

Knowledge, Attitude, and Behavior of Tanjungpura University Undergraduate Students towards Nasopharyngeal Carcinoma

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Abstract: Nasopharyngeal carcinoma is the most frequent head and neck cancer. The incidence of nasopharyngeal carcinoma significantly increased. Nasopharyngeal carcinoma is associated with risk factors linked to a lifestyle that usually begins in adolescence and young adulthood, such as undergraduate students. This research identifies undergraduate students' knowledge, attitude, and behavior about nasopharyngeal carcinoma. The study used a descriptive study with a cluster sampling method. As many as 100 undergraduate students from 8 faculties in Tanjungpura University filled out a questionnaire and analyzed using a statistical program with a descriptive statistical test. As much as 82% of respondents had received information about nasopharyngeal carcinoma from various sources. Knowledge was divided into 3 categories of levels, namely good (76-100% correct), fair (56-75% correct), and poor (<56%). At the same time, attitude and behavior were divided into positive (score>20) and negative (score<20). The test results showed that the level of knowledge of the undergraduate students of 52% was good, the attitude was 100% positive, and the behavior was 100% positive. Therefore, undergraduate students at Tanjungpura University had good knowledge, a positive attitude, and positive behavior toward nasopharyngeal carcinoma. This study implies that adequate information is important in determining knowledge, attitudes, and behavior towards nasopharyngeal carcinoma.

Keywords: attitude; behavior; knowledge; nasopharyngeal carcinoma

INTRODUCTION

Nowadays, non-communicable disease has become a worldwide issue. The development of this disease takes a long time. Thus, it is also called chronic disease. One example of non-communicable disease is cancer.¹ Cancer is a term for a malignant tumor. Its unique characteristics make cancer difficult to treat and often result in death.²

There are many types of cancer known today. One of them is nasopharyngeal carcinoma. Nasopharyngeal carcinoma originated from nasopharynx epithelial cells. Nasopharyngeal carcinoma is the most frequently happens in head and neck cancer.^{3,4}

According to GLOBOCAN, the number of global incidences of nasopharyngeal carcinoma in 2018 experienced a significant increase compared to 2012, with 129,079 new cases (0.7%) and 72,987 (0.8%) mortality. This number causes nasopharyngeal carcinoma to be occupied the 23rd rank in the world as the most frequent cancer.^{5,6}

The area with the highest incidence of nasopharyngeal carcinoma globally is Asia, amounting to 109,221 new cases and obtaining a proportion of 84.6% of the total number of patients worldwide. In Southeast Asia, nasopharyngeal carcinoma incidences rank 10th compared to other cancers with 34,681 new

cases and 8th in mortality with 22,231 deaths. Brunei has the highest incidence of nasopharyngeal carcinoma globally, with an average of 9.9 sufferers per 100,000 people. This number beat China's number of new cases in 2012. Indonesia ranks 4th in the world with 17,992 incidences and 11,204 deaths.^{5,6}

In Indonesia, nasopharyngeal carcinoma ranks 5th after breast, cervical, lung, and liver cancer. The cities with the highest number of incidences of nasopharyngeal carcinoma in Indonesia are Bandung, Malang, Denpasar, Manado, and Surabaya.^{4,6,7} The province of West Kalimantan does not have specific data on nasopharyngeal carcinoma. However, a preliminary study conducted at Dr. Soedarso Hospital Pontianak with histopathological examination data sources found 157 cases from 2014 to June 2019. The incidence rate fluctuates every year but tends to be higher than other types of cancer. Pontianak City has the highest incidences, followed by Sambas and Kubu Raya.

The etiology of nasopharyngeal carcinoma is still unclear. However, environmental substances such as Epstein-Barr Virus, alcohol, cigarettes, salted foods, canned foods, traditional medicines, formaldehyde, wood dust, and non-environmental risk factors such as gender and ethnicity have been determined as risk factors for nasopharyngeal carcinoma.⁸⁻¹¹ Being an Asian is a risk factor for nasopharyngeal carcinoma due to the narrower structure of the nasopharynx compared to other ethnicities. Therefore, repeated infections can occur and lead to malignancy.⁸ Nasopharyngeal carcinoma can be prevented by lifestyle modification by reducing exposure to lifestyle-based risk factors such as cigarettes, alcohol, salted fish, and others.^{12,13} This lifestyle modification is one of the health behaviors affected by knowledge and attitude. Better knowledge and attitude result in better behavior.¹²

The summit point age of nasopharyngeal carcinoma incidence is 45 to 55 years. According to epidemiological studies, the average latent period of cancer is 15 years or more.^{3,11,14} Thus, when calculated with the latent period, it can be assumed that exposure begins from adolescence to young adulthood. Undergraduate students are one of the groups belonging to adolescence and young adulthood. In addition, undergraduate students tend to live a leisurely lifestyle and can make more mature decisions than adolescents and a small proportion of interference from other people such as parents. Therefore, the researchers feel that research describing the level of knowledge, attitudes, and behavior towards risk factors for nasopharyngeal carcinoma in undergraduate program students at Tanjungpura University is necessary.

Previously, several studies have been conducted to discuss the level of knowledge about nasopharyngeal carcinoma. However, most research focused on doctors as the front line in treating nasopharyngeal carcinoma. Research by Balachandran (2011) in Perak and Fernandes (2017) in Sydney suggested that primary doctors' knowledge about nasopharyngeal carcinoma is insufficient.^{15,16} Meanwhile, research by Rinaldi (2018) at Sumatera Utara University suggested that medical students have a fair knowledge of nasopharyngeal carcinoma.¹⁷ In Malaysia, Ting (2019) conducted this kind of research that targeted the general public. It suggested that the general knowledge and interest in seeking information about nasopharyngeal carcinoma is low.¹⁸

Unlike the previous study, this study targets undergraduate students as a part of the adolescent to the young adult community with a high risk of developing nasopharyngeal carcinoma in the future. This study also described attitudes and behavior towards nasopharyngeal carcinoma.

This study described the knowledge, attitude, and behavior toward nasopharyngeal carcinoma of Tanjungpura University's undergraduate students. It also identified the respondent's attentiveness to nasopharyngeal carcinoma.

MATERIAL AND METHOD

This study used the quantitative method with a descriptive survey design. The population in this study was Tanjungpura University's undergraduate students. The sampling technique chosen for this study was cluster sampling which divided the sample based on the sample's faculty. The inclusion criteria included (i) Tanjungpura University non-medical undergraduate students, age range 18-24 years old; and (ii) Willing to fill out the questionnaire. The exclusion criteria were (i) Questionnaire filled was not complete; and (ii) Respondent was detected as "unfocused" on Quilgo. It was obtained as many as 100 respondents, according to the calculation of the sample size using the Slovin formula.

This descriptive study used questionnaires composed and adapted to the level of the general public rather than expert questions that might be irrelevant to them. The questionnaire was formed with fundamental questions about nasopharyngeal carcinoma, especially regarding risk factors. The instrument used in this study was a questionnaire divided into three sections: knowledge, attitude, and behavior. The questionnaire's validity and reliability were tested using product-moment correlation (r) for validity and Alpha Cronbach for reliability. As many as 30 people from the Faculty of Teacher Training and Education, Tanjungpura University, took part as respondents in testing the validity and reliability of this questionnaire.

Invalid and unreliable questions were omitted. Finally, this study obtained 9 valid and reliable questions for the knowledge section and 10 questions each for the attitude and the behavior section.

The knowledge section questionnaire used Guttman Scale with "true" or "false" as options of answer. At the same time, the attitude and the behavior knowledge section used the Likert Scale. Each of the correct answers in the knowledge section was given 1 point. This point was accumulated and interpreted as <6 points were poor knowledge, 6 were fair knowledge, and >6 were good knowledge. The options of answer for the attitude section were "strongly agree," "agree," "not agree," and "strongly not agree.". The highest point for each question was 4, and the lowest was 1. This point was accumulated and interpreted as >20 points for the positive attitude and <21 for the negative attitude. The scoring system for the behavior section was similar to the attitude section. If the points >20 were considered positive behavior, <21 points were negative behavior. However, the options were divided as "often," "sometimes," "seldom," and "never."

The questionnaire was distributed using Google Form with the help of add-ons that could detect if the respondent did not focus on the questionnaire and opened a website or other application, namely Quilgo. This add-on was used to minimize acts of fraud such as cheating. The questionnaire was completed from July 24th until August 8th, 2021. Data collection began with disseminating Google Forms containing initial information on prospective respondents. Prospective respondents were contacted via WhatsApp and given the questionnaire via Google Form link equipped with Quilgo. Each respondent was given 30 minutes to complete the questionnaire. The data obtained were analyzed univariately using a statistical program.

Furthermore, this study has been reviewed by the ethical committee of the Medical Faculty, Tanjungpura University. The number of letters is 4126/UN22.9/PG/2021.

RESULT

Respondent's Characteristics

Respondents were characterized by gender, class year, origin, and information sources of nasopharyngeal carcinoma. Table 1 shows the characteristic of respondents. The majority of respondents were female (69%). There were more respondents from class 2018 (35%) than in any other year. Pontianak City (45%) was the majority area of origin of the respondent. The majority of respondents had received information about nasopharyngeal carcinoma. As much as 82% of respondents had previously received information about nasopharyngeal carcinoma. Respondents' most widely accepted source of information came from social media (61%).

Table 1. Respondents' Characteristics

Characteristics	Total	Percentage
Gender		
Male	31	31.00%
Female	69	69.00%
Year of Class		
2018	35	35.00%
2019	13	13.00%
2020	19	19.00%
2021	33	33.00%
Origin		
Bengkayang	3	3.00%
Kapuas Hulu	4	4.00%
Ketapang	4	4.00%
Kubu Raya	8	8.00%
Landak	4	4.00%
Mempawah	5	5.00%
Pontianak	45	45.00%
Sambas	2	2.00%
Sanggau	11	11.00%
Sekadau	4	4.00%
Singkawang	1	1.00%
Sintang	3	3.00%
Outside of West Kalimantan	6	6.00%
Information Sources of NPC		
Social Media	61	61.00%
Electronic Media	6	6.00%
Printed Media	5	5.00%
People Around	10	10.00%
Never	18	18.00%

Knowledge Level Of Nasopharyngeal Carcinoma

The study results from 100 respondents found that the knowledge of Tanjungpura University undergraduate students about nasopharyngeal carcinoma was at a good level. As many as 52% of respondents had a good level of knowledge about nasopharyngeal carcinoma, 22% fair, and 26% poor. Table 2 describes the frequency distribution of knowledge levels based on each variable. It was found that more male respondents had a poor level of knowledge. Of the total male respondents, 38.8% had less knowledge, 32.2% were sufficient, and 29% were good. Meanwhile, 20.3% had a poor level of knowledge for females, 17.4% were fair, and 62.3% were good. Based on this percentage, it can be concluded that female respondents had relatively better knowledge.

The year of class with a better level of knowledge than the others was the 2021 batch, with respondents with a good level of knowledge of 54.5%, 27.3% fair, and 18.2% poor. If grouped by region of origin, the respondents with the poor level of knowledge were Kapuas Hulu with a percentage of 75%. This percentage was the largest compared to other cities or districts. Meanwhile, 25% of respondents had a good level of knowledge.

Respondents who had received information about nasopharyngeal carcinoma from various media had much better knowledge than respondents who had not received any information about nasopharyngeal carcinoma. Most respondents (82.00%) had received information about nasopharyngeal carcinoma. The most common source of information was social media (61%). The majority of respondents who had received information from various media had good knowledge. In comparison, the respondents who did not receive any information about nasopharyngeal carcinoma were as many as 18 people, and all had a poor knowledge level.

Table 2. Distribution of Knowledge Level Based on The Respondent's Characteristics

Variables	Knowledge						Total	
	Poor		Fair		Good		N	%
	N	%	N	%	N	%		
Gender								
Male	12	38.80	10	32.20	9	29.00	31	100.00
Female	14	20.30	12	17.40	43	62.30	69	100.00
Year of Class								
2018	8	22.80	5	14.30	22	62.90	35	100.00
2019	7	53.80	5	38.50	1	7.70	13	100.00
2020	5	26.30	3	1.60	11	57.90	19	100.00
2021	6	18.20	9	27.30	18	54.50	33	100.00
Origin								
Bengkayang	1	33.30	0	0	2	66.70	3	100.00
Kapuas Hulu	3	75.00	0	0	1	25.00	4	100.00
Ketapang	1	25.00	1	25.00	2	50.00	4	100.00
Kubu Raya	2	25.00	3	37.50	3	37.50	8	100.00
Landak	1	25.00	1	25.00	2	40.00	4	100.00
Mempawah	1	20.00	2	40.00	2	40.00	5	100.00
Pontianak	13	29.00	7	15.50	25	55.50	45	100.00
Sambas	0	0	1	50.00	1	50.00	2	100.00
Sanggau	4	36,40	3	27.20	4	36.40	11	100.00
Sekadau	0	0	1	25.00	3	75.00	4	100.00
Singkawang	0	0	0	0	1	100.00	1	100.00
Sintang	0	0	0	0	3	100.00	3	100.00
Outside of West Kalimantan	0	0	3	50.00	3	50.00	6	100.00
Information Sources of Nasopharyngeal Carcinoma								
Social Media	6	9.80	16	26.20	39	64.00	61	100.00
Electronic Media	1	16.70	2	33.30	3	50.00	6	100.00
Printed Media	0	0	2	40.00	3	60.00	5	100.00
People Around	1	10.00	2	20.00	7	70.00	10	100.00
Never	18	100.00	0	0	0	0	18	100.00

Table 3 shows how respondents answer each of the questions. Respondents performed well in risk factors questions, especially regarding smoking and alcoholic drink. Meanwhile, a question with the highest incorrect answer was question number 8 about symptoms of nasopharyngeal carcinoma.

Table 3. Answer Distributions of Knowledge Section

#	Statements	Options	Frequency	Percentage
1.	Carcinoma is a cancer that originates from mucosal or glandular epithelial cells.	True	86	86.00%
		False	14	14.00%
2.	Females are more at risk of developing nasopharyngeal carcinoma.	True	38	38.00%
		False	62	62.00%
3.	Consumption of alcohol and cigarettes increases the risk of developing nasopharyngeal carcinoma.	True	91	91.00%
		False	9	9.00%
4.	Wood dust and formaldehyde can increase the risk of nasopharyngeal carcinoma because they can cause irritation and persistent inflammation.	True	85	85.00%
		False	15	15.00%
5.	Salted foods contain nitrosamine substances that are good for the nasopharynx.	True	38	38.00%
		False	62	62.00%
6.	Epstein-Barr virus infection can increase the chance of nasopharyngeal carcinoma.	True	82	82.00%
		False	18	18.00%
7.	People with chronic respiratory disease history have a lower risk of developing nasopharyngeal carcinoma.	True	41	41.00%
		False	59	59.00%
8.	Symptoms of nasopharyngeal carcinoma tend to be non-specific.	True	51	51.00%
		False	49	49.00%
9.	Radiotherapy and chemotherapy are part of the therapy for nasopharyngeal carcinoma.	True	77	77.00%
		False	23	23.00%

Attitude towards Nasopharyngeal Carcinoma

While the knowledge section shows various results, all respondents had a positive attitude toward nasopharyngeal carcinoma. There was no difference in attitude level between variables. The respondents' answers for the attitude section can be seen in Table 4. As many as 97% of respondents were interested in finding more information about nasopharyngeal carcinoma. However, interestingly, there were still 2% of respondents that felt nasopharyngeal carcinoma was not important to be known. 39% of respondents believed alcohol drinking could not be separated from the young generation. However, 96% of respondents thought it was not okay to drink alcohol even at a young age. As many as 27% of respondents believed salted fish consumption was important to maintain nasopharyngeal health.

Table 4. Answer Distributions of Attitude Section

#	Statements	Options	Frequency	Percentage
1.	I am interested in finding information about nasopharyngeal carcinoma.	Strongly Agree	13	13.00%
		Agree	84	84.00%
		Disagree	3	3.00%
		Strongly Disagree	0	0.00%
2.	I feel nasopharyngeal carcinoma does not need to be known.	Strongly Agree	0	0.00%
		Agree	2	2.00%
		Disagree	58	58.00%
		Strongly Disagree	40	40.00%
3.	I consider cigarettes and alcohol cannot be separated from the young generation.	Strongly Agree	13	13.00%
		Agree	26	26.00%
		Disagree	38	38.00%
		Strongly Disagree	23	23.00%
4.	The incidence of nasopharyngeal carcinoma is influenced by lifestyle, especially diet.	Strongly Agree	27	27.00%
		Agree	69	69.00%
		Disagree	4	4.00%
		Strongly Disagree	0	0.00%
5.	I feel it is okay to drink alcohol at a young age.	Strongly Agree	1	1.00%
		Agree	3	3.00%
		Disagree	26	26.00%
		Strongly Disagree	70	70.00%
6.	I assume that using someone else's toothbrush or glass can transmit the Epstein-Barr Virus.	Strongly Agree	23	23.00%
		Agree	67	67.00%
		Disagree	9	9.00%
		Strongly Disagree	1	1.00%
7.	I feel that personal items such as toothbrushes and drinking glasses should not be shared.	Strongly Agree	58	58.00%
		Agree	39	39.00%
		Disagree	1	1.00%
		Strongly Disagree	2	2.00%
8.	In my opinion, the habit of brushing teeth has a relationship with the health of the nasopharynx.	Strongly Agree	16	16.00%
		Agree	68	68.00%
		Disagree	15	15.00%
		Strongly Disagree	1	1.00%
9.	Consumption of salted fish daily is important to maintain the health of the nasopharynx.	Strongly Agree	4	4.00%
		Agree	23	23.00%
		Disagree	55	55.00%
		Strongly Disagree	18	18.00%
10.	I feel that canned food consumption should not be done every day.	Strongly Agree	40	40.00%
		Agree	54	54.00%
		Disagree	1	1.00%
		Strongly Disagree	5	5.00%

Behavior towards Nasopharyngeal Carcinoma

All of the respondents had a positive behavior toward nasopharyngeal carcinoma. There was no difference in behavior level between variables.

Table 5 shows respondents' answers to each question in the behavior section. One example of health behavior was seeking information.¹⁹ In this study, more than half of respondents (53.00%) never intentionally sought information about nasopharyngeal carcinoma. Regarding information about nasopharyngeal carcinoma, it was also found that most respondents (55.00%) rarely heard or saw information about it in printed and digital media, either intentionally or unintentionally. However, even so, the majority of respondents had an interest in finding out more about the topic of nasopharyngeal carcinoma.

Respondents relatively avoided the risks of nasopharyngeal carcinoma, especially smoking. However, although 91% of respondents did not smoke actively, they tended to smoke passively.

Table 5. Answer Distributions of Behavior Section

#	Statements	Options	Frequency	Percentage
1.	Look for information about nasopharyngeal carcinoma.	Often	0	0.00%
		Sometime	11	11.00%
		Seldom	36	36.00%
		Never	53	53.00%
2.	See or hear information about nasopharyngeal carcinoma in printed and digital media.	Often	1	1.00%
		Sometime	26	26.00%
		Seldom	55	55.00%
		Never	18	18.00%
3.	Active smoking.	Often	2	2.00%
		Sometime	4	4.00%
		Seldom	3	3.00%
		Never	91	91.00%
4.	Passive smoking.	Often	17	17.00%
		Sometime	44	44.00%
		Seldom	34	34.00%
		Never	5	5.00%
5.	Drink alcohol.	Often	1	1.00%
		Sometime	4	4.00%
		Seldom	16	16.00%
		Never	79	79.00%
6.	Exposed to wood dust.	Often	1	1.00%
		Sometime	14	14.00%
		Seldom	36	36.00%
		Never	49	49.00%
7.	Sharing the same toothbrush and drinking glass with others.	Often	2	2.00%
		Sometime	9	9.00%
		Seldom	20	20.00%
		Never	69	69.00%
8.	Kissing.	Often	1	1.00%
		Sometime	3	3.00%
		Seldom	6	6.00%
		Never	90	90.00%
9.	Consume salted fish.	Often	11	11.00%
		Sometime	44	44.00%
		Seldom	37	37.00%
		Never	8	8.00%
10.	Consume canned food.	Often	0	0.00%
		Sometime	39	39.00%
		Seldom	50	50.00%
		Never	11	11.00%

DISCUSSION

Knowledge of Nasopharyngeal Carcinoma

Based on gender comparison, it can be said that the knowledge of female respondents about nasopharyngeal carcinoma is relatively better than male respondents. This result does not match the previous study, which showed no difference in the level of knowledge about nasopharyngeal cancer between male and female respondents in Hmong populations.²⁰ This result can be attributed to the different patterns between males and females seeking and processing information. Females tend to be more careful in deciding the source of information so that the results of the information obtained are satisfying.²¹

The 2021 batch had a better level of knowledge than the other batches. The difference in curiosity between generations may influence this result. According to Hartini, students in the early semester are more

curious than students in the advanced semester.²² This result does not match the previous study, which showed no difference in knowledge between generations.²³

Based on the percentage of each region of origin, Kapuas Hulu was the area with the largest percentage of respondents with poor knowledge compared to other regions. Kapuas Hulu region is a rural area comprising 23 sub-districts and 278 villages.²⁴ This result may relate to the characteristics of rural communities that are more concerned about traditional values over science.²⁵ Previous studies stated that residents in rural areas had lower knowledge than in city areas.¹⁸

In this study, it was found that the majority of the respondents had a good level of knowledge about nasopharyngeal carcinoma. The results of this study supported the previous study, where most of the respondents had good knowledge about cancer, especially its risk factors.^{26,27} However, another study identified that public knowledge of nasopharyngeal carcinoma is still low.¹⁹ The result of this study could be influenced by the fact that most respondents had received information about nasopharyngeal carcinoma. The majority of respondents who had received information from various media had a good knowledge level. In comparison, the respondents who did not receive any information about nasopharyngeal carcinoma were as many as 18, and all had poor knowledge. This result is supported by a previous study stating that media is an effective way to increase public knowledge and awareness, especially targeting the younger generation about cancer, including nasopharyngeal carcinoma.²⁷

Technology plays a large role in health promotion, especially on social media. Health promotion is an effort to make people able to maintain and improve their health. One of the health promotion efforts is education. Easy and inexpensive social media has increased public access to various health information. Social media increases public knowledge about health. It starts from the basic of disease and its prevention, better use of health services, medication adherence and participation in health decisions, increasing social support, and sharing support with others so that people can independently disseminate their positive experiences about healthier behavior changes.²⁸ According to Notoatmodjo, the source of information is one of the important elements that can affect knowledge.¹² Information received both formally and non-formally can directly influence a person's level of knowledge, especially in this technologically advanced era.¹²

Other factors that might play roles in a good level of knowledge in this study are age and educational level. Age and educational level affect how people. This study's respondents were young adults aged 18-24 years old. The older human gets, the higher their mental and intellectual maturity will be. Young adults are more mature than children and teenagers and have a better ability to accept information that results in better knowledge. Besides that, all of the respondents of this study were undergraduate students. Undeniably, the higher a person's educational level is, the easier it is for them to receive information and, in the end, have more knowledge.¹² That is why respondents in this study relatively had good knowledge about nasopharyngeal carcinoma.

However, the knowledge about symptoms of nasopharyngeal carcinoma was still inadequate. This question becomes the question with the least number of correct respondents. A previous study stated that the respondents' knowledge of identifying nasopharyngeal cancer symptoms is still lacking.^{16,29} Symptoms are important indicators encouraging individuals to seek medical help when sick. A good understanding of the non-specific symptoms of nasopharyngeal carcinomas, such as epistaxis, tinnitus, anosmia, or serous otitis media, will speed up seeking medical assistance, diagnosis, and treatment.³⁰

Attitude towards Nasopharyngeal Carcinoma

It was found that all respondents had a positive attitude towards nasopharyngeal carcinoma. A previous study also showed positive attitudes from the young generation regarding head and neck malignancies such as nasopharyngeal cancer.³¹ There is no difference in attitude when viewed from the aspect of the characteristics of the respondents. According to gender, class, regional origin, and sources of information about nasopharyngeal carcinoma received, they all had a positive attitude.

Various factors influence attitudes. One of the factors that influence attitudes is education. Education can influence the formation of attitudes. Attitudes can change due to new knowledge and perspectives gained after a stage of education. Education can affirm that attitude for people who have had a good attitude from the beginning. Meanwhile, transformation can occur after receiving education for individuals whose attitudes tend to be negative.³²

In this study, the respondents were students who took higher education, so the overall attitude was positive. In addition, the respondent's positive attitude may be influenced by the respondent's sound knowledge of nasopharyngeal carcinoma. In addition to knowledge, other aspects play an essential role in a person's attitude, namely thoughts, beliefs, and emotions. Together with knowledge, these aspects will play a role in an individual determining attitudes.¹²

Respondents performed very well on each question from the attitude section. Most respondents claimed to be interested in seeking information about nasopharyngeal carcinoma. A similar study showed the opposite result. Only a few of the respondents were interested in seeking information about nasopharyngeal carcinoma because they felt uncomfortable with the cancer subject, so they preferred not to know.¹⁸ Nevertheless, it may be influenced by high curiosity. Curiosity is one of the factors that motivate individuals to search for information.³² Information-seeking behavior is also often associated with socio-economic conditions. In this study, the respondents were students whose education level was sufficient to make health-conscious choices such as seeking information about nasopharyngeal carcinoma.³³

Unfortunately, this study did not conduct specific interviews regarding why respondents were interested in seeking information about nasopharyngeal carcinoma.

Behavior towards Nasopharyngeal Carcinoma

Health behavior is an action that each individual chooses to avoid certain diseases with certain behaviors. Health behavior helps individuals to achieve better health, self-satisfaction, and self-actualization. Health behavior consists of six aspects: physical activity, nutrition, stress management, health responsibility, interpersonal support, and self-actualization. Good health behavior at a young age will affect future health. Positive behavior will bring positive health levels as well.³⁴

In line with the positive attitude, all respondents in this study had a positive attitude towards nasopharyngeal carcinoma. There was no difference in behavior when viewed from the characteristics of the respondents, as all respondents showed positive behavior. Besides knowledge, attitude is assumed to be an essential key to understanding human behavior. In the health sector, attitudes and knowledge often influence behavior regarding particular objects.¹² Previous study stated that the public had good behavior towards cancer risk factors.³⁵

The positive results in this study were due to the good knowledge and attitudes of the respondents regarding nasopharyngeal carcinoma. It is known that knowledge and attitude play a close role in forming a person's behavior towards an object, in this case, nasopharyngeal carcinoma. However, although knowledge and attitudes can influence behavior, knowledge and attitudes are still combined with personal experiences; good knowledge and attitudes do not necessarily lead to good behavior.³⁴

One example of health behavior is seeking information.¹⁹ In this study, most respondents never intentionally seek information about nasopharyngeal carcinoma. Regarding information about nasopharyngeal carcinoma, it was also found that respondents rarely heard or saw information about nasopharyngeal carcinoma in printed and digital media, either intentionally or unintentionally. These results are matched with the previous study.¹⁸ This result can be attributed to the lack of education in the mass media about nasopharyngeal carcinoma. However, even so, the majority of respondents had an interest in finding out more about the topic of nasopharyngeal carcinoma.

Respondents performed well in each behavior especially smoking. However, although the number of active smokers was relatively low, almost all respondents had inhaled secondhand smoke. Indonesia is a country with the third highest number of smokers in the world. Awareness of active smokers about the surrounding environment is still low, as shown by the behavior of active smokers who still smoke in public places. As a result, many people are forced to become passive smokers.³⁶

Another significant result is that almost all respondents had ever consumed salted fish. The number of respondents who consumed salted fish was the highest compared to other behaviors. These results are supported by previous research, where most people in China and South-eastern Asian countries had ever consumed salted fish.³⁷ The behavior of eating salted fish can be influenced by many things, such as price, quality, preferences, and tastes that are more individualistic.³⁸

However, there are some limitations in this research. One is the absence of further interview questions regarding the respondent's behavior towards certain components regarding the exact frequency of performing certain behaviors such as smoking and drinking alcohol. In this study, the respondents were not asked about the reasons for carrying out certain behaviors, such as seeking information about nasopharyngeal carcinoma. In addition, there were no questions that discussed ethnicity and food that was burned or smoked as risk factors for nasopharyngeal carcinoma. Also, in measuring behavior, it is undeniable that there is a possibility of bias in remembering. Respondents may remember incorrectly or cannot remember their intensity in performing certain behaviors.

CONCLUSION

Based on the result of this study, it can be concluded that Tanjungpura University undergraduate students' knowledge of nasopharyngeal carcinoma was mostly good. The attitude and the behavior

regarding nasopharyngeal carcinoma were positive. It is recommended that Tanjungpura University's undergraduate students share their knowledge about nasopharyngeal carcinoma to increase public awareness. It is also recommended for health institutions to conduct education or campaigns regarding nasopharyngeal carcinoma through various media, especially sosial media.

CONFLICT OF INTEREST

None declared.

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