows that the percentage of students with knowledge is slightly higher than Le Minh Dat’s study

(2020), most students have sufficient knowledge about COVID-19 prevention, but only 13,84 % answered all questions correctly [5]. It may be because the method of calculating the passing knowledge score of our research is over 70% of the total score, and this study requires 100% correct answers of all questions, so the percentage of knowledge passing is lower. Students in Tan Trao University have 24,5% sufficient knowledge, much lower than Pham Le An’s (2020), students have 86,6% sufficient knowledge [6].

The percentage of students’ sufficient knowledge is also much lower than that of Zil-e-Rubab’s study (2020), a cross-sectional descriptive study interviewing 1474 medical students, 71,7% of students had sufficient knowledge [7]. This can be explained because students of our research from many different disciplines such as nursing, pharmacy, preschool and primary school.... In the study of Zil-e-Rubab (2020), Students’ Major are medical students, so their knowledge will be higher.

3.3. Related factors

Table 2. Related factors

		N	%
Traning about COVID-19 Disease	Trained	70	32,4
	No trained	146	67,6
The methods of media about COVID - 19 pademic	Local loudspeaker system	170	78,7
	Television	166	76,9
	Medical staff	134	62
	Friends	125	57,9
	Teachers	140	64,8
	No method of media	1	0,5
	Self - study	1	0,5

		N	%
The methods of media effective	Television, loudspeaker, radio	194	89,8
	Training sessions, seminars	92	42,6
	Signs, posters...	49	22,7
	Leaflets, pamphlet	20	9,3
	Facebook, tiktok	115	53,2
Teachers mentioned COVID-19 disease	Never mention	6	2,8
	Mentioned	84	38,9
	Often mention	122	56,5
	Don't remember	4	1,9

2/3 of students have not been trained on COVID-19 disease, accounting for 67,6%. The percentage of students who have not been trained is quite high, while this is a medium by which students can gain in-depth and necessary knowledge in COVID-19 prevention. Students who heard information about the COVID-19 epidemic from the local loudspeaker system accounted for 78,7%, television (76,9%), teachers (64,8%), medical staff (62%), and friends (57,9%). However, the knowledge gained is still not enough. Therefore, this may explain why the student's knowledge of our

research is low. When asked about effective media of communication, the majority said that it is television, loudspeakers, and radio accounting for 89,8%, Facebook, TikTok (53,2%), training sessions, and seminars (42,6 %). Among subjects, 56,5% responded that teachers often mentioned COVID-19 disease. This shows that for students, access to information mainly through mass media dominates. In subjects, teachers have not mentioned COVID-19 much, so this may also be the reason why students' knowledge is low.

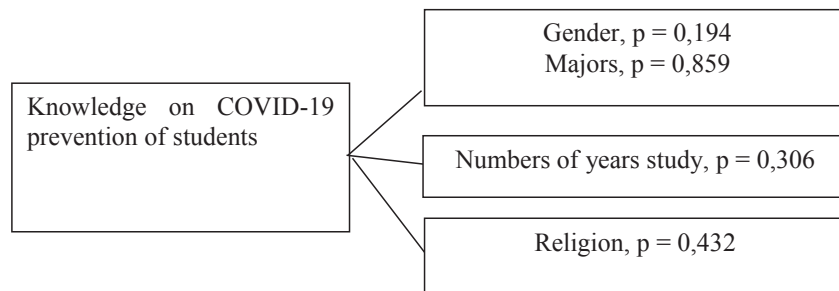


Figure 1: Relationship between factors related to students' knowledge about COVID-19 prevention.

Gender, the number of years of study, major, and religion were not related to students' knowledge about COVID-19 prevention because $p > 0,05$.

Table 3. Relationship between ethnicity and student knowledge about COVID-19 prevention

	Knowledge					OR	95% CI _{OR}	P
	Good		Not good					
	N	%	N	%				
Ethnicity	Kinh	30	31,6	65	68,4	1,967	1,05-3,682	0,033
	Others	23	19	98	81			

Ethnicity has a statistically significant relationship with students' knowledge about COVID-19 prevention because $p = 0,033 < 0,05$. Specifically, Kinh students have higher knowledge than other ethnic students 1,967 times.

Table 4. Relationship between training and students’ knowledge about COVID-19 prevention

	Knowledge					OR	95% CI _{OR}	P
	Good		Not good					
	N	%	N	%				
Training	Trained	28	40	42	60	3,227	1,695-6,141	0,000
	Not trained yet	25	17,1	121	82,9			

Training on COVID-19 prevention has a statistically significant relationship with students’ knowledge because $p = 0,000 < 0,05$. Specifically, students who have been trained on COVID-19 have higher knowledge than students who have not been trained 3,227 times. This is reasonable given the fact that only 32,4% of students in Tan Trao University have been trained on COVID-19 prevention.

Table 5. Multivariate regression analysis between related factors to students’ knowledge of COVID-19 prevention

Related factors	OR	95% CI	p
Ethnicity	2,166	1,125-4,17	0,021
Training	3,442	1,782-6,65	0,000

After multivariate logistic regression analysis, ethnicity and training on COVID-19 prevention were statistically significantly related to students’ knowledge about COVID-19 prevention because $p < 0,05$. The research results are different from Asuka Hatabu’s Study (2020), gender, major, education level, nationality, place of residence and psychological factors (personal awareness and extroversion) are related with knowledge and attitudes toward COVID-19 [4].

The relevant factors of the study are different from the study of Dao Thi Ngoc Huyen and colleagues. There is a difference in knowledge between 5th and 6th-year students [3].

According to research by Hamdan Mohammad Albaqawi (2020), the overall average score of knowledge questions is 9,85, equivalent to 82,1%. Female students, in their 4th year, have high knowledge about COVID-19 [8]. This result is also different from the results of our study.

In our study, we analyzed factors related to students’ knowledge and did not analyze factors related to students’ attitudes about COVID-19 prevention because the research results showed that: knowledge of students about COVID-19 prevention is low (24,5%), students’ attitude in COVID-19 prevention is quite high (94%). The objective of the research team is also not to evaluate the students’ practice in the COVID-19 prevention because the assessment of practice is quite complicated when based only on the available

questionnaires, which may also be a limitation of our study.

Recommendation:

Tan Trao University: It is necessary to have a specific plan for training all students on knowledge of prevention of COVID-19 in particular and dangerous infectious diseases, because there are many new infectious disease now and in the future.

Conclusion:

- 24,5% students have sufficient knowledge.
- Ethnicity and training about COVID-19 prevention were related to students’ knowledge on COVID-19 prevention ($p < 0,05$).

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