

Knowledge, Attitude and Practice of Community Health Center Pharmacists toward COVID-19 in West Sumatera Province, Indonesia

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Abstract:- Community Health Center Pharmacists is one of the health workers the Community Health Center which plays an important role in the management of pharmaceuticals and clinical pharmacy services. The Community Health Center (CHC) is the front line in breaking the chain of transmission of COVID -19 which is included in the Task Force for the Acceleration of COVID-19 in Indonesia. Knowledge, attitude and practice Community Health Center Pharmacists related countermeasures COVID-19 is indispensable in carrying out its role according to the standard pharmacy services in a pandemic era COVID-19. This study aimed to evaluate the level of knowledge, attitudes and practices Community Health Center Pharmacists in Provincial West Sumatera to COVID-19 and examines the relationship between these three variables. This study was an observational study design with a *cross-sectional*. The research instrument used a questionnaire which was declared valid with validity and reliability tests. A total of 114 Community Health Center Pharmacists in West Sumatera province were respondents study who met the inclusion criteria by filling out the questionnaire via *Google Form* is distributed via *WhatsApp*. The results of this study, Community Health Center Pharmacists has a high level of knowledge (87.7%), a positive attitude (62.3%) and good practices (53.5%) against COVID-19. Knowledge of COVID-19 is influenced by marital status and attitudes towards COVID-19 are influenced by gender, age and length of practice and practice of COVID-19 is influenced by gender, marital status and length of practice. From the results of statistical tests between knowledge, attitude and practice Community Health Center Pharmacists against COVID- 19, there is a significant relationship between attitude and practice ($p=0.016$) and no significant relationship between knowledge with attitude ($p=0.316$) and knowledge with practice ($p=0.157$)

Keywords:- Knowledge; Attitude; Practice; Community Health Center Pharmacist; West Sumatera; COVID-19.

I. INTRODUCTION

The first COVID-19 case in Indonesia was announced on March 2, 2020 or about 4 months after the first case in China. The first case in Indonesia in March 2020 was 2

cases and after that on March 6, 2 cases were found again. The number of COVID-19 cases continues to increase. At the beginning of the addition of hundreds of cases and until now the addition of cases to thousands. On April 30, 2021, there were additional 5,500 positive cases, 5,202 patients recovered and 187 patients died. So the total positive cases of Covid-19 reached 1,668,368 cases, a total of 1,522,634 patients recovered and 45,521 people died. [6]. COVID-positive cases in the first 19 Provincial West Sumatera announced on 26 March 2020. Until now, per the date of 30 April 2021, positive cases COVID-19 amounted to 36,931 cases, with total patient recovered 33,675 cases and 795 cases of death [15].

In dealing with the COVID-19 case, the Indonesian Government formed a Task Force for the Acceleration of Handling COVID-19 which was ratified through Presidential Decree No. 7 of 2020, which was later updated through Presidential Decree No. 9 of 2020 [13]. Community Health Centers (CHC) with number 10.134 health centers are spread all over Indonesia serves as the spearhead of health services for all Indonesian people. Located in each sub-district and having a regional concept, CHC are the frontline in breaking the chain of transmission of Covid-19. At this time, the focus of handling the Covid-19 pandemic is not only on handling cases, but also needs to empower the community in an effort to break the chain of transmission. The role of CHC is very important in realizing community independence through community empowerment through behavior change, where people are encouraged to have healthy living behaviors. It is also the responsibility of 275 health centers spread across every town in the province of West Sumatera to help break the chain of transmission of COVID-19 which is already widespread in society Provincial West Sumatera [7].

One of the health workers at the Community Health Centers who plays a role in public health services at the CHC is a pharmacist. Community Health Center Pharmacists are responsible for providing pharmaceutical services in the form of managing pharmaceutical preparations and medical consumables and clinical pharmacy services [14]. Pharmacists as one of the health workers who provide pharmacy services to patients in health centers can not avoid direct contact with the patient or with other health workers who perform patient management, So that in every work process requires knowledge, attitudes and

practice appropriate handling protocol COVID-19 . Through this study, researchers are trying to download level of knowledge, attitudes and practices of Pharmacists Health Center in West Sumatera to COVID -19.

II. RESEARCH METHOD

The study was conducted from April to July 2021. This study was an observational study with a cross-sectional design . The population is all pharmacists on duty at CHC spread in the Province Sumatera West. Inclusion criteria of Pharmacist who works at CHC in Provincial West Sumatra and willing to become respondents and fill out a questionnaire to complete. The exclusion criteria were A health center pharmacist who was not willing to be a respondent and did not fill out the questionnaire completely and a CHC Pharmacist who was used as a questionnaire validation respondent.

The number of respondents who specified are 1 56 people CHC Pharmacist in Provincial West Sumatra is incorporated in the organization IAI (IAI PD Hisfarkemas

Sumatra) in the province of West Sumatra. A total of 42 respondents were excluded from the study sample because not met the inclusion criteria , namely 30 person as respondent validation of a questionnaire and 12 people are not willing to become respondents and do not fill out the questionnaire , so that samples can be processed for analysis is as much as 114 respondents.

The instrument used in this study was a questionnaire. The questionnaire was developed largely based on the World Health Organization (WHO) Questions and Answers on COVID-19 and from several existing studies adapted to the pharmaceutical field . In the validation process for the questionnaire, *content validation* was carried out by five pharmacists and one linguist. Furthermore, the validation and reliability of the questionnaire were carried out by 30 CHC Pharmacists (exclusion) . Then statistical tests were carried out, for *Validity Test* with *Bivariate Pearson* correlation (Pearson Moment Product) and *Corrected Item-Total Correlation* and for *Realibility Test* with Conbrach Alpha .

III. RESULT AND DISCUSSION

Table 1 . Characteristics of Respondents

No	Characteristics of Respondents	n = 1 14		
		F	%	
1	Gender			
	Man	18	15.8	
	Woman	96	84.2	
2	Age			
	< 35 years old	56	49.1	
	≥ 35 years	58	50.9	
3	Marital status			
	Marry	83	72.8	
	Not Married	31	27.2	
4	Level of education			
	Pharrmacist	1 11	97.4	
	Pharmacist +S2/S3	3	2.6	
5	Practice Length			
	< 10 years	65	57.0	
	≥ 1 0 years	49	43.0	

The data collection method was carried out by distributing online questionnaires in the form of a *Google Form* by utilizing social media (*Whatsapp*). The questionnaire contains 47 questions covering: sociodemographic data (10 questions) evaluation of knowledge level (17 questions) , attitudes (8 questions) and practice (12 questions) about COVID-19. After the data is collected, the data is tabulated and coding is done. The data was then processed using the SPSS (*Statistical Package for the Social Sciences*) program version 2 6. The Spearman correlation was used to determine the relationship between the knowledge, attitudes and practice variables of CHC Pharmacist A towards COVID-19.

Table 2. Distribution of Knowledge Questions (n= 114)

No	Question	Right		Wrong		Total	
		f	%	f	%	f	%
1	COVID-19 is a disease caused by the SARS 2 Coronavirus (SARS-CoV-2).	111	97.4 %	3	2.6 %	114	100
2	The first case of COVID-19 was discovered in Hainan, China.	59	51.8 %	55	48.2 %	114	100
3	The incubation period (from exposure to the first appearance of symptoms) of COVID-19 is 2-5 days	53	46.5 %	61	53.5 %	114	100
4	Fever, fatigue, convulsions and dry cough are the main symptoms of COVID-19	17	14.9 %	97	85.1 %	114	100
5	All patients who are positive for COVID-19 have symptoms	108	94.7 %	6	5.3 %	114	100
6	The virus that causes COVID-19 can spread through respiratory droplets when a patient coughs/sneezes even if they are more than two meters away	67	58.8 %	47	41.2 %	114	100
7	There is no difference in the risk of potential exposure to pharmacists who work in services with pharmacists who work in non-services.	68	59.6 %	46	40.4 %	114	100
8	Always and regularly washing hands with soap or hand sanitizer can reduce the spread of the COVID-19 virus.	114	100 %	0	0.0 %	114	100
9	Avoiding touching your eyes, nose and mouth when serving patients can prevent COVID-19 infection.	111	97.4 %	3	2.6 %	114	100
10	Using a mask or face shield and the presence of a glass barrier when serving patients who redeem drugs can reduce the spread of COVID-19	112	98.2 %	2	1.8 %	114	100
11	Individuals aged < 60 years and do not have health problems may use non-medical masks	40	35.1 %	74	64.9 %	114	100
12	To reduce the transmission of COVID-19, disinfection of environmental surfaces can use <i>Na. Hypochlorite</i> (eg: Bayclin) 0.1%.	105	92.1 %	9	7.9 %	114	100
13	Mixing bleach and household cleaning fluids to get the maximum disinfectant is the right thing to do.	44	38.6 %	70	61.4 %	114	100
14	<i>Azithromycin/levofloxacin</i> given to COVID-19 patients to kill the SARS-2 coronavirus	44	38.6 %	70	61.4 %	114	100
15	WHO prohibit the use <i>dexametason</i> in patients COVID-19 were not severe, but the patient had had for other therapies	85	74.6 %	29	25.4 %	114	100
16	Vitamin D in COVID-19 therapy is needed by people who are not exposed to sunlight (isolation)	85	74.6 %	29	25.4 %	114	100
17	The use of <i>chloroquine</i> for COVID is not recommended because it can cause heart rhythm disturbances	101	88.6 %	13	11.4 %	114	100

Table 3 . Frequency Distribution of Respondents Based on Knowledge

No	Knowledge	f	(%)
1	Tall	100	87.7
2	Low	14	12.3
Amount		114	100.0

Table 4 . Distribution of Attitude Questions (n= 114)

Question	STS		TS		N		S		SS	
	f	%	f	%	f	%	f	%	f	%
1. I am worried that when I serve patients there is no glass barrier between me and the patient	0	0,0 %	1	0.9 %	6	5.3 %	44	38.6 %	63	55.3 %
2. I'm worried if the patient who redeems the medicine to the Pharmacy Room / Puskesmas Pharmacy doesn't wear a mask	0	0,0 %	0	0.0 %	0	0.0 %	28	24.6 %	86	75.4 %
3. I am afraid that while working in pharmaceutical facilities I do not use PPE (masks, face shields or gloves).	0	0,0 %	2	1.8 %	3	2.6 %	41	36.0 %	68	59.6 %
4. I feel the need to ensure the availability of pharmaceutical supplies needed for handling COVID-19	0	0,0 %	0	0,0 %	0	0.0 %	35	30.7 %	79	69.3 %
5. I am willing to provide pharmaceutical services for patients with COVID-19 infection with complete PPE	0	0.0 %	0	0.0 %	2	1,8 %	51	44.7 %	61	53.5 %
6. I feel uncomfortable when patients wait for drugs in the Pharmacy Room / Public Health Center without keeping a distance.	0	0.0 %	0	0,0 %	2	1.8 %	40	35.1 %	72	63.2 %
7. I am willing to explain to patients how to prepare disinfectant at home	0	0,0 %	1	0.9 %	5	4.4 %	46	40.4 %	62	54.4 %
8. If I am exposed to COVID-19, I will isolate according to the COVID-19 handling guidelines	0	0,0 %	0	0,0 %	1	0.9 %	26	22.8 %	87	76.3 %

Table 5 . Frequency Distribution of Respondents Based on Attitude

No	Attitude	f	(%)
1	Positive	71	62.3
2	Negatif	43	37.7
Amount		114	100.0

Table 6 . Distribution of Practice Questions (n= 114)

QUESTION	TP		Jr		Sr		Se	
	f	%	f	%	f	%	f	%
1. Do you wash your hands the right way?	0	0.0%	5	4.4 %	37	32.5 %	72	63.2 %
2. Do you always use a mask, face shield or gloves at work?	1	0.9 %	4	3.5 %	33	28.9 %	76	66.7 %
3. Do you avoid touching your eyes, nose or mouth when interacting with patients or customers?	2	1.8 %	5	4.4 %	23	20.2 %	84	73.7 %
4. Do you always keep a distance with people who come to room Farmasi / Pharmacy Health Center	0	0,0 %	7	6.1 %	27	23.7 %	80	70.2 %
5. Do you clean the surface area where the work area is with disinfectant?	3	2.6 %	15	13.2 %	50	43.9 %	46	40.4 %
6. After work, do you follow the health protocol when you get home (shower and change clothes)	2	1.8 %	13	11.4 %	41	36.0 %	58	50.9 %
7. I remind patients who will enter the Pharmacy Raung / Public Health Center to put	0	0.0 %	5	4.4 %	21	18.4 %	88	77.2 %

on the correct mask								
8. Do you limit the number of patients awaiting medicine at room F armasi / Pharmacy Health Center	14	12.3 %	21	18.4 %	39	34.2%	40	35.1 %
9. I make sure the hand washing facilities where I work are functioning properly	3	2.6 %	13	11.4 %	30	26.3 %	68	59.6 %
10. Do you ensure the availability of masks in room F armasi/ Pharmacy Health Center you	1	0.9 %	2	1.8 %	15	13.2 %	96	84.2 %
11. Did you participate in any training related to COVID-19 during the pandemic (offline or online)	19	16.7 %	45	39.5 %	28	24.6 %	22	19.3 %
12. Are you educating the public regarding COVID-19.	6	5.3 %	37	32.5 %	52	45.6 %	19	16.7 %

Table 7 . Frequency Distribution of Respondents Based on Practice

No	Pratik	f	(%)
1	Well	61	53.5
2	Not Good	53	46.5
	Amount	114	100.0

Table 8 . Relations Sociodemografi with Tingkat P : What Knowledge

SOCIODEMOGRAPHY	TALL		LOW		TOTAL		Pvalue	Yates Correction	Fishers Test
	f	%	f	%	f	%			
Gender									
Man	15	83.3 %	3	16.7 %	18	100%	0, 537		0.462
Woman	85	88.5 %	11	11.5 %	96	100%			
Age									
< 35 years old	48	85.7%	8	14.3%	56	100%	0.522	0.412	
≥ 35 years	52	89.6%	6	10.4%	58	100%			
Marital status									
Marry	74	89.1 %	9	10.9 %	83	100%	0, 444	0.585	
Not Married	26	83.9 %	5	16.1 %	31	100%			
Level of education									
Pharmacist	97	87.4 %	14	12.6 %	111	100%	0, 511		1.00
Pharmacist + S2 /S3	3	100.0 %	0	0, 0 %	3	100%			
Practice Length									
< 10 years	57	87.7 %	8	12.3 %	65	100%	0, 992	0.000	
≥ 10 years	43	87.7 %	6	12.3 %	49	100%			

Table 9 . Relations Sociodemografi with Sikap

SOCIODEMOGRAPHY	POSITIVE		NEGATIVE		TOTAL		Pvalue	Yates Correction	Fishers Test
	f	%	f	%	f	%			
Gender									
Man	7	38.9 %	11	61.1 %	18	100%	0, 026	4,979	
Woman	64	66.7 %	32	33.3 %	96	100%			
Age									
< 35 years old	33	58.9%	23	41.1%	56	100%	0.468	0.526	
≥ 35 years	38	65.5%	20	34.5%	58	100%			
Marital status									
Marry	53	63.8 %	30	36.2 %	83	100%	0, 570	0.322	
Not Married	18	58.1 %	13	41.9 %	31	100%			

Level of education								
Pharmacist	70	63.1 %	41	36.9 %	1 11	100%	0, 294	0.556
Pharmacist + S2 /S3	1	33.3 %	2	66.7 %	3	100%		
Practice Length								
< 10 years	38	58.5 %	27	41.5 %	65	100%	0, 333	0.939
≥ 10 years	3 3	67.3 %	16	32.7 %	49	100%		

Table 10. Relationship S osiodemografi with P raktik

SOCIODEMOGRAPHY	GOOD		NOT GOOD		TOTAL		Pvalue	Yates Correction	Fishers Test
	f	%	f	%	f	%			
Gender									
Man	7	43.7 %	11	56.3 %	16	100%	0, 175	2.066	
Woman	54	56.2 %	42	43.8 %	96	100%			
Age									
< 35 years old	29	51.8%	27	38.7%	56	100%	0.717	0.131	
≥ 35 years	32	52.9%	26	48.2%	58	100%			
Marital status									
Marry	50	60.2 %	33	39.8 %	83	100%	0, 018	5.561	
Not Married	11	35.5 %	20	64.5 %	31	100%			
Level of education									
Pharmacist	58	52.2 %	53	47.8 %	1 11	100%	0, 102		0.247
Pharmacist + S2 /S3	3	100.0 %	0	0.0 %	3	100%			
Practice Length									
10 years	31	50, 8 %	30	49, 2 %	6 1	100%	0, 152	4,249	
> 10 years	3 7	69, 8 %	1 6	30, 2 %	53	100%			

Table 11. Relationship between Knowledge Level and Attitude

Knowledge level	Attitude				Total		P Value
	Positive		Negative		N	%	
	f	%	f	%			
Tall	64	64.0	36	36.0	100	100	0, 311
Low	7	50.0	7	5 0.0	14	100	
Amount	71	62.3	43	37.7	1 14	100	

Table 12. Relationship between Attitude and Practice

Attitude	Practice				Total		P Value
	Well		Not good		N	%	
	f	%	f	%			
Positive	45	38.4	26	3 6.6	71	100	0.0 07
Negative	16	37.2	27	62.8	43	100	
Amount	61	53.5	53	4 6.5	1 14	100	

Table 13. Relationship between Knowledge Level and Practice

Knowledge level	Practice				Total		P Value
	Well		Not good		N	%	
	f	%	f	%			
Tall	56	56.0	44	44.0	100	100	0, 154
Low	5	3 5, 7	9	64.3	14	100	
Amount	61	53.5	53	4 6.5	1 14	100	

Based on the results of the validity and reliability tests, which were conducted on 30 pharmacists at the West Sumatra Province Health Center (exclusion), the questionnaire was declared valid with a *Pearson* correlation value > 0.05 for each question item with a total of 17 questions about knowledge, 8 questions about attitudes and 12 questions about practice. The reliability with *Cronbach-alpha value* > 0.6 is 0.857, 0.753 and 0.808, respectively.

The sample in this study is a pharmacist who works CHC in the province of West Sumatra, a total of 114 respondents. Data characteristic of the general taken is sex, worth, education, marital status, place of residence, and the tenure of respondents.

Based on research that has been conducted on 114 respondents in table 1, it is known that from the demographic data it can be seen that most of the respondents are female pharmacists as many as 96 people (84.2%), productive age in the range < 35 years (56 people = 49.1%). Distribution of respondents by age categories Indonesian Association Young Pharmacist Group (IYPG), where the division category of pharmacists who are younger than 35 years are included young pharmacist, so that the characteristics of age divided into < 35 years and ≥ 35 years. And the characteristics of those who were married were 83 people (72.8%) with a sex distribution of fewer married men (8 people) and an average education level of pharmacists (111 people = 97.4%). Characteristics of practical experience as a Pharmacist spread with a range of 1 to 20 years, so it was taken category < 10 years and ≥ 10 years, so we get the old practice of < 10 years (65 people = 57.0%).

This result is similar to a study conducted on pharmacists in Goa, India that most of the pharmacists were female (79.5%) with the age of 35 years under 80% of the total respondents [17]. As for the tenure, the same as the research conducted in Egypt, where most of the community pharmacists in Egypt worked with a practice period of less than 10 years, which was 82.4% [2]. Based on research that has been done that out of 114 respondents note that respondents who have a knowledge level high as 100 persons (87.7%), and respondents who have a knowledge level lower as much as 14 people (12.3%). The results obtained in this study are the same as the research conducted by M. Saqlain [11] in Pakistan, which conducted a knowledge survey about COVID-19 on health workers including pharmacists, in the study it was found that pharmacist knowledge was 94.7%, this is higher compared to other health workers such as doctors and nurses. It was also discovered by Gao [4] in Thailand. In addition, Muhammad [11] in Pakistan also found that 71.5% of respondents who were community pharmacists had high knowledge of COVID-19.

The results regarding pharmacists' knowledge of

COVID-19 obtained in this study differed from the results of a study conducted by Tesfaye [21], where it was reported that 53.2% of pharmacists in Ethiopia had low knowledge. In addition, from a study conducted in Bangladesh, only 48.3% of the respondents had high knowledge [17].

Almost all respondents (97.4%) already know the name of the virus that causes COVID-19 correctly, namely Coronavirus SARS 2 (SARS-CoV-2). This is higher than that found by Cacodcar [1] which is around 87%. However, for the place where the first case was found, more than 50% of respondents answered incorrectly (51.8%). The first case was reported by doctors in China's Wuhan province. Some people who are exposed to suspected because of the contact with the market gross Sea food (seafood) Wuhan.

Seen in tables 2 and 3 of the highest score achievement of the 17 questions about knowledge, it was found that the highest achievement was found in questions number 1, 5, 8, 9, 10 and 12 with the respondent's achievement level of 97.4%, 94.7%, 100%, 97.4%, 98.2% and 92.1% respectively. In understanding this question, almost all respondents know how to protect themselves from the spread of COVID-19, namely by always and routinely washing hands with soap and hand sanitizer, avoiding touching eyes, nose and mouth when serving patients can prevent COVID-19 infection. And to reduce the transmission of COVID-19, disinfection of environmental surfaces can use 0.1% Na Hypochlorite (eg Bayclin). Using a mask or faceshield and the presence of a protective glass when serving patients who redeem drugs can reduce the spread of COVID-19, this is in line with that found in Nigeria by 91% [2] and higher than that found in Ethiopia and Egypt by 68% and 66.7% [3].

Pharmacists have high knowledge of effective steps to reduce the spread of COVID-19. This is in line with research conducted by Cacodcar [1] which found that 93% of respondents had knowledge of preventive measures for this disease. Bhagavathula et al in their study in the UAE also found that the majority of health workers (85.6%) agreed that maintaining good hand hygiene, covering nose and mouth when coughing, and avoiding symptomatic patients could help prevent the transmission of COVID-19. A similar study in Thailand also found the same thing, namely 98% of respondents consisting of health workers also had knowledge about how to prevent the spread of the SARS-CoV-2 virus [4].

The lowest achievement was found in question number 4, which was only 14.9% of respondents who answered correctly regarding the main symptoms of COVID-19, namely fever, fatigue and dry cough, which was different from that found by Cacodcar ([1] by 61%, and by Alzoubi amounted to 68.4%. According to WHO the most common symptoms today are fever, fatigue, cough, and loss of ability to feel or smell (anosmia). Coronavirus, which is an RNA virus known to cause disease in channel pen digestion and respiratory tract in animals and Humans. Most

coronaviruses share a similar structure and route of infection. Therefore, the previously discovered infection mechanisms for other coronaviruses may also apply to SARS-CoV-2. There is increasing evidence that neurotropism is one of the common features of the coronavirus. One study, specifically investigated the neurologic manifestations of COVID-19 and was able to document CNS manifestations in 25% of patients (headache (13%), dizziness (17%), impaired consciousness (8%), acute cerebrovascular problems (3%), ataxia (0.5), and seizures (0.5 %)). There are also reports of meningitis / encephalitis associated with SARS-CoV2 accompanied by seizures (SARS-CoV2 RNA was detected in CSF). Other reports describe a patient who was exposed to COVID-19 early symptoms appear as status epilepticus focal [20]. Therefore, it makes sense why patients with COVID-19 experience seizures as a result of hypoxia, metabolic disturbances, organ failure, or even brain damage that may occur in people with COVID-19 [18].

Based on the research that has been done, in tables 4 and 5 of 114 respondents it is known that there are 71 respondents who have a positive attitude towards COVID-19 (62.3%) and 43 respondents who have a positive attitude (37.7%). Judging from the level of achievement of respondents in each of their statement of attitudes about COVID-19, it was found that the highest achievement of respondents in responding to COVID-19 well was found in their statements responding to worry when patients redeemed drugs at the Pharmacy Room / Public Health Center. not using a mask, here the attitude of the respondents reached 75.4%. This is supported by research conducted by Zhang that 85% of health workers are worried about being exposed to the COVID-19 virus at work [25]. In addition, the highest achievement was also in the statement where respondent pharmacists agreed to isolate according to the COVID-19 handling guidelines, which reached 76.3%.

Meanwhile, the lowest achievement of the respondent's attitude can be seen from their statements regarding the availability of pharmaceutical services for patients experiencing COVID-19 infection with complete PPE, where in this statement only 53.5% agreed. It is inversely proportional to the knowledge of the pharmacist where nearly all respondents answered using a mask or *faceshield* and the glass barrier when serving patients can reduce the spread of COVID-19 is 98.2%.

The attitude of pharmacists in this study is also in line with research conducted by S sebufu in Bangladesh which found 62.3% of respondents had a positive attitude towards COVID-19 [3]. Research conducted in Uganda also showed results that were not much different, namely 72.4% of respondents had a positive attitude [17]. Dan Zhang [24] also explained that the majority of the attitudes shown by medical personnel towards COVID-19 were more positive. It is the same with research in Saudi Arabia that more than 90% of respondents have a good attitude towards COVID-19 [17] and it is not much different from research in India,

which is more than 80% of respondents who are medical students give a positive attitude towards COVID-19 [9].

Attitudes clearly indicate the appropriateness of the reaction to a particular stimulus or object. A person's attitude towards an object is a feeling of support or partiality or a feeling of not supporting or not taking sides with an object. Attitude structure consists of three components that support each other, namely: cognitive component (perceptual component), affective component (emotional component), conative component (behavioral component). The components of these attitudes are very supportive in the formation of one's attitude in everyday life. However, there are several factors that can influence a person's attitude, including: personal experience, the influence of other people who are considered important, the influence of culture, mass media, educational institutions and religious institutions, and emotional factors [19].

Based on the research that has been done, in tables 6 and 7 it is known that from 114 respondents, respondents who have good practice are 61 people (53.5%) and respondents who have good practice are 53 people (46.5%).

From the level of respondent's achievement in each statement about the practice of COVID-19, it was found that the highest achievement of respondents was related to the respondent's statement about ensuring the availability of masks in the Pharmacy Room/Public Health Center, which was 84.2% of respondents. This is in line with the Decree No. 74 Year 2016 on Standards of Pharmaceutical Services in the Health Center, in addition to a role in the clinical pharmacy services, CHC Pharmacist also play a role in the management of pharmaceutical and medical consumable materials. During this pandemic, masks are one of the most important medical materials and must always be available at the CHC. In addition, in a study conducted by Zuckerman [14], one of the roles of pharmacists during this pandemic is to regulate the supply of drugs and medical materials apart from participating in the COVID-19 pharmacotherapy *working group*.

In practice Pharmacists Health Center, c apaian lows can be seen from the statement about the lack of educating the public related to COVID-19, in which this statement was only 16.7%. Followed by a pharmacist in the practice of participation in related training COVID-19 during a pandemic (*offline* or *online*) only reached 19.3%.

This study is in line with research conducted in Bangladesh, only 55.1% of respondents had good practices against COVID-19 [9]. The results are almost the same as the research conducted on the Addis Ababa Ethiopian community, it is known that the practice of COVID-19 is still bad only 49% [17]. In contrast to Saefi, where in the results of his research on students, it is known that the practice of COVID-19 is more dominant [18]. Alzoubi's research in Jordan also states that good practice is more dominantly carried out by those who have a health education

background. Likewise, research conducted by Zhang stated that the dominant resident staff had good practices against COVID-19 [25].

The COVID-19 pandemic requires pharmacists to make changes, both in terms of thinking, behaving, and working. The next challenge is a way of thinking and behaving that can improve the health status of medical workers and the community and be resilient to the threat of COVID-19. It takes the partnership of various parties and the readiness of the officers, both medical and non-medical to support it. The role of health workers who serve the community is very important in preventing the handling of COVID-19 at every level of intervention. Medical personnel are considered more capable of understanding the promotive and preventive patterns of COVID-19 in the community. In fact, health workers who serve the community, including officers in the Pharmacy Room (Puskesmas Pharmacists) who are at the forefront of handling COVID-19, are the group most vulnerable to contracting the SARS-CoV-2 corona virus. The implementation of service practices that meet health protocol standards must always be applied and the results of research that have been carried out provide an illustration that the practice of implementing services with health protocols has been able to be applied properly.

Table 8 shows the relationship of socio- demographic variables such as gender, age, education, marital status, and length of work to the level of pharmacist knowledge about COVID-19 . And there was no relationship between sociodemographic characters of gender, age, level of education and length of practice on the level of pharmacist knowledge of COVID-19 . For gender, P value > 0.05 was 0.537 and Fishers was 0.462. This is contrary to the research conducted by Masoud [9] , where women have a higher level of knowledge than men . And research conducted in Nepal by Devkota [1] , that male respondents have better knowledge than female respondents .

For age also does not have an effect on the level of knowledge where the Yates Correction Cs count $0.412 < Cs$ table 0.522. And this is contrary to the fact that age is something that influences a person's perception and mindset. The older one gets, the more one's grasping power and mindset develop, so that one will find it easier to receive information [12].

From marital status, it has an effect on knowledge with Yates' Cs correction count $0.585 > Cs$ table 0.444, which is in accordance with research that marital status and the meaning of life together affect a person's happiness [19] . Furthermore, several components or instruments of happiness can be identified objectively into the following, namely: fulfillment of physiological (material) needs, such as eating, drinking, clothing, housing, sexual life, physical health, and so on; fulfillment of psychological (emotional) needs, for example, a feeling of

Covid-19. For marital status, P value > 0.05 is 0.570

calm, peace, comfort, and security, and not suffering from inner conflicts, depression, anxiety, frustration, and so on; the fulfillment of social needs, for example having a harmonious relationship with the people around him, especially family, mutual respect, love, and respect; and the fulfillment of spiritual needs, for example being able to see all episodes of life from the perspective of the wider meaning of life, worship, and have a sense of belonging, faith in God ([16]).

As for the level of education, it does not affect the level of pharmacist knowledge about COVID-19. As indicated by P value > 0.05, namely 0.511 and Fishers 1,000. This is different from what was found in Pakistan and Bangladesh that the level of education significantly has an influence on the level of knowledge about COVID- 19 [5] . The level of education and experience are two of the factors that influence a person's knowledge. Education is an attempt to develop one's personality and abilities in order to understand something. Education affects the learning process, the higher a person's education, the easier it is for that person to receive information. Knowledge is very closely related to education where it is expected that someone with higher education will have more extensive knowledge. The higher the education, the easier it will be to accept new things and adapt easily to the new things [10].

And also for the length of practice does not show a significant effect with the Yates Correction Cs count $0.000 < Cs$ table 0.992. While experience is an event that has been experienced by someone in the past. In general, the more experience a person has, the more knowledge he gains. Experience will affect how to solve problems from previous experiences that have been experienced so that the experience gained can be used as knowledge if you get the same problem.

But in line with research conducted in Nigeria that there is no effect between age and work experience of health workers (one of whom is a pharmacist) on knowledge about COVID-19 [2]

From table 9 it can be seen that gender has a significant effect on respondents' attitudes in dealing with COVID-19 where $P < 0.05$ is 0.026 and Yates' Cs correction count is $4.979 > Cs$ table 0.026 . Similar to the research conducted by Masoud [9] , where gender had a significant influence on respondents' attitudes in dealing with COVID-19, and in this study, women had more positive attitudes than male respondents. In line with research by Zhong et. Al [24] , women show a more responsible attitude than men and men tend to exhibit risky behavior.

Meanwhile, marital status and education level did not have a significant influence on respondents' attitudes towards

and Yates Cs correction is $0.322 < Cs$ table is 0.570. And for education level, P value > 0.05 is 0.294 and Fishers Test is

0.556.

In addition, it was found that there was a relationship between the sociodemographic character of the respondent's age and the length of practice of the respondent with attitudes towards COVID-19 in this study. For age, Yates Correction Cs count was $0.526 > Cs$ table was 0.468 and the length of practice was obtained Correction was Yates Cs count was $0.939 > Cs$ table was 0.333 . The same result was conveyed by Muhammad et.al [11] from a study conducted in Pakistan, where over 26 years of age, a good level of education and knowledge contributed to forming a positive attitude towards COVID-19. And research in Bangladesh by Ferdous (2020) shows the results that older age, higher education level gives positive attitude towards COVID-19.

From table 10 it can be seen that the respondent's practice in dealing with COVID-19 is not influenced by the respondent's age and education level. For age, P value > 0.05 was 0.717 and Yates Cs correction calculated $0.131 < Cs$ table 0.717 and for education level, P value > 0.05 was 0.102 and Fishers Test was 0.247 . And according to research conducted in Ethiopia by Yimenu et. Al (2020), that sociodemographic factors such as age and education level have no effect on practice.

Meanwhile, practice is significantly influenced by gender, marital status and length of practice of the respondents. For gender, Yates Correction Cs count is $2.066 > Cs$ table is 0.175 . For marital status, P value < 0.05 was 0.018 and Yates Cs correction calculated $5.561 > Cs$ table 0.018 . And for the length of practice, Yates Correction Cs count is $4.249 > Cs$ table is 0.152 . And this contradicts the research conducted in Ethiopia by Yimenu et. Al (2020), that sociodemographic factors such as gender and tenure have no effect on practice. While research conducted in Yogyakarta by Sulistyawati [19], women tend to practice better than men because women tend to be the main *caregivers* in the family and women are more attentive to their surroundings, which will direct families to comply with health protocols.

Based on table 11, it can be seen that of the 100 respondents who have a high level of knowledge, 64 people (64%) of them have a positive attitude towards COVID-19 and 36 people (36%) of the other respondents have a negative attitude. In 14 people who have low knowledge, 7 people (50%) of respondents have a positive attitude, while 7 people (50%) have a negative attitude.

Statistical test obtained p value of $0.311 >$

0.05 . These results explain that there is no significant relationship between knowledge and attitudes. This is different from that found in China, that the level of knowledge of the respondents has a direct influence on attitudes [25].

The staff in the pharmacy room should have good knowledge to be able to show a good attitude. The hood positive should also be supported with concrete actions so

that the quality of health care can be realized. Attitude is not only the tendency to respond which is obtained from experience but the attitude of the response must be consistent. Yanti's research (2014) explains that good knowledge of health workers also has a significant relationship to their attitude in acting, as also explained by Notoatmodjo [12] that someone who has a positive attitude will tend to correctly understand any information or knowledge available.

Based on table 12, it can be seen that of the 71 respondents who had a positive attitude, 45 people (38.4%) had good practices while 26 people (36.6%) had bad practices. Meanwhile, of the 43 respondents who have a negative attitude, 16 people (37.2%) have good practices and 27 people (62.8%) have bad practices.

Statistical test obtained p value of $0.007 < 0.05$. These results explain that there is a significant relationship between pharmacist attitudes and pharmacist practices in dealing with COVID-19. The Community Health Center Pharmacist room is a community service place that also has a high risk of COVID-19 transmission, with the interaction of officers with patients with all kinds of work and activities that require them to be more vigilant and careful in providing services.

Attitude is a readiness to act, seen from the correlation of these theories are uncovered strong influence between the attitude held by the clerk of space pharmaceutical puskes m axles with their behavior towards COVID-19. The behavior of officers in providing services to people who have a risk of disease transmission is already in the good category and has become a habit that they do in their daily work. This is in accordance with research conducted in Jordan. Health workers in Jordan already have good habits in terms of preventing a disease, even before the outbreak of the COVID-19 virus, such as washing hands with hand sanitizer, using masks and following etiquette when coughing and sneezing [2].

Allport was quoted Soekidjo Notoatmodjo [12], said that the behavior may last longer (*long lasting*) when based on positive attitudes, compared with the behavior that is based on a negative attitude. According to Morgan and King, attitudes and behavior are consistent. Therefore, an individual's positive attitude towards COVID-19 will affect the individual's behavior in dealing with COVID-19.

The data in Table 13 can dilhat that of the 100 respondents who have a high level of knowledge, as many as 56 people (56.0%) do a good practice, while 44 people (44.0%) did not practice either. While the first four respondents who have a low level of knowledge, 5 people (35.7%) do a good practice, and 9 others (64.3%) did not practice either. Statistical test obtained p value of $0.154 > 0.05$. These results explain that there is no significant relationship between knowledge and practice. Similar to that found in Nigeria [2], although there is no strong correlation between the level of knowledge and

practice it appears that almost all respondents have good practices against COVID-19 (97.3%) .

Health protocols are rules and regulations that need to be followed by all parties in order to carry out activities safely during this pandemic. With the aim that people can continue to move safely and do not endanger the safety or health of others. Good practice from a pharmacist regarding the prevention of COVID-19 is very important in treating COVID-19 positive patients effectively and can reduce the associated risks [23] . The FIP (*International Pharmacy Federation*) has issued interim guidelines or guidelines for the pharmacy workforce outlining the main activities that are part of the professional responsibilities of a pharmacist during the current pandemic . In this guide, the implementation of health protocols during work is something that must be considered. Because COVID-19 is now a pandemic, then a poteker must follow and apply good hygienic conditions and me should take precautions , such as wearing gloves, protective clothing, goggles, face masks, and also maintain social distance appropriate from the patient and from officers other health [11] .

Questions related to the practice of health protocols , more than 90% of respondents always implement them, such as questions about washing hands, always using masks, *face shields* and or gloves and keeping a distance from other people who come to pharmacy facilities, more than 98% of respondents answer always do it. This result does not differ much from the study reported from Pakistan [5] .

IV. CONCLUSION

Based research shows that Community Health Center Pharmacist in the province of West Sumatra has a high level of knowledge (87.7%) , a positive attitude (62.3%) and good practices (53.5%) against COVID- 19 . Knowledge of COVID-19 is influenced by marital status and attitudes towards COVID-19 are influenced by gender , age and length of practice and practice of COVID-19 is influenced by gender, marital status and length of practice . From the results of statistical tests between knowledge, attitude and practice Community Health Centers Pharmacist in the province of West Sumatra to COVID-19, there is a significant relationship between attitude and practice ($p=0.016$) and no significant relationship between knowledge with attitude ($p=0.316$) and knowledge by practice ($p=0.157$).

REFERENCES

[1]. Devkota HR, Sijali TR, Bogati R, Clarke A, Adhikary P, Karkee R. How Does Public Knowledge, Attitudes, and Behaviors Correlate in Relation to COVID-19? A Community-Based Cross-Sectional Study in Nepal. *Front Public Health*. 2021 Jan 14;8:589372. doi: 10.3389/fpubh.2020.589372. PMID: 33520911; PMCID: PMC7842277.

[2]. Ebid, AIM, AS Ali, ME Mohamed, A. Saqr, A. Elsayy, S. Magdy, KA El- Fass. Knowledge, Practices

and Information Sources of Egyptian Community Pharmacists Towards the Novel Coronavirus (COVID-19) during the Peak of the Pandemic. *J. Adv. Pharm. res.* 2021 ,5(1), 222- 233.DOI: 10.21608/aprh.2020.48748.1118

- [3]. Gautier, JF, & Ravussin, Y. A New Symptom of COVID-19: Loss of Taste and Smell. *Obesity* , 28 (5), 2020 . 848. <https://doi.org/10.1002/oby.22809>
- [4]. Giao, H., Thi, N., Han, N., Khanh, T. Van, Ngan, VK, Tam, V. Van, & An, P. Le. (2020). *Knowledge and attitude toward COVID-19 among healthcare workers at District 2 Hospital, Ho Chi Minh City* . 13 (March), 2020 , 260–265.
- [5]. Hussain, *et al* . A National Study to Assess Pharmacists' Preparedness against Covid-19 during Its Rapid Rise Period in Pakistan. *PIOS One*. 2020
- [6]. Indonesian Ministry of Health. Daily Covid-19 data. 2021
- [7]. Ministry of Health RI. *Technical Instructions for Health Center Services During a Pandemic Period* . Indonesian Ministry of Health. 2020
- [8]. Presidential Decree No. 12 of 2020 Concerning Determination non-natural disasters Spreading C orona Disease Virus 2019 As a National Disaster. *KEPRES RI* , (01), 18–30. 2020
- [9]. Masoud AT, Zaazouee MS, Elsayed SM, et al. KAP-COVIDGLOBAL: a multinational survey of the levels and determinants of public knowledge, attitudes and practices towards COVID-19. 2021. *BMJ Open*2021;11:e043971. doi:10.1136/bmjopen-2020-043971
- [10]. Mubarak, Wahid Iqbal; Chayatin, N. ; SR, & Khoirul. *Health Promotion An Introduction to Teaching and Learning in Education*. Yogyakarta: Graha Ilmu. 2011
- [11]. Muhammad, K. *et al*. Knowledge, Attitude, and Practices of Community Pharmacists About Covid-19: A Cross Sectional Survey in 2 Provinces of Pakistan. *ResearchGate*. 2020
- [12]. Notoatmodjo, S. *Health Promotion Theory and Applications* . Jogjakarta: Rineka Cipta. 2007
- [13]. Pandemic, GTP *Protocol for the Acceleration of Handling the COVID- 19 Pandemic* .1–32. 2020
- [14]. Regulation of the Minister of Health of the Republic of Indonesia No. 74 of 2016. *Standards of Pharmaceutical Services at Public Health Centers*, Ministry of Health of the Republic of Indonesia. 2016
- [15]. Provincial Government. Boast. *West Sumatra Covid-19 info, April 30, 2021* . West Sumatra Province 2021
- [16]. Rahman, A., & Sathi, NJ *Knowledge, Attitude, and Preventive Practices toward COVID-19 among Bangladeshi Internet Users* . 17 (5). 2020
- [17]. Reema Karasneh, Sayer Al-Azzam, Suhaib Muflih, Ola Soudah, Sahar Hawamdeh, Yousef Khader. Media's effect on shaping knowledge, awareness of risk perceptions and communication practices of the COVID-19 pandemic among pharmacists. *Research in Social and Administrative Pharmacy*. Volume 17, Issue 1. 2021 . Pages 1897- 1902. ISSN 1551-7411. <https://doi.org/10.1016/j.sapharm.2020.04.027>.
- [18]. Saefi, M., Fauzi, A., Kristiana, E., Adi, WC, Muchson,

- M., Setiawan, ME, ... Ramadhani, M. Survey data of COVID-19-related knowledge, attitude, and practices among Indonesian undergraduate students. *Data in Brief* , 2020 , 31 .
<https://doi.org/10.1016/j.dib.2020.105855>
- [19]. Sulistyawati S, Rokhmayanti R, Aji B, Wijayanti SPM, Hastuti SKW, Sukei TW, Mulasari SA. Knowledge, Attitudes, Practices and Information Needs During the COVID-19 Pandemic in Indonesia. *Risk Manager Healthc Policy* . 2021 Jan 14;14:163-175. doi: 10.2147/RMHP.S288579. PMID: 33488129; PMCID: PMC7814231.
- [20]. Tang, D., Comish, P., & Kang, R. (2020). The hallmarks of COVID-19 disease. *PLoS Pathogens* , 16 (5), 1–24. 2020
- [21]. Tesfaye ZT, *et al* . Covid-19 Related Knowledge, Attitude, and Practice . 2020
- [22]. Among Hospital and Community Pharmacists in Addis Ababa, Ethiopia. *Integrated Pharmacy Research and Practice* : 2020. 105-112.
- [23]. Zeeny R. *et al* . Assessing Knowledge, Attitude, Practice, and Preparedness of Hospital Pharmacists in Lebanon towards Covid-19 Pandemic: A Cross-Sectional Study. *Journal of Pharmaceutical Policy and Practice* . 2020
- [24]. Zhong, Bao-Liang & Luo, Wei & Li, Hai-Mei & Zhang, Qian-Qian & Liu, Xiao-Ge & Li, Wen-Tian & Li, Yi. Knowledge, attitudes, and practices towards COVID-19 among Chinese residents during the rapid rise period of the COVID-19 outbreak: a quick online cross-sectional survey. *International Journal of Biological Sciences* . 2020 . 16. 1745- 1752. 10.7150/ijbs.45221.
- [25]. Zhang, M., Zhou, M., Tang, F., Wang, Y., Nie, H., Zhang, L., & You, G. Knowledge, attitude, and practice regarding COVID-19 among healthcare workers in Henan, China. *Journal of Hospital Infection* , 105 (2), 2020 , 183–187.