EFFECT OF AGE AND EDUCATION LEVEL ON RELATED WITH ANXIETY LEVELS TO PATIENT IN EXAMINING NASOPHARYNGEAL SWAB TEST FOR COVID-19

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ABSTRACT

Introduction: *Patients undergoing nasopharyngeal swabs for Covid-19 detection may feel anxiety. This study was conducted to see the effect age and education level on related with anxiety level.* ***Methods:*** *The design of this study was descriptive-analyticity, a cross-sectional approach at Bumame Pharmacy Clinic in March 2021. This study population was all patients subjected to a swab test. The sampling technique with the accidental technique approach was 404 respondents. The instrument used to measure anxiety in Hamilton Anxiety Rating Scale (HARS). The statistical test used is the chi-square test.* ***Results:*** *The statistical tests show a practical age on anxiety level undergo nasopharyngeal swab is p-value 0.002. And then, the effect of education on anxiety level is p-value 0.038.* ***Conclusions and Recommendations:*** *Patient knowledge regarding nasopharyngeal swab examination in detecting covid-19 is needed. Of course, this will impact the psychology of the patient. Providing education regarding nasopharyngeal swab examination in the detection of covid-19 can undoubtedly be a recommendation for further research*

Keywords: *Anxiety, Nasopharyngeal swab, Covid-19*

Introduction

Coronavirus (COVID-19) has emerged as a global health threat due to its accelerated geographic spread over the last two decades (Umakanthan et al. 2020). The COVID-19 epidemic started from the city of Wuhan in China towards the end of December 2019 and

It has since spread rapidly to Thailand, Japan, South Korea, Singapore, and Iran entered the early months. This recent emergence of a previously unknown coronavirus in China has had huge impacts globally. Covid-19 is a challenge to the global public health (El Zowalaty and

Jarhult 2020). In Indonesia, from 3 January 2020 to 26 March 2021, there have been 1,482,559 confirmed cases of COVID-19 with 40,081 deaths (WHO 2021)

Most patients infected with COVID-19 have a history of contact with a surface virus or infected patients or carriers of the virus. In addition, infected patients have common symptoms relative to the common cold, such as fever, cough, fatigue, and shortness of breath in severe cases. The most common complication in infected patients is pneumonia, respiratory distress, and rare shock(China 2020). According to China's National Health Commission (NHC), about 80% of deaths were reported among patients over 60 years of age, while 75% had previous health problems, including diabetes and cardiovascular disease. In line with WHO Situation Report No. 7 issued on 27 January 2020, cases detected outside China had a mean age of 45 (2-74 years). Male predominant among detected patients (71%).

A study of 138 hospitalized patients with pneumonia infected with the COVID-19 showed that the mean age was 56 years (interquartile range: 42-68 years; range: 22-92 years) and 75 (54.3%)) were male while 63 (45.7) were female (Wang et al. 2020). Older people, especially those with previous health problems such as asthma, diabetes, or heart disease, are more likely to die from COVID-19 (CCDC 2020).

PCR detection for SARS-CoV-2 mRNA on nasopharyngeal swabs is the standard for diagnosing active Covid-19 disease in asymptomatic subjects and symptomatic patients without characteristic radiological findings. Nasopharyngeal swabs appear to be a simple procedure, still imprecise nasopharyngeal sampling, performed by untrained operators, can be the cause of the false-negative conclusions relevant to clear negative impact on epidemic control efforts and, if PPE is not used correctly, this can expose healthcare workers and patients to a risk of transmission (Piras et al. 2020).

Patients undergoing a nasopharyngeal swab for Covid-19 detection often feel anxious. The level of anxiety of each patient is different. This is caused by several factors, including the patient's age.

Methods

The study's design was descriptive-analytic through a cross-sectional approach conducted at the Bumame Pharmacy Sunter Clinic in March 2021. The population in this study were all patients who were subjected to PCR swab. The sampling technique using the accidental technique approach was 404 respondents. The instrument used to measure anxiety levels to patients use Hamilton Anxiety Rating Scale (HARS). Assuming the chi-square test, the statistical test assessed the relationship between age and education level.

Results

a. Univariate Analysis

Table 1

Distribution of Age Frequency Patients to Swab test ((n = 404)

Age	Frequency	Percentage
> 36 years	108	26,7
26-35 years	158	39,1
17-25 years	138	34,2
Total	404	100

Based on table 1, the frequency distribution of the age of the patients who will undergo the swab test shows that most of the respondents are aged 26-35 years as many as 158 (39.1%) of respondents, aged 17-25 years as many as 138 (34.2%) respondents and aged over 36 years as many as 108 (26.7%) respondents.

Table 2

Distribution of Education Level Patients to Swab test (n = 404)

Education	Frequency	Percentage
College	374	92,6
Senior High School	30	7,4
Total	404	100,0

Based on table 2, the frequency distribution of the education level of the patients who will take the swab test shows that most of the respondents have higher education as many as 374 (92.6%) respondents and those with low education are 30 (7.4%).

Table 3

Distribution of Anxiety Patients to Swab test (n = 404)

Anxiety	Frequency	Percentage
Not present	35	8,7
Mild	24	5,9
Moderate	43	10,6
Severe	302	74,8
Total	404	100

Based on table 3, the frequency distribution of the patient reduction rates for swab test shows that most of the respondents experienced severe 302 (74.8%) of respondents, who experienced moderate 43 (10.6%) respondents, not present 35 (8.7%) respondents, and mild anxiety were 24 (5.9%) respondents.

b. Bivariate Analysis

Table 4

Effect of Age with Anxiety Level Patient to Swab test (n = 404)

Age (years)	Anxiety								Total		*P value*
	Not present		Mild		Moderate		Severe				
	n	%	n	%	n	%	n	%	n	%	
> 36	6	5,5	2	1,9	7	6,5	93	86,1	108	100	
26-35	8	5,1	13	8,2	22	13,9	115	72,8	156	100	0,002
17-25	21	15,2	9	6,5	14	10,1	94	78,1	138	100	
Total	35	8,7	24	5,9	43	10,6	302	74,8	404	100	

Based on table 4, the effect age with anxiety patient's level about the swab test shows that of the 108 respondents more than 36 years old, most of the respondent's severe anxiety 93 (86.1%) respondents. Moderate 7 (6.5%) respondents, mild 2 (1.9%) respondents, not present anxiety 6 (5.5%) respondents. Age 156 respondents 26-35 years, the majority of respondents severe 115 (72.8%) respondents, moderate 22 (13.9%) respondents, mild 13 (8.2%), not present anxiety 8 (5.1%) respondents. Age 138 respondents 17-25 years, the majority of anxiety respondents severe 94 (78.1%) of respondents, moderate 14 (10.1%), mild 9 (6.5%).) respondents and those not present 21 (15.2%) respondents. The bivariate analysis results obtained a *p-value* of 0.002 (p-value <0.05). It can be concluded that there is an effect between age and a patient's anxiety level about the swab test.

Table 5

Effect of Education Level with Anxiety Level

Education	Anxiety								Total		*P value*
	Not present		Mild		Moderate		Severe				
	n	%	n	%	n	%	n	%	n	%	
College	35	9,4	24	6,4	42	11,2	273	73	374	100	
Senior High School	0	0	0	0	1	3,3	29	96,7	30	100	0,038
Total	35	8,7	24	5,9	43	10,6	302	74,8	404	100	

Patient to Swab test

Based on table 5, the effect between education and anxiety level patient's regarding the swab test shows that of the 374 education college respondents, most of the respondent's severe anxiety 273 (73%) respondents, 42 (11.2%) moderate, 24 (6, 4%) mild, and 35 (9.4%) respondents not present anxiety.Thirty0 respondents with senior high school education anxiety 29 (96.7%) severe, 1 (3.33%) moderate, mild, and not present anxiety 0 (0%). Bivariate shop-value value of 0.0p-valuable <0.05), it can be concluded that there is an effect between education level and anxiety patients regarding the swab test.

Discussion

Anxiety refers to the overstimulation of a person's inability to encounter a problem. The COVID-19 pandemic has a severe threat to physical health and life. It also has a far-reaching impact on psychological issues. During the COVID-19 pandemic, a person may experience crisis, fear, and anxiety due to the influence of the media and their observations around them (Phan et al. 2020).

In carrying out the swab test examination, many patients have do not want to be afraid for fear of the pain it will cause. Besides anxiety or being scared of performing the antigen swab procedure, the patient is also anxious about the coronavirus itself, which can cause things that can influence the psychology of patients and families. Besides, the patient is worried about the pain caused during the examination; the patient is too acute about the examination results. Because if the swab test results are positive, patients should undergo treatment and be separated from the family (Piras et al. 2020).

The results showed that most respondents experienced anxiety in the severe category. Stress often causes the patient to undergo a swab test examination. Many things cause this to haunt the patient, such as fear of having a swab test, fear of the result, fear of side effects, and so on. Although this is a normal thing, it will be a problem if the problem in the patient becomes severe so that it can disturb the patient's psychology (Huang and Zhao 2020). Education can bring someone to get the broadest possible information and knowledge. People who have higher education will have more comprehensive insight and knowledge than people who have lower education Fields, (Gurning, Karim, and Misrawati 2014).

Anxiety disorders can occur at any age, more often in adulthood. If the psychological maturity of the individual is getting better, the more mature one's psychology will be to adapt to anxiety. The maturity of an individual will affect a person's coping ability so that older individuals can deal with stress because individuals have a more remarkable ability

to adapt to anxiety than young people (Leigh and Clark 2018).

Age affects someone behaves and acts. The more mature a person better-prepared person is to face a problem. The older person more mature is to think so that they can control their emotions. The maturity of an individual will affect the coping ability of a person's mechanism so that a more mature individual will not experience a little anxiety because the individual has a more remarkable ability to adapt to stress than the immature age (Coles et al. 2001)

Highly educated will receive a rational response compared to those with little or no education. The higher the community education, the more insight and knowledge will be gained, and always want to know about the latest developments, including learning about the nasopharyngeal swab test (Valent et al. 2021)

Conclusion

Patient knowledge before nasopharyngeal swab test the detection of covid-19 is needed. Of course, this will impact the psychology of the patient and the family. Education regarding nasopharyngeal swab examination in detecting covid-19 can undoubtedly recommend further research.

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