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FACTORS RELATED TO HYPERTENSION AMONG ELDERLY DURING COVID-19 PANDEMIC
Dewi Gustianti Rahayu, Puji Nurfauziatul Hasanah, Mona Yulianti, Indra Gunawan (PP. 1 - 10)

RELATIONSHIP OF KNOWLEDGE AND ATTITUDES WITH HIV - AIDS PREVENTION BEHAVIOR
IN STUDENTS
Muhamad Abdul Hadi, Burdahyat, Hana Fitria Andayani (pp. 11 -17)

RELATIONSHIP BETWEEN THE IMPLEMENTATION OF A NUTRITION-CONSCIOUS FAMILY
WITH NUTRITIONAL STATUS OF CHILDREN UNDER THE RED LINE
Evi Sonjati, Dini Afriani, Hendi Septiana, Hana Fitria Andayani (pp. 18 - 24)

THE RELATIONSHIP BETWEEN KNOWLEDGE AND ATTITUDE WITH THE BEHAVIOR OF
INCREASING HAND WASHING WITH SOAP (CTPS) AT SMK PELITA NUSA SUBANG
Nuridha Fauziyah , Karwati , Witri Dewi Mentari (25 - 31)

FACTORS INFLUENCING THE ROLE OF MENTAL HEALTH CADRES IN HANDLING PATIENT
WITH SCHIZOPHRENIA
Dini Maryam, Gita Arisara (pp. 32 -40)

THE RELATIONSHIP BETWEEN FEEDING PATTERNS IN TODDLERS WITH THE INCIDENCE OF
STUNTING
Meli Nida Saadatul Munada, Uu Sunarya, Ely Walimah (pp. 41 - 45)

THE RELATIONSHIP BETWEEN MATERNAL KNOWLEDGE LEVEL AND THE INCIDENCE OF
STUNTING IN TODDLERS AT SUKAMATRI HEALTH CENTER
Dini Justian , Dhea Rizkyani Solihah , Dini Afriani (pp. 46 - 52)

THE RELATIONSHIP BETWEEN THE LEVEL OF KNOWLEDGE AND THE LEVEL OF ANXIETY OF
WOMEN IN FACING MENOPAUSE IN THE MARGALAKSANA VILLAGE AREA SUMEDANG
REGENCY
Karwati , Mona Yulianti , Dini Afriani, Sri Yulianti (pp. 53 - 59)

THE RELATIONSHIP BETWEEN DIET AND THE INCIDENCE OF GASTRITIS IN ADOLESCENT
Serly Marcelina (pp. 60 - 65)

FACTORS ASSOCIATED WITH COMMUNITY PARTICIPATION IN THE COVID-19 VACCINE
PROGRAM
Neni Sumarni, Dadang Sulaeman, Hilman Taufik Wijayasamantri (pp. 67-75)

EFFECTIVENESS OF LAVENDER AROMATHERAPY INHALATION ON HEMODIALYSIS SIDE
EFFECTS IN PATIENTS WITH CHRONIC RENAL FAILURE
**Neni Sumarni , Iis Tarlih Kunaedi , Muhamad Abdul Hadi , M. Ikbal Surya Fadilah , Tasya Kamila
Wiliansyah , Yusuf Rahmat Rodiansyah (pp. 76 - 82)**

FACTORS RELATED TO HYPERTENSION AMONG ELDERLY DURING COVID-19 PANDEMIC

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ABSTRACT

Hypertension is a condition where systolic blood pressure is more than 140 mm Hg and diastolic more than 90 mm Hg. Various factors can affect hypertension including sex, obesity and smoking. This study aimed to determine factors related to hypertension in the elderly during the Covid-19 pandemic in the Darmaraja Puskemas 2021 work area. This research was carried out in the village of Darmaraja District Voluntary. This type of research was quantitative research with cross sectional design. The study sample was elderly hypertension with aged 55-65 years as many as 73 respondents. Using the probability sampling technique. The data collection technique used a research instrument in the form of a questionnaire. The data analyzer used is Chi- square with statistic application program. The results showed that the elderly with hypertension showed experienced Grade I hypertension (mild) of 68.5% with a majority of female sex as much as 68.5% and obese by 79.5% and not smoking as much as 52.1% . The result of the statistic test p-value = 0.177(>0.05), that there is no relationship between hypertension and gender. As well as the value of p-value = 0.123(>0.05), that there is no relationship between hypertension and obesity , and p-value = 0.450(>0.05), that there is no relationship between hypertension and smoking.



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1. INTRODUCTION

Hypertension is a condition where the systolic blood pressure is more than 140 mmHg and the diastolic is more than 90 mmHg. Hypertension itself can affect anyone, both children, adults and the elderly. Based on WHO data in 2019, it states that the global prevalence of hypertension is as much as 22% of the total population in the world (WHO, 2019). Where the African region has the highest prevalence with hypertension sufferers of 27%, followed by Southeast Asia which occupies the 3rd highest position with a prevalence of 25% (WHO, 2019). Indonesia itself was recorded in 2019, there were 34.11% of hypertension sufferers in Indonesia (Litbangkes, 2019).

In December 2019 the world was shocked by the emergence of a new disease called Coronavirus Disease 2019 (COVID-19). This virus spread so quickly all over the world, including Indonesia, and in March 2020 WHO declared it a pandemic. Severe Acute respiratory Syndrome Coronavirus 2 (SARS-CoV-2) is transmitted from human to human by infecting the respiratory tract through droplets, causing a disease called Coronavirus Disease 2019 (COVID-19). As of the end of May 2021, there were 1,821,703 confirmed positive cases of COVID-19, 11.3% of these cases occurred in the elderly and the highest comorbid disease was hypertension, 50.3% (COVID-19, 2021). Old age and hypertension are among the conditions considered as a co-morbidity of COVID-19, so that it can increase the severity and death rate of a person. This will later be related to abnormalities in the cardiovascular system which will cause the elderly to be susceptible to

blood pressure disorders such as hypertension. This is in line with the results of a study conducted by (Ridwan et al., 2017) which states that the diseases that are commonly experienced by the elderly are diseases of the cardiovascular system, one of which is hypertension. adolescents as much as 13.2%, and 55.2% at the age of 55-64 years, 63.2% at the age of 65-74 years and 69% at the age of 75 years (Rikesdas, 2018).

The magnitude of the incidence of hypertension can be seen in terms of age, the prevalence of youth is 13.2%, and 55.2% at the age of 55-64 years, 63.2% at the age of 65-74 years and 69% at the age of 75 years (Rikesdas, 2018). 8 times, aged 65-69 years 2.45 times and age > 70 years 2.97 times. This is supported by the results of a study by Sudarso et al., (2019) explaining that this cardiovascular disease condition occurs with age where there is a decrease in the elasticity of the walls of the arteries and stiffness in the systemic blood vessels.

The BKKBN explains that the elderly (elderly) is someone who has reached the age of 60 years (Heri, 2019; Padila, 2013). As is the case in other countries in the world, Indonesia is also experiencing an increase in the number of elderly people. In 2019, the number of elderly Indonesians is projected to increase to 27.5 million or 10.3%, and 57.0 million people or 17.9% in 2045 (BPS, 2018). With increasing age, physiological functions decrease due to degenerative processes (aging). The process of aging in humans is a natural event, the loss of the ability of tissues in the body to repair themselves and maintain body functions resulting in a slow decline in body resistance, resulting in a progressive decline in health status and health problems in the elderly in addition to being susceptible to infectious diseases, the elderly are susceptible to non-communicable diseases (Mubarak et al., 2015).

West Java Province is one of the provinces where there are elderly people with hypertension, there are 9,459 elderly people in West Java experiencing hypertension (West Java Health Office, 2019). Sumedang is one of the districts with elderly hypertension, it was recorded that in 2019 as many as 82.96% had hypertension in Sumedang Regency (Sumedang Health Office, 2019). Hypertension in the elderly itself has an impact on sufferers where hypertension can cause the heart to work weakly when pumping blood, and can result in complications such as coronary heart disease, stroke which can cause death (Setyanto, 2017). The Institute for Health Metrics and Evaluation (IHME) in 2017 stated that out of 53.3 million deaths in the world, 33.1% of the causes of death were due to cardiovascular disease (IHME, 2017). Hypertension is a cause of early death, and the longer the problem increases (Setya, 2015). In Indonesia it is stated that as many as 1.7 million deaths in Indonesia are blood pressure (hypertension) of 23.7% (IHME, 2017).

There are many factors that influence the incidence of hypertension including age, gender, obesity, smoking and previous family history. The results of research conducted by Zein, et.al (2015), stated that gender (women) with hypertension is 0.600 with a positive direction. the relationship between the two variables is significant because of the p or sig value. of 0.000 or less than the error rate that we set is 0.05 (5%). meaning that patients aged >50 years and female are 6 times more at risk of developing hypertension, due to the influence of the decreased estrogen hormone due to menopause. In addition, Zein, et.al (2015), stated that the Spearman rank correlation between the variables Family History and Hypertension was 0.355 with a negative direction. The relationship between the two variables is significant because the value of P or Sig. of 0.025 or smaller than the error rate that we set is 0.05 (5%).

This means that patients who positively have a family history of hypertension are 3 times more at risk of developing hypertension. And the Spearman rank correlation between obesity and hypertension is 0.456 with a positive direction. This means that patients with obesity are 4 times more at risk of developing hypertension. Paat (2014). The research was conducted in Motoling Dua Village, Motoling District, South Minahasa Regency. It was found that 53.0% of respondents smoked with a history of hypertension, with the results of the Chi Square statistical test proving that there was a relationship between smoking status and the incidence of hypertension in men aged 40-65 years with a p value = 0.001. Or ≤ 0.05 . People with smoking habits are at risk of developing hypertension compared to people who don't smoke, this shows that smoking habits are one of the triggers for hypertension. This is due to other influencing factors such as environmental factors, in this case the community.

The factors that cause hypertension are important to know to prevent unwanted complications caused by these factors. The results of a preliminary study conducted at one of the health centers in Sumedang district, namely at the Darmaraja health center, found that in 2020 there were 2,314 elderly people with hypertension, this was an increase from the previous year, namely 2019, where there were 2,030 elderly people with hypertension. Sukaratu Village is in first place with 273 hypertensive elderly compared to Cieunteung Village, which is 110. Therefore, based on the description above, we see an increasing number of hypertension sufferers from year to year, as well as the impact caused by hypertension. Therefore, researchers are interested in taking research with the title factors related to hypertension during a pandemic in the working area of the Darmaraja Health Center 2022.

2. METHOD

The quantitative research method is a research method based on the philosophy of positivism, used to examine certain populations or samples, collecting data using research instruments, analyzing data is quantitative or statistical, with the aim of testing established hypotheses (Sugiyono, 2017). This type of research uses a quantitative method with a Cross Sectional Study design or research with data collection at one time, data relating to independent or risk variables and dependent variables or effect variables, will be collected at the same time (Notoatmodjo, 2010). This study aims to find out what factors are related to hypertension in the elderly during the Covid-19 pandemic in the 2021 Darmaraja Health Center work area. The population in this study were elderly people with hypertension at Posyandu in Sukaratu Village in 2021 which consisted of 4 posyandu, namely Posyandu Kenanga 1 (93 people), Kenanga 2 (85 people), Kenanga 3 (46 people), Kenanga 4 (49 people). So the elderly population with hypertension in Sukaratu village is 273 elderly.

The sample is part of the population that has the same characteristics as the population. The sampling technique in this study is using probability sampling technique. Probability sampling is a sampling technique that provides equal opportunities for each element (member) of the population to be selected as a member of the sample (Sugiyono, 2017). The results of calculations based on the Slovin formula, the number of samples obtained is 73 with a confidence level of 10%. The number of stratified sample members (literary) is carried out by means of proportional random sampling. Test the reliability of the questionnaire that has been tested in Noerinta (2018), seen from the value of Cronbach's Alpha with a significance level of 5%. The questionnaire is said to be reliable if the Cronbach's Alpha value is > 0.60 . The results of the reliability test of the questionnaire Factors Influencing the Incidence of Hypertension in the Elderly show a Cronbach's Alpha value of $0.661 > 0.60$, this means reliable.

3. RESULTS AND DISCUSSION

3.1. Results

3.1.1 Distribution of Hypertension Frequency in the Elderly

Table 1.
Distribution of Hypertension Frequency in the Elderly in Sukaratu Village (n=73).

Hypertension	f	%
Grade I (mild)	50	68,5 %
Grade II (moderate)	23	31,5%
Total	73	100,0%

Based on table 1 it can be seen that the majority of the elderly in Sukaratu village suffer from Grade I Hypertension (mild) as much as 68.5% (50 respondents).

3.2.2 Relationship between Gender and Hypertension in the Elderly

Table 2.
Relationship between Gender and Hypertension in the Elderly (n=73)

Hypertension	Gender				Total		<i>p - value</i>
	Woman		Man		f	%	
	f	%	f	%			
Grade I	37	50,7%	13	17,8%	50	68,5 %	0,177
Grade II	13	17,8%	10	13,7%	23	31,5%	
Total	50	68.5%	23	31,5%	73	100 %	

Based on table 2 above, it can be seen that the majority of elderly suffer from hypertension more women than men, namely 68.5% (50 respondents) are elderly women, and most are in grade I as much as 50.7% (37 respondents) and the number of elderly men who suffer from hypertension is equal to 31.5% (23 respondents) and most are in grade I as much as 17.8% (13 respondents). While the p-value = 0.177, which means that the p-value is greater ($>$) than the value $\alpha = 0.05$ so that H_a is rejected and H_o is accepted, it can

be concluded that there is no relationship between gender and hypertension in the elderly in Sukaratu village, Darmaraja sub-district 2022.

3.2.3 The Relationship between Obesity and Hypertension in the Elderly

Table 3.
The Relationship between Obesity and Hypertension in the Elderly (n=73)

Hypertension	Body Mass Index				Total		<i>p – value</i>
	IMT < 25		IMT > 25		f	%	
	f	%	f	%			f
Grade I	13	17,8%	37	50,7%	50	68,5 %	0,123
Grade II	2	2,7%	21	28,8%	23	31,5%	
Total	15	20,5%	58	79,5%	73	100%	

Based on table 3 it can be seen that the majority of the elderly in Sukaratu Village have a body mass index of more than 25, which means they are obese 79.5% (58 respondents), and most are in grade I as much as 50.7% (37 respondents). Meanwhile, the p-value = 0.123, which means that the p-value is greater (>) than $\alpha = 0.05$, so that H_a is rejected and H_0 is accepted. So it can be concluded that there is no relationship between obesity and hypertension in the elderly in Sukaratu Village, Darmaraja District.

3.2.4 The Relationship between Smoking and Hypertension in the Elderly

Table 4.
The Relationship between Smoking and Hypertension in the Elderly in Sukaratu Village (n=73)

Hypertension	Smoking				Total		<i>p – value</i>
	Yes		No		f	%	
	f	%	f	%			
Grade I	22	30,1%	28	38,4%	50	68,5 %	0,450
Grade II	13	17,8%	10	13,7%	23	31,5%	
Total	35	47,9%	38	52,1%	73	100%	

Based on table 4 it can be seen that the majority of elderly respondents as much as 52.1% (38 respondents) elderly in Sukaratu village do not smoke and most are in grade I as much as 38.4% (28 respondents). Meanwhile, as many as 47.9% (35 respondents) of the elderly in Sukaratu Village smoked and most of them were in grade I as much as 30.1% (22 respondents). Meanwhile, it can be seen that the p-value = 0.450, which means that the p-value is greater than $\alpha = 0.05$, so that H_a is rejected and H_0 is accepted. So it can be concluded that there is no relationship between smoking and hypertension in Sukaratu Village, Darmaraja District.

3.2.5 Relationship between Age and Hypertension in the Elderly

Table 5.
Relationship between Age and Hypertension in the Elderly in Sukaratu Village.

Hypertension	Age (years)				Total		<i>p – value</i>
	55-60		61-65		f	%	
	f	%	f	%			
Grade I	36	49.3%	14	19.2%	50	68,5%	0,035
Grade II	10	17,8%	13	13,7%	23	31,5%	
Total	46	63%	27	37%	73	100 %	

Based on table 5, it can be seen that the majority of elderly respondents, 63% (46 respondents) in Sukaratu village, are in the range of 55-50 years and most are in grade I, 49.3% (36 respondents). While 37%

(27 respondents) of the elderly in Sukaratu Village are in the age range of 61-65 years and most are in grade I as much as 19.2% (14 respondents). While it can be seen that the p -value = 0.035, which means that the p -value is smaller than $\alpha = 0.05$, so that H_a is accepted and H_o is rejected. So it can be concluded that there is a relationship between age and hypertension in Sukaratu Village, Darmaraja District.

3.2. Discussion

3.2.1 Description of hypertension in the elderly

The Joint National Committee in The Eighth Report of Joint National Committee on Prevention, Detection, Evaluation and Treatment of High Blood Pressure states that high blood pressure (hypertension) is a condition in which a person's blood pressure is ≥ 140 mmHg (systolic) and/or ≥ 90 mmHg (Ministry of Health, 2018). The results of this study showed that as many as 68.5% or as many as 50 elderly in Sukaratu Village experienced Grade I (mild) hypertension and as many as 31.5% or as many as 23 elderly in Sukaratu Village experienced Grade II (moderate) hypertension. This study is in line with the results of research conducted by Sri Agustina (2014), the results of which stated that elderly people with hypertension suffer more from Grade I (mild) hypertension, namely 70.1% or 61 elderly respondents have Grade I hypertension (mild).

It can also be seen that in this study the age characteristics of the respondents were 22 respondents (30.1%) elderly aged 56 years or more. Research conducted by Gonidjaya (2021) shows as much as 63.2%.

Most of the elderly experience hypertension at the age of 56-65 years, where it is clear that the risk of hypertension increases with age. This is also in line with the results of a study conducted by Tumanduk WM, et al (2017), which stated that the age group 56-65 years experienced the most cases of hypertension, 33 cases (43.8%). Increasing age causes physiological changes in the body such as thickening of the arterial walls, so that the blood vessels experience narrowing and become stiff, so that arterial pressure increases and degenerative processes occur with age (Widjya, 2019). The link between the pandemic and high blood pressure goes both ways. Basically people with high blood pressure are at higher risk of getting covid and also the possibility of complications is high. Patients do not dare to go to the hospital for examination, so if there are complaints that are not so severe they will buy medicine at the pharmacy without knowing their blood pressure (Suprayitno & Wahid, 2019). This is very worrying because uncontrolled blood pressure can cause other complications such as stroke (Suprayitno & Huzaimah, 2020).

Cases of the incidence of COVID 19 in Indonesia are still increasing with the highest death rate in the world (Handayani, Hadi, Isbaniah, Burhan, & Agustin, 2020). This makes people worried, anxious, confused and stressed so that it affects health (Afifah, 2020). People are afraid to check their health conditions in hospitals, clinics and puskesmas with the reason they are afraid of contracting COVID-19, so many diseases are not well controlled, one of which is hypertension.

3.2.2 Relationship between Gender and Hypertension in the Elderly

Gender is one of the factors that cannot be changed. The results of the study regarding the relationship between gender and hypertension in the elderly in Sukaratu Village showed that the number of women suffering from hypertension was more, namely 68.5% (50 respondents) and the number of elderly men suffering from hypertension was equal to 31.5% (23 respondents). The results of the chi-square statistical test obtained a p -value = 0.177, which means that the p -value is greater ($>$) than the value $\alpha = 0.05$ so that H_a is rejected and H_o is accepted. It can be concluded that in this study there is no relationship between gender and hypertension in the elderly in Sukaratu village, Darmaraja sub-district 2022.

The results of this study are in contrast to the results of a study conducted by Miftahul (2019), which stated that there is a relationship between the incidence of hypertension in the elderly and gender. As well as the results of this study are not in line with the opinion of Aristotle (2018) which states that men tend to suffer from hypertension more than women. This happens because men have an unhealthy lifestyle when compared to women. This is caused by hormonal changes experienced by postmenopausal women. Men often experience signs of hypertension in their late thirties, whereas women often experience hypertension after menopause.

Women's blood pressure, especially systolic, increases more sharply with age. After 55 years, women do have a higher risk of suffering from hypertension. One of the causes of this pattern is the difference in hormones of the two sexes. The production of the hormone estrogen decreases at menopause, women lose its beneficial effect so that blood pressure increases. The prevalence of hypertension in men is almost the same as women, but women are protected from cardiovascular disease before menopause, women who have not experienced menopause are protected by the hormone estrogen which plays a role in increasing levels of High Density Lipoprotein (HDL). High levels of HDL cholesterol are a protective factor in preventing atherosclerosis. The protective effect of estrogen is considered as an explanation for the presence of female immunity at premenopausal age (Aristotle, 2018).

However, the results of this study are in line with the results of a study conducted by Yunus (2021), which states that there is no relationship between hypertension in the elderly and gender. This is because the incidence of hypertension in men and women does not show a significant difference in terms of the number of events.

The results of this study are in agreement with previous research by Novitaningtyas (2014) in Makamhaji Village, Kartasura District, Sukoharjo Regency with the result that there is no statistical relationship between gender and the incidence of hypertension. Research by Supriyono & Andriyanto (2020) on healthy training participants with the result that gender has no relationship with the incidence of hypertension.

Although statistically there is no significant relationship between hypertension and gender, descriptively it is clear that women suffer from hypertension more than men. The absence of a relationship between gender and the incidence of hypertension in Sukaratu Village is possible because the number of hypertensive patients in women and men is not much different or in other words between men and women have the same opportunity to experience hypertension. Based on these results, even though there is no significant relationship, health promotion must still be given to both male and female patients related to the dangers and risks of hypertension as a prevention effort considering that both have the same risk of experiencing hypertension.

3.2.3 Relationship between Body Mass Index and Hypertension in the Elderly

Obesity is a complex and multifactorial disease characterized by excess BMI of more than or equal to 25 due to excessive accumulation of fat in the body. Obesity is caused by an imbalance between the amount of energy received and the amount of energy expended so that the body weight becomes heavier than the ideal body weight due to the accumulation of fat in the body (Wijaksana, 2016). It can be seen that 79.5% (58 respondents) of the elderly in Sukaratu Village have a body mass index of more than 25 which means they are obese. Meanwhile, 20.5% (15 respondents) of the elderly in Sukaratu Village have a body mass index of less than 25. while the p -value = 0.123, which means that the p -value is greater ($>$) than $\alpha = 0.05$, so H_a is rejected and H_o is accepted. So it can be concluded that there is no relationship between obesity and hypertension in the elderly in Sukaratu Village, Darmaraja District.

The results of this study are not in line with the results of research conducted by Kartika (2020), which states that there is a significant relationship between hypertension and obesity in the elderly. Another study conducted by Mustolih (2015) concluded that there is a significant relationship between obesity and the incidence of high blood pressure. This is due to an increase in heart performance in people who are obese so that blood volume and pressure on the arterial walls increase.

However, the results of this study are in line with the results of a study conducted by Rohkuswara (2017), which stated that there is no relationship between obesity and hypertension in the elderly. This was also reinforced by research conducted by Arifin (2016) which stated that the number of elderly people with hypertension with a BMI of more than 25 was higher, but when the chi-square test was carried out, the result was $p = 0.271$ ($P > 0.05$), meaning that there is no relationship between hypertension and obesity in the elderly with hypertension. This research is in line with research conducted by Gonidzo (2021). In that study, the results obtained were $p=0.160$ ($P>0.05$) so that there was no significant relationship between obesity and the incidence of hypertension in the elderly. The condition of the COVID-19 pandemic is one of the reasons why PTM risk factors cannot be controlled due to limitations in conducting regular health checks for fear of contracting it.

However, even though seen from the statistical results there is no relationship between obesity and the incidence of hypertension in the elderly, when viewed from a descriptive perspective, it seems clear that most of the elderly with hypertension in Sukaratu Village are obese or overweight ($BMI > 25$). The absence of a relationship between obesity and hypertension may be due to research limitations or other influencing factors such as nutritional intake, lifestyle and one thing is the renin-angiotensin system. The system is closely related to sodium, which in this study these factors were not examined. In the blood renin converts angiotensinogen to angiotensin. This angiotensin can cause the diameter of blood vessels to shrink. While renin will trigger the production of aldosterone which functions to regulate extravascular fluid expenditure. This will cause sodium in the blood to increase, thus causing blood volume to rise and that automatically causes blood pressure to increase. According to Olack (2015), it is known that the average case of hypertension has decreased blood pressure by reducing salt intake. The condition of the COVID-19 pandemic has caused various changes such as an increased risk of increasing obesity or Body Mass Index (BMI) due to an imbalance between food intake and physical activity and causing uncontrolled blood pressure.

3.2.4 Relationship between Smoking Behavior and Hypertension in the Elderly

The risk factors for hypertension, in general, are divided into risk factors that can be controlled or changed (changeable), such as obesity, lack of exercise, smoking, and consumption of alcohol and salt and which cannot be controlled or cannot be changed (unchangeable). Smoking is one of the factors that causes hypertension, but these factors can be changed. It can be seen that as many as 52.1% (38 respondents) of the elderly in Sukaratu village do not smoke, while 47.9% (35 respondents) of the elderly in Sukaratu Village smoked. Meanwhile, it can be seen that the p -value = 0.450, which means that the p -value is greater than $\alpha = 0.05$, so that H_0 is rejected and H_a is accepted. So it can be concluded that there is no relationship between smoking and hypertension in Sukaratu Village, Darmaraja District.

The results of this study are not in line with the results of a study conducted by Setyanda (2015), which states that there is a relationship between the incidence of hypertension and smoking habits in the elderly. As well as research conducted by Paat (2015), states that smoking is related to the incidence of hypertension in the elderly. Tobacco in cigarettes contains more than 4,000 chemical substances that are closely related to heart disease, lung disease, cancer, infertility, hypertension, ISPA and a number of other diseases.

Tobacco in cigarettes is closely related to hypertension, this is because cigarettes contain nicotine which can cause blood pressure to increase. The more a person consumes cigarettes in a day, the greater the chance of suffering from hypertension. The main ingredients in tobacco include nicotine, tar, carbon monoxide, even radioactive substances such as ^{210}Pb and ^{210}Po which, although found in small quantities, can accumulate in the body, as well as other harmful substances. The nicotine found in cigarettes triggers the hormone adrenaline which causes blood pressure to increase. Nicotine and other harmful substances are absorbed by the blood vessels into the lungs and circulated throughout the rest of the bloodstream, causing narrowing of the blood vessels. This causes the work of the heart to increase to pump blood throughout the body through narrow blood vessels (Suprihatin, 2016).

Nonetheless, the results of this study are in line with the results of research conducted by Musni (2019). The results of his research stated that there was no relationship between smoking and hypertension in the elderly with a p -value of 0.390 ($P > 0.05$). There is no significant relationship between hypertension and smoking, one of which is due to the respondent factor that the majority of respondents do not smoke are greater than respondents who smoke. The results of this study are also in line with the results of a study conducted by Puspita & Haskas (2014), in hypertensive patients who were treated at the Labuang Baji Hospital polyclinic in Makassar, showing that smoking is not associated with the incidence of hypertension. Meanwhile, the results of research by Sukma (2019) Pebriyandini (2015), Hamzah (2019) and Siswanto (2020), show that there is no relationship between smoking behavior and the incidence of hypertension. This is supported by several elements in their research. First, when viewed from the research subjects in the literature based on the characteristics of the respondents, the majority are female. Second, from the results of interviews with respondents in the literature, that the majority of respondents who are female tend not to smoke. Where this is the same and in line with this study, when viewed from the statistical test it is indeed unrelated, but when viewed from the descriptive it is clear that most of the respondents are women and most of the female respondents do not smoke.

Although the results of the study showed that there was no relationship between smoking behavior and the incidence of hypertension, this could occur due to research limitations such as being influenced by other factors such as nutritional status. An unbalanced nutritional status will cause health problems for the body, high levels of fat in the blood will lead to narrowing and blockage of the blood vessels and if this continues to happen, the work of the heart will pump extra blood to supply blood needs to the tissues, resulting in an increase in blood pressure. Stress levels, stress is related to increased sympathetic nerve activity so that it can trigger blood pressure. age, as people get older, the walls of blood vessels become stiffer so that it contributes to increasing blood pressure in older age groups. Excessive salt consumption also contributes to the prevalence of hypertension because high salt content in the body will increase cerebrospinal fluid and sympathetic nerve activity (Rosdiana, 2019).

3.2.5 Relationship between Age and Hypertension in the Elderly

Risk factors for hypertension, in general, are divided into risk factors that can be controlled or modified and those that cannot be controlled or cannot be changed. Age is one of the factors of hypertension that cannot be changed. The results showed that the majority of elderly respondents were 63% (46 respondents). The elderly in Sukaratu village were in the range of 55-50 years and most were in grade I, 49.3% (36 respondents). While 37% (27 respondents) of the elderly in Sukaratu Village are in the age range of 61-65 years and most are in grade I as much as 19.2% (14 respondents). While it can be seen that the p -value = 0.035, which means that the p -value is smaller than $\alpha = 0.05$, so that H_a is accepted and H_0 is rejected. So it can be concluded that there is a relationship between age and hypertension in Sukaratu Village, Darmaraja District.

The results of this study are not in line with the results of a study conducted by Wicaksono (2019), stating that there is no significant relationship between age and the incidence of hypertension in the elderly. It

can be seen that the p-value shows 0.094 where the p-value is greater than $\alpha = 0.05$. In addition, the research conducted by Wicaksono (2019) is in line with the results of research conducted by Mills et al (2016), which stated that there was no significant relationship between age and the incidence of hypertension in the elderly and the elderly who routinely control blood pressure.

However, the results of this study are in line with the results of a study conducted by Nuraeni (2019), stating that there is a significant relationship between age and the incidence of hypertension in the elderly. Based on the results of a study where the elderly group of 55-65 years had the highest percentage of suffering from hypertension, in this case the researchers concluded that the older a person is, the more at risk of experiencing hypertension. Researchers assume that this is because as a person ages, there is a decrease in the ability of the body's organs including the cardiovascular system, in this case the heart and blood vessels. The blood vessels become narrower and the walls of the blood vessels stiffen, causing blood pressure to increase. This is in line with the theory that increasing a person's age increases the risk of developing hypertension. This occurs because in old age the large arteries lose their flexibility and become stiff so that blood is forced to pass through narrower blood vessels than usual and results in an increase in blood pressure (Hartanti & Mifbakhuddin, 2015).

The high hypertension in line with increasing age, is caused by structural changes in the large blood vessels, so that the lumen becomes narrow and the blood vessel walls become more rigid, as a result is an increase in systolic blood pressure. With increasing age, there is an increase in average diastolic blood pressure, although not so significant, there is also an increase in the prevalence of hypertension for each decade of age group (Sartik, Tjekyan, & Zulkarnain, 2017). The results of this study are in line with previous research from Ningsih & Indriani (2017) on respondents to Beringharjo market workers in Yogyakarta City, who obtained the result that age is related to the incidence of hypertension ($p = 0.000$), Odds Ratio (OR = 15.706, 95% CI 3.615-68.230), meaning that the older a person is, the more likely he is to experience 15.7 times more severe hypertension. The higher the age, the higher the risk of experiencing an increased degree of severity of hypertension. This is caused by the degenerative process that occurs in the elderly.

4. CONCLUSION

Based on the results of the research and discussion described in the previous chapters, the conclusions that can be drawn from this research are:

1. The majority of elderly hypertension is in the mild grade (68.5%)
2. The majority of the elderly who suffer from hypertension in Sukaratu Village are female (68.5%), have a BMI > 25 (79.5%), and most of the elderly do not smoke (52.1%). As well as the age of elderly people with hypertension in Sukaratu Village, which is in the range of 55-60 years (49.3%).
3. There is a relationship between age and hypertension in the elderly in Sukaratu Village, Darmaraja District 2022. However, there is no relationship between gender, obesity and smoking habits in the elderly and hypertension in Sukaratu Village, Darmaraja District 2022, but there is a relationship between age and hypertension in the elderly in Sukaratu Village, Darmaraja District 2022.

REFERENCES

- Andria, K. M. (2013). Hubungan antara perilaku olahraga, stress dan pola makan dengan tingkat hipertensi pada lanjut usia di posyandu lansia Kelurahan Gebang Putih Kecamatan Sukolilo Kota Surabaya. *Jurnal Promkes*, 1(2), 111-117.
- Afifah, Mahardini Nur. (2020). Dampak Stres Pandemi Corona pada Kesehatan Mental dan Fisik. *E-Jurnal*, 1(2), 2450-1345
- Arifin, M. H. B. M., Weta, I. W., & Ratnawati, N. L. K. A. (2016). Faktor-faktor yang berhubungan dengan kejadian hipertensi pada kelompok lanjut usia di wilayah kerja UPT Puskesmas Petang I Kabupaten Badung tahun 2016. *E-Jurnal Medika*, 5(7), 2303-1395.
- Angraini, R. D. (2014). Hubungan Indeks Massa Tubuh (IMT), Aktivitas Fisik, Rokok, Konsumsi Buah, Sayur Dan Kejadian Hipertensi Pada Lansia Di Pulau Kalimantan (Analisis Data Riskesdas 2007). Hubungan indeks massa tubuh (IMT), aktivitas fisik, rokok, konsumsi buah, sayur dan kejadian hipertensi pada lansia di pulau kalimantan (Analisis Data Riskesdas 2007).
- Agustina, S., & Sari, S. M. (2014). Faktor-Faktor yang Berhubungan dengan Hipertensi pada Lansia di atas Umur 65 tahun. *Jurnal Kesehatan Komunitas*, 2(4), 180-186.

- Asari, H. R. V., & Helda, H. (2021). Hubungan Obesitas dengan Kejadian Hipertensi pada Lansia di Posyandu Lansia di Wilayah Kerja Puskesmas PB Selayang II Kecamatan Medan Selayang, Medan. *Jurnal Epidemiologi Kesehatan Indonesia*, 5(1).
- Azizah, L. M. (2011). *Keperawatan Lanjut Usia*. Yogyakarta: Graha Ilmu, 45.
- Azhari. (2017). Faktor-faktor yang berhubungan dengan kejadian hipertensi di Puskesmas Makrayu Kecamatan Ilir Barat II Palembang. Palembang. *Jurnal Aisyah: J*.
- Depkes, R. (2016). *Profil Kesehatan Indonesia*. Jakarta: Depkes RI.
- Falah, M. (2019). Hubungan Jenis Kelamin dengan Angka Kejadian Hipertensi Pada Masyarakat Di Kelurahan Tamansari Kota Tasikmalaya. *Jurnal Mitra Kencana Keperawatan Dan Kebidanan*, 3(1).
- Gonidjaya, J. J., Que, B. J., Kailola, N. E., Asmin, E., Titaley, C. R., & Kusadhiani, I. (2021). Prevalensi Dan Karakteristik Penderita Hipertensi Pada Penduduk Desa Banda Baru Kabupaten Maluku Tengah Tahun 2020. *PAMERI: Pattimura Medical Review*, 3(1), 46-59.
- Handa yani, Diah, Hadi, Dwi Rendra, Isbaniah, Fathiyah, Burha, Erlina, & Agustin, Heidy. (2020). Penyakit Virus Corona 2019. *Jurnal Respirologi Indonesia*, 40(2)
- Kartika, J., & Purwaningsih, E. (2020). Hubungan Obesitas pada Pra Lansia dengan Kejadian Hipertensi di Kecamatan Senen Jakarta Pusat Tahun 2017-2018. *Jurnal Kedokteran dan Kesehatan*, 16(1), 35-40.
- Kemenkes, R. (2018). *Laporan Nasional Riskesdas Tahun 2018*.
- Mills KT, Bundy JD, Kelly TN, Reed JE, Kearney PM, Reynolds K, et al.(2016). Global disparities of hypertension prevalence and control. *Circulation*. 2016;134(6):441–50.
- Mustolih, A., Trisnawati, E., dan Ridha A. 2015. Faktor Yang Berhubungan Dengan Kejadian Hipertensi Pada Perokok Pasif (Studi Kasus Keluarga Perokok Aktif Di Desa Bukit Mulya Kecamatan Subah Kabupaten Sambas Kalimantan Barat). *JUMANTIK: Jurnal Mahasiswa dan Peneliti Kesehatan*, Vol 2, No 4 (2015) eISSN: 2503-4731 p-ISSN: 2407-2559.
- Noerinta, R. D. (2018). Faktor-Faktor yang Mempengaruhi Kejadian Hipertensi Pada Lansia di Kelurahan Manisrejo Kota Madiun.
- Nurarif, A. H., & Kusuma, H. (2016). *Asuhan Keperawatan Praktis Berdasarkan Penerapan Diagnosa Nanda, Nic, Noc dalam Berbagai Kasus*. Yogyakarta: Penerbit Mediacion
- Olack, B., Mangen, F.W., Smeeth, L., Montgomery, J.M., Kiwanuka, N. and Breiman, R.F. (2015). Risk factors of hypertension among adults aged 35-64 years living in an urban slum Nairobi, Kenya. *BMC Public Health* 15(1): 1–10.
- Paat, I. (2014). Hubungan Antara Konsumsi Alkohol Dan Status Merokok Dengan Kejadian Hipertensi Pada Laki-laki Usia 40-65 Tahun Di Desa Motoling 2 Kecamatan Motoling Kabupaten Minahasa Selatan. Manado: Universitas Sam Ratulung
- Padila, S., & Kep, N. (2013). *Asuhan Keperawatan Penyakit Dalam*. Nuha Medika, Yogyakarta.
- Rohkuswara, T. D., & Syarif, S. (2017). Hubungan obesitas dengan kejadian hipertensi derajat 1 di pos pembinaan terpadu Penyakit Tidak Menular (Posbindu PTM) Kantor Kesehatan Pelabuhan Bandung tahun 2016. *Jurnal Epidemiologi Kesehatan Indonesia*, 1(2).
- Setyanda, Y. O. G., Sulastri, D., & Lestari, Y. (2015). Hubungan merokok dengan kejadian hipertensi pada laki-laki usia 35-65 tahun di Kota Padang. *Jurnal kesehatan andalas*, 4(2).
- Suprihatin A, Bejo Raharjo, Wijayanti AC. (2016). Hubungan Antara Kebiasaan Merokok, Aktivitas Fisik, Riwayat Keluarga dengan Kejadian Hipertensi di Wilayah Kerja Puskesmas Nguter. Universitas Muhammadiyah Surakarta
- Sulastri, D., Elmatris, E., & Ramadhani, R. (2012). Hubungan obesitas dengan kejadian hipertensi pada masyarakat etnik minangkabau di kota padang. *Majalah Kedokteran Andalas*, 36(2), 188-201.
- Suprayitno, E, & Wahid, A. (2019). Pendampingan Tentang Penyakit Hipertensi Dan Perawatan Keluarga Dengan Hipertensi. *Seminar Nasional Hasil Pengabdian*

- Suprayitno, E, & Huzaimah, N. (2020). PENDAMPINGAN LANSIA DALAM PENCEGAHAN KOMPLIKASI HIPERTENSI. *SELAPARANG Jurnal Pengabdian Masyarakat Berkemajuan*, 4(1), 518
- Triyanto, E. (2014). *Pelayanan Keperawatan Bagi Penderita Hipertensi Secara Terpadu*. Yogyakarta: Graha Ilmu.
- Umbas, I. M., Tuda, J., & Numansyah, M. (2019). Hubungan Antara Merokok Dengan Hipertensi Di Puskesmas Kawangkoan. *Jurnal Keperawatan*, 7(1).
- Wahyuni dan Eksanoto. (2013). Hubungan Tingkat Pendidikan dan Jenis Kelamin dengan Kejadian Hipertensi di Kelurahan Jagalan di Wilayah Kerja Puskesmas Pucang Sawit Surakarta. *Surakarta. Jurnal Ilmu Keperawatan Indonesia*. 1 (1): 79-85.
- Wijaya, A. S., & Putri, Y. M. (2013). *Keperawatan Medikal Bedah (Keperawatan Dewasa)*.
- Wicaksono, S. (2019). Angka Kejadian Peningkatan Tekanan Darah (Hipertensi) Pada Lansia Di Dusun 1 Desa Kembangseri Kecamatan Talang Empat Bengkulu Tengah Tahun 2015. *Jurnal Kedokteran Raflesia*, 5(1), 1-6.
- Widjaya N, Anwar F, Laura Sabrina R, Rizki Puspawati R, Wijayanti E. Hubungan Usia Dengan Kejadian Hipertensi di Kecamatan Kresek dan Tegal Angus, Kabupaten Tangerang. *Yars Med J [Internet]*. (2019);26(3):131. Available from: <https://tinyurl.com/yx3btywh>
- Widyanto F. C dan Triwibowo C. (2013). *Trend Disease "Trend Penyakit Saat Ini"*. TIM. Jakarta.
- Yassine, M., Al-Hajje, A., Awada, S., Rachidi, S., Zein, S., Bawab, W., Zeid, M. B., El Hajj, M., & Salameh, P. (2016). Evaluation Of Medication Adherence In Lebanese Hypertensive Patients. *Journal Of Epidemiology And Global Health*, 6(3), 157–167.
- Yunus, M., Aditya, I. W. C., & Eksa, D. R. (2021). Hubungan Usia Dan Jenis Kelamin Dengan Kejadian Hipertensi Di Puskesmas Haji Pemanggilan Kecamatan Anak Tuha Kab. Lampung Tengah. *Jurnal Ilmu Kedokteran Dan Kesehatan*, 8(3).
- Zein, A. F. M. Z., & Saputra, H. E. (2015). Hubungan Usia, Jenis Kelamin, Riwayat Keluarga, Obesitas Dan Aktivitas Fisik Dengan Hipertensi Di Puskesmas Kalitanjung Kota Cirebon. *Tunas Medika Jurnal Kedokteran & Kesehatan*, 2(4).

RELATIONSHIP OF KNOWLEDGE AND ATTITUDES WITH HIV - AIDS PREVENTION BEHAVIOR IN STUDENTS

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ABSTRACT

This research is about the relationship between knowledge and attitudes with HIV-Aids prevention measures in Sumedang Informatics Vocational High School students in 2022. The purpose of this study is to determine the relationship between knowledge and attitudes with HIV-Aids prevention measures in Sumedang Informatics Vocational High School students in 2022. This study uses quantitative methods. And the research design used is a descriptive correlational research. Sources of data used in this study are primary data and secondary data with data collection techniques used, namely observation, questionnaires and literature study. Data analysis techniques used include Bi-variate Analysis and Uni-variate Analysis. The results of this study indicate that the bi-variate analysis of statistical test results on the relationship between knowledge and prevention of HIV/AIDS transmission in SMK Informatika Sumedang, obtained P value = 0.011 < alpha value 0.05, for statistical test results the relationship between attitudes and actions to prevent HIV/AIDS transmission in SMK Sumedang Informatics, obtained P value = 0.018 < alpha value 0.05. And the uni-variate analysis of the results of the statistical test of the respondent's knowledge level with a percentage of 58.7%, for the attitude of the respondent is in the sufficient category with a percentage of 50.0%, and for respondent preventive measures with a percentage of 70.7%.



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1. INTRODUCTION

Human Immunodeficiency Virus (HIV) and Acquired Immune Deficiency Syndrome (AIDS) are global pandemics that have health, social, economic and political impacts. Data obtained from the United Nation For AIDS (UNAIDS, 2019) and the United Nation Population Fund at the end of 2019 stated that today's world's youth live side by side with HIV-AIDS because some of the new cases of HIV-AIDS have attacked adolescents aged 15-24 years. (UNAIDS, 2019)

It is reported that every 14 seconds, one teenager is infected with the HIV/AIDS virus. Every day around 6,000 people aged 15-24 years are recorded as new sufferers of HIV. The number of youth cases of HIV-AIDS tends to increase. Data from the Directorate General of PP & PL Ministry of Health RI, 2013 there were 26,483 cases of HIV-AIDS, 821 cases in the group of adolescents aged 15-19 years and in the age group of 20-29 years found 12,288 cases of HIV-AIDS. (UNAIDS, 2019)

HIV in Indonesia from 1987-2013 recorded more than 52,000 cases of AIDS and more than 120,000 cases of HIV. HIV has spread in 34 provinces in Indonesia (KPA, 2019). Data from the West Java AIDS Commission for HIV and AIDS until 2021 in West Java Province recorded 1219 people. The Sumedang Regency AIDS Commission (KPA) recorded that until November 2020 there were cumulatively 474 cases of

HIV/AIDS in Sumedang Regency. of these, 102 people dropped out or were no longer taking ARVs (antiretrovirals). Of the 26 that were met, only 3 people were willing to continue taking ARVs. There are many factors that cause them to stop taking ARVs, including the negative stigma from the surrounding community. Sometimes they are embarrassed when they are known by the surrounding community, let alone until they are known to routinely come to the health service to take ARVs. Apart from these factors, there are also financial factors, namely the difficulty of transportation costs from their place of residence to the health service center to take ARVs. For such cases, we also continue to educate them so that they want to take ARVs again, because only by consuming ARVs their immunity will be maintained. (sumedangkab.go.id)

Adolescence is a turbulent time, a period filled with various introductions and adventures of new things, including the experience of interacting with the opposite sex as a provision for humans to fill their lives in the future. About 30% of people living with HIV-AIDS are teenagers. The attack of the productive age is a challenge that needs to be addressed immediately considering that the productive age is an asset for national development (BKKBN, 2011). The characteristics of adolescents whose curiosity is very high causes them to try everything they find interesting. If correct information about adolescence is not available, it can result in behavior that is detrimental to adolescents, including being infected with HIV-AIDS (Depkes RI, 2020).

Many teenagers do not have information about sexual health, infections caused by sex and HIV-AIDS. It is realized that the total population of Indonesia reaches 210 million people, of which approximately 30% are called teenagers. Threatened by HIV-AIDS, Indonesia's youth are also not spared (DISKESDA, 2018).

UNAIDS in collaboration with WHO in 2019 explained that HIV and similar viruses are generally transmitted through direct contact between the inner layers of the skin (mucous membranes) or the bloodstream with body fluids containing HIV, such as blood, semen, vaginal fluids, preseminal fluids and breast milk. Transmission can occur through intercourse (vaginal, anal or oral), blood transfusions, contaminated needles between mother and baby during pregnancy, childbirth or breastfeeding, as well as other forms of contact with these body fluids.

Measures to prevent the transmission of HIV-AIDS according to the BKKBN (2020) are classified for those who have not been infected, including by: understanding how HIV-AIDS is transmitted, knowing the status of sex partners, avoiding injection drug users, using quality condom contraception, performing circumcision/circumcision, conducting regular HIV-AIDS tests, telling sex partners that you are positively infected with HIV-AIDS, avoiding blood donations and organ donations, if you are pregnant immediately consult the medical team. BKKBN (2020)

The results of research conducted by Eni Wiyanti (2013) on adolescents showed that 45.6% had a positive attitude and 54.4% had a negative attitude towards HIV/AIDS. This is reinforced by Haeriyanto.S (2010) which states that adolescents who are reluctant to behave in a good or low manner may have risky sexual behavior. Attitude is not an act of activity but is a predisposition to the action of a behavior because the way to behave towards an object is also determined from knowledge about the object (Notoatmodjo, 2013).

2. METHOD

This type of research is quantitative and the research design used is correlational descriptive research, namely research directed at explaining the relationship between two variables, namely the independent variable and the dependent variable (Notoatmodjo, 2019). This study also used a cross-sectional approach in which the variables included as risk factors and variables included as effects were approached, observed and collected data at the same time / point time approach (Notoatmodjo, 2019).

Sugiyono (2018) Population is "a generalization area consisting of objects/subjects that have certain qualities and characteristics determined by researchers to study and draw conclusions". The population in this study were 1268 Sumedang Informatics Vocational High School students.

The sample is part of the population that has the same characteristics as the population. The sampling technique in this study is using random sampling technique. The results of calculations based on the Slovin formula, the number of samples obtained is 92 with a confidence level of 10%. Univariate analysis is the first step in analyzing each variable in the study to describe the frequency distribution or proportion of each variable studied, both the dependent variable (HIV prevention) and the independent variable (knowledge and attitudes). The presentation of each variable is in the form of a frequency distribution table.

Univariate analysis in this study analyzed knowledge and attitudes that influence HIV prevention actions. This bivariate analysis is used to see the relationship between two variables, namely the Independent variable and the Dependent variable. The statistical test used is the chi square test which aims to test the difference in proportions or percentages between several groups of data. In terms of data, the chi square test (X²) can be used to determine the relationship between categorical variables and categorical variables.

3. RESULTS AND DISCUSSION

3.1. Results

3.1.1 Frequency Distribution of HIV-AIDS Knowledge among Sumedang Informatics Vocational High School students

Table 1.
Frequency Distribution of HIV-AIDS Knowledge among Sumedang Informatics Vocational High School students (n=92)

Knowledge	Frequency	Percentage (%)
Low	16	17,4
Moderate	54	58,7
High	22	23,9
Total	92	100

Based on table 4.1 above, it can be seen that the distribution of the frequency of knowledge of HIV-AIDS prevention measures among Sumedang Informatics Vocational High School students. The description of the level of knowledge of Sumedang Informatics Vocational High School students is in the sufficient category with a percentage of 58.7%.

3.2.2 Frequency Distribution of HIV-AIDS Attitude among Sumedang Informatics Vocational High School student

Table 2.
Frequency Distribution of HIV-AIDS Attitude among Sumedang Informatics Vocational High School student (n=92)

Attitude	Frequency	Percentage (%)
Low	2	2,2
Moderate	46	50,0
High	44	47,8
Total	92	100

Based on table 2 above, it can be seen that the distribution of the frequency of attitudes towards HIV-AIDS prevention actions in Sumedang Informatics Vocational High School students. The majority of Sumedang Informatics Vocational High School students' attitudes are in the sufficient category with a percentage of 50.0%.

3.2.3 Frequency Distribution of HIV-AIDS Prevention Behavior among Sumedang Informatics Vocational High School student

Table 3.
Frequency Distribution of HIV-AIDS Prevention Behavior among Sumedang Informatics Vocational High School student (n=92)

Prevention	Frequency	Percentage (%)
No	27	29,3
Yes	65	70,7
Total	92	100

Based on table 3 above, it can be seen that the distribution of the frequency of HIV-AIDS prevention actions among Sumedang Informatics Vocational High School students. The description of preventive measures for the majority of Sumedang Informatics Vocational High School student respondents is in the category of taking action with a percentage of 70.7%.

3.2.4 Relationship between knowledge and prevention of HIV/AIDS transmission in Informatics Vocational Schools

Table 4.
Relationship between knowledge and prevention of HIV/AIDS transmission in Informatics Vocational Schools (n=92)

Knowledge	HIV-AIDS Prevention Behavior				Total		<i>p – value</i>
	Yes		No		f	%	
	f	%	f	%			
Low	7	43%	9	57%	16	100	0.011
Moderate	19	36%	35	64%	52	100	
High	1	5%	21	95%	22	100	
Total	27	29%	65	71%	92	100%	

Based on table 4. above, it can be seen that as many as 35 students of Sumedang Informatics Vocational School have sufficient knowledge about HIV prevention and are taking HIV prevention measures. Based on the statistical test results, the relationship between knowledge and prevention of HIV-AIDS transmission in Sumedang Informatics Vocational School, obtained a P value = 0.011 <alpha value of 0.05, which means that there is a relationship between knowledge and prevention of HIV/AIDS transmission in Sumedang Informatics Vocational School.

3.2.5 Relationship between attitude and prevention of HIV/AIDS transmission in Sumedang Informatics Vocational School

Table 5.
Relationship between attitude and prevention of HIV/AIDS transmission in Sumedang Informatics Vocational School (n=92)

Attitude	HIV-AIDS Prevention Behavior				Total		<i>p – value</i>
	Yes		No		f	%	
	f	%	f	%			
Low	0	0%	2	100%	2	100	0.018
Moderate	8	17%	38	83%	46	100	
High	19	43%	25	57%	44	100	
Total	27	29%	65	71%	92	100%	

Based on table 5 above, it can be seen that as many as 46 students of SMK Informatics Sumedang have sufficient attitudes in terms of HIV prevention and students of SMK Informatics Sumedang carry out preventive measures.

Based on the results of statistical tests, the relationship between attitude and prevention of HIV/AIDS transmission in Sumedang Informatics Vocational School, obtained a P value = 0.018 <alpha value of 0.05, which means that there is a relationship between attitude and prevention of HIV/AIDS transmission in Sumedang Informatics Vocational School.

3.2. Discussion

3.2.1 Knowledge of Student

Based on table 1 above, it can be seen that the frequency distribution of knowledge with HIV-AIDS prevention measures in Sumedang Informatics Vocational High School students. Researchers can conclude that the description of knowledge is 58.7%, which means that most of it is sufficient in terms of the knowledge of Sumedang Informatics Vocational High School students. According to the knowledge researcher of Sumedang Informatics Vocational High School students, most of the Sumedang Informatics Vocational High School students have sufficient knowledge about HIV prevention, so that Sumedang Informatics Vocational High School students are able to carry out HIV prevention. According to

Notoatmodjo, (2019) Knowledge is the result of knowing, and this occurs after people sense a certain object. Sensing through the five human senses, namely the sense of sight, taste, smell, sense, taste, touch. Most of human knowledge is obtained through the eyes and ears. Knowledge is a very important domain for the formation of one's actions.

3.1.2. Attitude of Students

Based on table 2 above, it can be seen that the frequency distribution of attitudes of Sumedang Informatics Vocational High School students can be concluded that the description of the attitudes of Sumedang Informatics Vocational High School students is as much as 50%, which means that most students of Sumedang Informatics Vocational School have sufficient attitudes towards HIV-AIDS prevention. Attitude is a reaction or response that is still closed from someone to a stimulus or object, attitude actually shows the connotation of a suitability of reaction to a certain stimulus which in everyday life is an emotional reaction to social stimulus. That attitude is a readiness or willingness to act and is not an implementation of a certain motive. Attitude is not yet an action or activity, but a predisposition of a behavior.

3.1.3. HIV prevention behavior

Based on table 3 above, it can be seen that the frequency distribution of HIV prevention measures. The researcher can conclude that the description of HIV prevention measures is 70.7%, which means that most of the Sumedang Informatics Vocational School students take HIV prevention measures. According to Zulkifli (2012), Efforts that can be made are prevention of transmission through non-sexual routes, sexual routes and prevention of transmission from mother to child. Prevention of transmission through non-sexual routes consists of two ways: first, blood transfusion, this method can be prevented by holding blood donor tests.

3.2.2 Relationship between Knowledge and Attitude with HIV-AIDS Prevention Behavior Among Students

Based on table 4 above, it can be seen that as many as 35 students of Sumedang Informatics Vocational School have sufficient knowledge about HIV prevention and are taking HIV prevention measures. From the statistical test results, the relationship between knowledge and prevention of HIV/AIDS transmission in Sumedang Informatics Vocational School, obtained a P value = 0.011 <alpha value of 0.05, which means that there is a relationship between knowledge and prevention of HIV/AIDS transmission in Sumedang Informatics Vocational School. The results of this study are in line with Notoatmodjo, 2019, that knowledge is the result of knowing, and this occurs after people sense a certain object. Sensing through the five human senses, namely the sense of sight, taste, smell, sense, taste, touch. Most of human knowledge is obtained through the eyes and ears. Knowledge is a very important domain for the formation of one's actions.

Knowledge of Sumedang Informatics Vocational High School students is the result of knowing and understanding after people sense a particular object. Sumedang Informatics Vocational School students are expected to understand, know and understand more, which in the end can play an active role as the main support for sufferers who will also improve their ability to adapt and are no longer vulnerable to the effects of psychosocial stressors. Efforts to increase knowledge in families of schizophrenic clients need to be through counseling and health education, both carried out directly and indirectly.

In this case the knowledge of Sumedang Informatics Vocational High School students about HIV prevention measures. Agreed with the results of Said's 2016 study. Based on the results of the tests that have been carried out, a P-Value of 0.000 is obtained, this value is smaller than the significant level of 0.05, so there is a relationship between knowledge of HIV-AIDS prevention measures.

Based on table 4.6 above, it can be seen that as many as 46 students of SMK Informatics Sumedang have sufficient attitudes in terms of HIV prevention and students of SMK Informatics Sumedang carry out preventive measures. Based on the results of statistical tests, the relationship between attitude and prevention of HIV/AIDS transmission in Sumedang Informatics Vocational School, obtained a P value = 0.018 <alpha value of 0.05, which means that there is a relationship between attitude and prevention of HIV/AIDS transmission in Sumedang Informatics Vocational School.

From the results of the data analysis above in line with Notoatmodjo 2019 that attitude is a reaction or response that is still closed from someone to a stimulus or object, attitude actually shows the connotation of appropriate reactions to certain stimuli which in everyday life are emotional reactions to social stimuli. That attitude is a readiness or willingness to act and is not an implementation of a certain motive. Attitude is not yet an action or activity, but a predisposition of a behavior. This also shows that the attitudes of Sumedang Informatics Vocational High School students influence each other towards HIV prevention measures. The attitude of the Sumedang Informatics Vocational High School students in this study is an attitude or positive or negative assessment of an object as an effort to improve the attitude of Sumedang Informatics Vocational High School students in taking HIV prevention measures by increasing their knowledge first because a person's attitude and behavior will be determined by the level of knowledge he has. So that Sumedang

Informatics Vocational School students can take HIV prevention measures. The results of this study also agree with Said 2016. Based on the results of the tests that have been carried out, a P-Value of 0.017 is obtained, this value is greater than the significant level of 0.05, so that there is a relationship between attitudes and HIV-AIDS prevention measures in Sumedang Informatics Vocational High School students.

4. CONCLUSION

Based on the results of the research and discussion described in the previous chapters, the conclusions that can be drawn from this research are:

1. The description of students' knowledge of HIV-AIDS prevention measures for Sumedang Informatics Vocational High School students is 58.7%, which means that most of the Sumedang Informatics Vocational High School students' knowledge is sufficient.
2. An overview of the attitudes of students with HIV-AIDS prevention measures in Sumedang Informatics Vocational High School students as much as 50.0%, which means that most of the attitudes of Sumedang Informatics Vocational High School students are sufficient
3. An overview of HIV-AIDS prevention measures in Sumedang Informatics Vocational High School students as much as 70.7%, which means that most of the attitudes of Sumedang Informatics Vocational High School students take HIV prevention actions.
4. There is a relationship between knowledge and prevention of HIV-AIDS in Sumedang Informatics Vocational High School students

REFERENCES

- Arahap. (2018). Riset Keperawatan & Teknik Penulisan Ilmiah. Jakarta : Salemba Medika
- Sarwono. (2019). Psikologi Remaja. Jakarta : Bumi Aksara
- Arikunto, S. (2018). Prosedur Penelitian Suatu Pendekatan Proses. Jakarta : Rineka Cipta
- Azwar, (2011). Sikap Manusia Teori dan Pengukurannya, (Edisi Ke 2). Yogyakarta, Pustaka Pelajar.
- Hurlock. (2019). Memahami Kesehatan Reproduksi Remaja Putri, Bandung: Penerbit Effhaar & Dahara Prize.
- BKKBN. (2019). Persiapan Kehidupan Berkeluarga Bagi Remaja Ditinjau dari Aspek 8 Fungsi Keluarga, Kesehatan, Ekonomi, Psikologi, Pendidikan, Agama, dan Sosial. Jakarta : Direktorat Remaja dan Perlindungan Hak-Hak Reproduksi.
- Notoadmodjo. (2019). Dorongan Seksual. Jakarta : Direktorat Bina Ketahanan Remaja dan Perlindungan Hak-Hak Reproduksi.
- Stuart, Sundeen. (2018). Buku Pintar Miss V Cara cerdas Merawat Organ Intim Wanita. Yogyakarta : Araska
- Depkes RI. (2019). Pedoman Pelaksanaan Kegiatan Komunikasi, Informasi, Edukasi Kesehatan Reproduksi Untuk Petugas Kesehatan Ditingkat Pelayanan Dasar. Jakarta : Dirjen Bina Kesehatan Masyarakat dan Direktorat Bina Kesehatan Ibu.
- Dharmayanti. (2018). (Jurnal Kependudukan dan pembangunan). < <http://Jurnal kependudukan dan pembangunan .com> > di akses tanggal 11 Januari 2016: 09.12
- Yulihastin. (2017), Sejarah keperawatan, Jakarta, Rajawali Pers.
- Jamian (Hubungan Pengetahuan Kesehatan Reproduksi terhadap Sikap Remaja Tentang Seksualitas dan Napza). Mahasiswa Sekolah Tinggi Ilmu Kesehatan Muhammadiyah Samarinda. Tahun 2018
- Notoatmodjo, S. (2019). Metodologi Penelitian Kesehatan. Jakarta : Rineka Cipta.
- Nursalam. (2019). Konsep dan Metodologi Penelitian Ilmu Keperawatan.
- Andriewongso. (2017). SAejarah Keperawatan, Sidoarjo, Citra Media. Suhartono (2018). Konsep Dasar Statistik.: Jakarta: Reksa Pustaka
- Widyastuti. (Hubungan Konsep Diri Remaja Terhadap Kesehatan Reproduksi). Mahasiswi Universitas Diponegoro. Tahun 2009
- Wiyantiyeny. (Hubungan Pengetahuan Dengan Sikap Remaja Terhadap Hiv-Aids). Mahasiswa Sekolah Tinggi Ilmu Kesehatan Muhammadiyah Samarinda. Tahun 2018

-
- Haeriyanto. (Gambaran Sikap Remaja Terhadap Kesehatan Reproduksi). Mahasiswa Universitas Muhammadiyah Yogyakarta. Tahun 2019
- UNAIDS. (2017). Informasi HIV-AIDS .< <http://forumkesehatan umum .com> >di akses tanggal 09 Januari 2016: 09.00
- KPA. (2018). Data Komisi Penanggulangan AIDS Kalimantan Timur. <[http//KPA.com](http://KPA.com)>di akses tanggal 09 Januari 2016: 09.10
- Notoadmodjo. (2019). Pengetahuan Tentang Hiv-Aids. Jakarta : Direktorat Bina Ketahanan Remaja dan Perlindungan Hak-Hak Reproduksi.
- BKKBN. (2018).Karakteristik Pengetahuan dan Tindakan Pencegahan Hiv-Aids. Jakarta : Direktorat Remaja dan Perlindungan Hak-Hak Reproduksi.
- Notoadmodjo. (2018). Memahami Sikap Remaja. Jakarta : Yayasan Bina Jakarta.
- Lastianti. (Hubungan Pengetahuan Dengan Tindakan Pencegahan Hiv-Aids). Mahasiswa Politeknik Kesehatan Tahuna. Tahun 2019).

RELATIONSHIP BETWEEN THE IMPLEMENTATION OF A NUTRITION-CONSCIOUS FAMILY WITH NUTRITIONAL STATUS OF CHILDREN UNDER THE RED LINE

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ABSTRACT

In the current era, toddlers are malnourished due to a lack of balanced nutritional intake which has an impact on stunting participants. Short-term risks due to malnutrition are increased morbidity and mortality of developmental disorders, increased burden of care and treatment. The purpose of this study was to determine the relationship between the application of nutrition-aware families using the nutritional status of toddlers below the Red Line. The benefits of this study increase knowledge about health issues for the community, especially young mothers, the importance of perfect handling so that toddlers do not suffer from malnutrition, less, and more nutrition. The approach in this study used Cross Sectional. The independent variable in this study is the application of nutrition-aware families, the dependent variable is the nutritional status of toddlers below the red line. Data collection using field information in the form of a Guttman scale. The study was conducted at one of the health centers in Sumedang district. The population of people who have toddlers with nutritional status below the red line is 19 people. Sample using total holistic population. from the analysis it is known that there is a correlation between the application of family nutrition awareness with the nutritional status of toddlers below the Red Line using a p-value of 0.002 and an OR value of 1.853. Suggestions researchers can maintain and increase the application of nutrition-conscious family attitudes similar to adding a variety of foods and it is also expected that the community routinely brings their toddlers to the posyandu every month to determine the growth and development of their toddler nutrition.



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1. INTRODUCTION

Nutrition is one of the primary determinants of the quality of human resources. Poor nutrition not only increases morbidity and mortality, permanently also reduces productivity, inhibits brain growth cells that cause stupidity and underdevelopment. there is a very close bond between the level of nutritional conditions using culinary consumption.

Nutritional status is a very crucial health indicator where the age of toddlers is a group that is very vulnerable to nutritional conflicts, especially in stunting patients, which means the condition of growth failure in children under five years of chronic lack of nutrition as a result of less height at their age. Short-term risks due to malnutrition are increased morbidity and mortality of developmental and growth disorders. Long-term risks can cause disruption of reproductive health, learning concentration and decreased work productivity (Lestari, 2015).

A Nutrition Aware family is one in which all family members practice balanced nutritional behavior, can recognize health and nutritional problems for each family member, and can take steps to overcome nutritional problems encountered by each family member. a nutrition-aware family if it has good nutritional behavior, which is characterized by using regular toddler weight gain, delivering breast milk (ASI) alone to babies from birth to six months of age (exclusive breastfeeding), diverse cuisine, using iodized salt and taking nutritional supplements as recommended by health workers (Adriani Merryana & Bambang Wiratmadji, 2014).

Based on the results of monitoring the causes of under-five malnutrition due to lack of balanced nutritional intake, inadequate health care, low family income levels and others. The nutritional status of 41 toddlers carried out at the Puskesmas produced the following results, 16 people (three.9%) were malnourished, 21 people (5.1%) were well-nourished, 1 person (0.24%) was overnourished and three people (0.73%) were malnourished (Riskasdas, 2018).

The number of toddlers reported in the work area of the health center in 2021 was 41 toddlers including 16 male toddlers and 25 female toddlers. The number of toddlers who were weighed was 41 toddlers, the number of D / S percentages was 100% including the number of male and female children. The number of BGM toddlers is 19 toddlers, the highest number is in one of the villages in the puskesmas of 4 BGM toddlers including the number of male and female toddlers. Based on preliminary studies, researchers are interested in conducting research so that the community, especially mothers, is concerned about the importance of perfect handling so that toddlers do not suffer from malnutrition, less, as well as more nutrition.(Riskasdas, 2018). The general objective of this research is to determine the relationship between the application of family nutrition awareness and the nutritional status of BGM toddlers in the Rancakalong Health Center working area.

2. METHOD

The design of this research is quantitative research using a Cross Sectional design that is narrative. The population, namely, all families who have toddlers 0-59 months using BGM in Rancakalong District, Sumedang Regency, totaling 19 toddlers. in sampling using the total population which is a sampling technique, where the number of samples is the same using the population.(Sugiyono, 2014)

Simple random sampling technique Sampling techniques from members of the population are carried out randomly without regard to the strata contained in that population. so that the characteristics of the sample do not deviate from the origin of the population, then before sampling it is necessary to determine the inclusion criteria as well as the exclusion criteria. Inclusion criteria means criteria or what needs to be met by each member of the population who can be taken into the sample. While the exclusion criteria are members of the population who cannot be taken as samples. The research instrument used is general news, the measuring scale uses Guttman. Data collection techniques are primary data and secondary data.(Arikunto, 2006)

3. RESULTS AND DISCUSSION

3.1. Results

3.1.1 Univariate Analysis

In Univariate analysis, the frequency distribution of each variable will be displayed, both independent variables and dependent variables, while the results of univariate analysis are described as follows:

1. Frequency distribution of Consuming a Variety of Foods on the Nutritional Status of BGM Toddlers.

Table 1

Frequency distribution of Consuming a Variety of Foods on the Nutritional Status of BGM Toddlers.

Category Consume Variety food	Frequency	Percentage (%)
Not Diverse	8	42,1%
Various	11	57,8%
Total	19	100%

Based on table 1.1 on the frequency distribution of consuming a variety of foods in the working area of the Rancakalong Health Center, Rancakalong District, it was found that most of the respondents consumed a variety of foods, 11 people or (57.8%).

2. Frequency Distribution of Regular Weighting Categories on the nutritional status of BGM toddlers.

Table 2
Frequency Distribution of Regular Weighting Categories on the nutritional status of BGM toddlers in the Rancakalong Health Center Working Area in 2022

Category Considering Body weight Regularly	Frequency	Percentage (%)
Good	14	73,6%
Not good	5	26,3%
Total	19	100%

Based on table 4.2 on the frequency distribution of categories of regular weighing on the nutritional status of BGM toddlers in the working area of the rancakalong health center, rancakalong sub-district, it was found that most of the regular weighing was categorized as good, namely, 14 people or (73.6%).

3. Frequency Distribution of Categories of Using Iodized Salt on the Nutritional Status of BGM Toddlers.

Table 3
Frequency Distribution of the category of Using Iodized Salt on the Nutritional Status of BGM toddlers in the Rancakalong Health Center Working Area in 2022.

Category Using Salt Iodized	Frequency	Percentage (%)
Good	15	78,9%
Not good	4	21,0%
Total	19	100%

Based on table 3 about the frequency distribution of categories using iodized salt on the nutritional status of BGM toddlers in the working area of the Rancakalong Puskesmas, Rancakalong District in 2022, it was found that most of the respondents who had been studied and categorized as good with a frequency of 15 people or (78.9%).

4. Frequency distribution of categories of providing nutritional supplements according to recommendations (Vit A) on the nutritional status of BGM toddlers.

Table 4
Frequency Distribution of Categories of Providing Nutritional Supplements as Recommended (Vit A) on the Nutritional status of BGM Toddlers in the Rancakalong Health Center Working Area in 2022

Category Provide Nutritiona Supplements As recommended (Vit A)	Frequency	Percentage (%)
Good	19	100%
Not good	-	-
Total	19	100%

Based on table 4 on the frequency distribution of categories of providing nutritional supplements as recommended (Vit A) on the nutritional status of BGM toddlers in the working area of the Rancakalong Puskesmas, Rancakalong District in 2022, it was found that all respondents who had been studied were categorized as good with a frequency of 19 people or (100%).

5. Frequency Distribution of Exclusive Breastfeeding Categories on the Nutritional Status of BGM Toddlers.

Table 5
Frequency Distribution of Exclusive Breastfeeding Categories on the Nutritional Status of BGM Toddlers in the Rancakalong Health Center Working Area in 2022.

Category Breastfeeding Exclusive	Frequency	Percentage (%)
Good	7	36,8%
Not good	12	63,1%
Total	19	100%

Based on table 5 on the frequency distribution of categories of exclusive breastfeeding on the nutritional status of BGM toddlers in the working area of the Rancakalong Health Center, Rancakalong District in 2022, it was found that most of the respondents who had been studied were categorized as not good with a frequency of 12 people or (63.1%).

6. Frequency distribution of nutritional status categories of BGM toddlers.

Table 6
Frequency Distribution of Nutritional Status of BGM Toddlers in the Working Area
Rancakalong Health Center in 2022

Category Status BGM Toddler Nutrition	Frequency	Percentage (%)
Good Nutrition	6	31,5%
Undernourished	13	68,4%
Total	19	100%

Based on table 6 on the frequency distribution of nutritional status categories of BGM toddlers in the working area of the Rancakalong Health Center, Rancakalong District in 2022, it was found that most of the respondents who had been studied were categorized as less with a frequency of 13 people or (68.4%).

7. Frequency Distribution of Kadarzi Status Categories on the Nutritional Status of BGM Toddlers.

Table 7
Frequency Distribution of Kadarzi Status Categories in the Working Area
Rancakalong Health Center in 2022

Category Status Kadarzi	Frequency	Percentage (%)
Already Kadarzi	9	47,3%
Not yet Kadarzi	10	52,6%
Total	19	100%

Based on table 4.7 about the frequency distribution of the Kadarzi Status category on the nutritional status of BGM toddlers in the Rancakalong Puskesmas work area in Rancakalong District in 2022, it was found that most of the respondents who had been studied were categorized as not yet kadarzi with a frequency of 10 people or (52.6%).

3.1.2 Bivariate Analysis

In this bivariate analysis, a cross tabulation between the independent variable and the dependent variable was first carried out, using the Chi Square statistical test. This section will present the results of research conducted on respondents in the Rancakalong Health Center Working Area, the relationship between the application of KADARZI to the Nutritional Status of NGM Toddlers in the Rancakalong Health Center Working Area, Rancakalong District in 2022.

Table 8
Cross Tabulation of Kadarzi Status on Nutritional Status of BGM Toddlers in the Rancakalong Health
Center Working Area in 2022.

Application KADARZI	Nutritional Status of BGM Toddlers				Total		P Value
	Less		Good		f	%	
	f	%	f	%			
Not yet Kadarzi	5	26,3%	5	26,3%	10	52,6%	0,002
Already Kadarzi	8	42,1%	1	5,2%	9	47,3%	
Total	13	68,4%	6	31,5%	19	100%	

Based on table 8 about the cross tabulation of the relationship between the application of Kadarzi to the nutritional status of BGM toddlers, it is known that respondents with nutrition-conscious family characteristics (already kadarzi) were 42.1% of nutritional status less and 5.2% of good nutritional status, while from 19 respondents with family characteristics not aware of nutrition (not kadarzi) were 26.3% of nutritional status less and 26.3% of good nutritional status. This shows that respondents with nutrition awareness (KADARZI).

By using the Chi Square statistical test where the degree of confidence used is 95% and $\alpha = 0.05$, the p value is 0.002. Where the p value is <0.05 , so the null hypothesis is rejected or in other words, statistically it is proven that there is a significant relationship between the application of Family Nutrition Awareness on the Nutritional Status of BGM Toddlers.

3.2 Discussion

According to table 1, the frequency distribution of consuming various culinary varieties in the Rancakalong Health Center Working area, Rancakalong District, it was found that most of them consumed a variety of foods with a total of 19 respondents categorized as compound, namely, 11 people or (57.8%). Eating a variety of foods is a family consuming food is a family consuming staple foods, side dishes, vegetables, and fruit every day. (MOH RI, 2018) Diverse food is guaranteed to provide great benefits to health. because certain nutrients, which are not contained in one type of food, will be complemented by similar nutrients from other culinary ingredients. Likewise, each culinary dish in a balanced assortment of dishes will complement each other.

The culinary arrangement of the balanced nutrition guidelines of the Indonesian Ministry of Health is diverse, if in each meal the dish consists of staple foods + side dishes, vegetables, grains or staple foods + side dishes + vegetables, also not diverse, if each meal consists of only two or one type of food.

Based on Table 2 discourse of the Frequency Distribution of Regular Weight-Weighing Categories in the Working Area of the Rancakalong Health Center, Rancakalong District found that most of the regular weight weighing categorized as good, namely, 14 people or (73.6%).

Monitoring the nutritional status of toddlers can be done by weighing toddlers at home or weighed at the posyandu or elsewhere every month or at least once every 2 months. Can be monitored by looking at the weighing records of toddlers in the KMS during the last month, namely If babies aged >6 months are weighed 4 or more times in a row are evaluated as good and If less than 4 times are considered not good. If babies 4-5 months old are weighed three times or more are evaluated and if less than three times are evaluated as not good. If infants aged two-3 months are weighed 2 or more times consecutively, it is considered good and if less is considered not good, and in infants who are still 0-1 month old, it is good if they have been weighed and not good if they have never been weighed. (Teknologi et al., 2022)

Based on table 3 about the frequency distribution of categories using iodized salt in the Rancakalong Health Center Work area, Rancakalong District in 2022, it was found that most of the respondents who had been studied and categorized as good used a frequency of 15 people or (78.9%).

Iodized salt consumed every day is useful to prevent the onset of iodine deficiency disorders (GAKY). Gaky can inhibit the development of intelligence levels in children, endemic goiter, and cretin. (Khulafa'ur Rosidah & Harsiwi, 2019). To find out whether the salt used by the family contains iodine or not can generally be done in 2 ways, namely, seeing the presence or absence of an iodized salt label or conducting an iodine test. claimed to be good when labeled and when tested iodine is purple, not good when not labeled and when tested using iodine the hue does not change. (Biswan et al., 2018)

According to table 4 discourse of the frequency distribution of categories of providing nutritional supplements as recommended (Vit A) in the working area of the Rancakalong Health Center, Rancakalong District in 2022, it was found that all respondents who had been studied were categorized as good with a frequency of 19 people or (100%).

Consumption of nutritional supplements recommended by the Indonesian Ministry of Health (2007) is a high dose of vitamin A capsules (blue capsules for infants aged 6-11 months, red capsules for toddlers aged 12-59 months). (Rachman, Ika, 2016). Infants and toddlers vitamin A capsules are useful for eye health, especially in the process of vision where vitamin A plays a role in helping the adaptation process from detailed areas to dark places. Vitamin A deficiency causes abnormalities in vision due to the process of metaplastation of epithelial cells, as a result of which the glands do not produce fluids that can cause dryness in the eyes, called conjunctive xerosis, If this condition continues, bitot spots will form and lead to blindness. (Adriyanti, 2017) One coverage of infant visits 6-11 months and coverage of services for children under five 12-59 months in basic health services contained in the minimum service standards is the award of high dose Vitamin A capsules, 100,000 IU (blue) for infants and or 200,000 IU (red) for children under five by 2 pieces per year. (Dwiyanti et al., 2004)

According to table 4. five regarding the frequency distribution of the category of exclusive breastfeeding in the working area of the Rancakalong Health Center, Rancakalong District in 2022, it was found that most

of the respondents who had been studied in the category were not good using a frequency of 12 people or (63.1%).

Breast milk (ASI) is able to fulfill the baby's nutrition to grow and become healthy until he is 6 months old. Colostrum, which is breast milk that comes out in the first days, should be given to babies. After the baby is 6 months old, breast milk alone can no longer fulfill the baby's nutritional needs. therefore, after the age of 6 months, the baby needs to receive complementary foods (MP-ASI). Complementary feeding is given to babies gradually according to their age, body growth, and intelligence development. Even so, the gift of breast milk is still continued until the child is 24 months old. its benefits mean to help the child's growth and development, maintain and increase the child's body resistance to infectious diseases, and familiarize the relationship between the mother and her child back and forth.

The results showed that the prevalence of toddlers in the undernutrition category in the Rancakalong Health Center area is still high, but there are no subjects included in the poor nutrition category. Nutrition affects the growth and development of toddlers. Children under five are in the transition period from baby food to adult culinary. In addition, toddlers are also unable to take care of themselves, including determining their food, as a result of which the attitude of parents is needed.(Susilowati et al., 2021)

The origin of 19 respondents whose level of application of nutrition-conscious families was not good using the nutritional status of toddlers using the good category as many as 4 toddlers (21.0%). in respondents whose level of application of nutrition-conscious families was not good with the nutritional status of toddlers using the undernutrition category as many as 6 toddlers (31.5%). While the origin of 19 respondents whose level of application of nutrition-conscious families is good whose nutritional status of toddlers with good categories is 1 toddler (five.2%). in respondents whose level of application of nutrition-conscious families is good whose nutritional status of toddlers with nutritional categories is less than 8 toddlers (42.1%).

As a result of the calculation of the chi square (χ^2) test between the application of a nutrition-conscious family using the nutritional status of BGM toddlers obtained a p-value using a value of 0.002 smaller than 0.05, as a result H_0 is accepted which is there is a significant correlation between the application of a nutrition-conscious family with the nutritional status of BGM toddlers. This can be interpreted that the better this applies a nutritionally conscious family attitude, the better the nutritional status of the toddler. therefore, the low nutritional status of toddlers can mistakenly be caused by the mother, who takes care of and takes care of her child, does not have a good Kadarzi attitude. Kadarzi attitude means response or reaction to a stimulus. health attitude is the action of a person's actions in maintaining and improving their health, for example the success of the family in achieving a nutrition-conscious family. (Kusumaningati et al., 2018)

This is because respondents are still difficult to weigh their toddlers routinely to the posyandu or puskesmas. the attitude of weighing toddlers can be influenced by several factors such as the condition of the toddler who is not possible to take to the posyandu because of illness and family busyness. Weighing toddlers regularly every month is done to find out growth disorders that could not be observed before, which can be caused by lack of mkan, recurrent illness, or ignorance about children's food. One of the indicators of successful implementation of a nutrition-conscious family is exclusive breastfeeding from birth to six months of age. The respondents did not implement this. Exclusive breastfeeding for less than six months can be one of the factors that cause the consumption level of toddlers to be low because weaning is too early as a result if left for a relatively long time will hypnotize their nutritional status, which can cause malnutrition.

The use of iodized salt is intended to meet the iodine needs of each family member, especially toddlers who are still in the process of growth, Iodine in the body is needed to produce the hormone thyroxine. Thyroxine is very important for physical growth as well as motor and mental development of children. Low levels of thyroid hormone in the bloodstream caused by iodine deficiency can cause inhibition of human growth and development. Nutritional status with the BB/U index means that the indicator sits acute nutritional case to be the impact of the situation that lasts long enough. the impact of the application of nutrition-conscious families has a tendency to affect the nutritional status of toddlers in the long term.

A good nutrition-conscious attitude in the household of toddlers with kadarzi indicators is directly related to using weight monitoring as an early indication of rapid changes in nutritional status. Several series of analyses on the correlation of the application of a nutrition-conscious family using the nutritional status of children under five can emphasize that a nutrition-conscious family is valid and reliable and can be applied in order to overcome sitting nutritional cases in children under five. The attitude of nutrition-conscious mothers can be a way for mothers to overcome nutritional dilemmas as a result can improve the nutritional status of toddlers.

4. CONCLUSION

Based on the results of the research and discussion described in the previous chapters, the conclusions that can be drawn from this research are:

1. To find out the illustration of the application of nutrition-conscious families that have not been good using the nutritional status of toddlers using the good category as many as 5 toddlers (26.three%). at the level of application of nutrition-conscious families that have not been good using the nutritional status of toddlers with the category of undernutrition as many as 5 toddlers (26.three%).
2. To find out the picture of the application of a good nutrition-conscious family whose nutritional status of toddlers with good categories as much as 1 toddler (five.2%). on respondents whose level of application of a good nutrition-conscious family with nutritional status of toddlers using the category of undernutrition of 8 toddlers (42.1%).
3. There is a relationship using the Chi square statistical test where the degree of religion used is 95% and $\alpha = 0.05$ obtained a p value of 0.002. Where the p value < 0.05 , as a result the null hypothesis is rejected or in other words statistically it is proven that there is a significant correlation between the application of the Nutrition Aware family to the Nutritional Status of BGM Toddlers.

REFERENCES

- Adriani Merryana, & Bambang wiratmadji. (2014). *Toddler Nutrition and Health, The Role of Micro Zinc in Toddler Growth*. Kharisma Putra Utama.
- Adriyanti, D. (2017). The Relationship of Maternal Knowledge, Attitudes, and Actions in Feeding with Nutritional Status. *University of North Sumatera Institutional Repository*. <https://repositori.usu.ac.id/handle/123456789/4969>
- Arikunto, S. (2006). Practical Action Research Procedure. *Jakarta: Rineka Cipta*.
- Biswan, M., Puspita, E., & Department of Midwifery Poltekkes Kemenkes Jakarta, D. I. (2018). Maternal Parenting and Nutritional Status of Toddlers. *Quality Journal of Health*, 9(1), 1-41.
- Indonesian Ministry of Health. (2018). Ministry of Health of the Republic of Indonesia. *Ministry of Health RI*.
- Dwiyanti, D., Hadi, H., & Susetyowati, S. (2004). Effect of Food Intake on the Incidence of Malnutrition in Hospital. *Indonesian Journal of Clinical Nutrition*, 1(1), 1. <https://doi.org/10.22146/ijcn.15354>
- Khulafa'ur Rosidah, L., & Harsiwi, S. (2019). RELATIONSHIP OF NUTRITION STATUS WITH THE DEVELOPMENT OF 1-3 YEAR OLD CHILDREN (At Posyandu Jaan, Jaan Village, Gondang District, Nganjuk Regency). *Journal of Midwifery*, 6(1), 24-37. <https://doi.org/10.35890/jkdh.v6i1.48>
- Kusumaningati, W., Dainy, N. C., & Kushargina, R. (2018). Cespleng (Prevent Stunting That Matters) Education and Stunting Screening at Posyandu Doktren 2 District. *Proceedings of the National Seminar on Community Service LPPM UMJ, September 2019*, 2-6.
- Lestari, N. D. (2015). Determinant Analysis of Nutritional Status of Children under Five Years in Yogyakarta. *Mutiara Medika*, 15(1), 22-29.
- Rachman, Ika, A. (2016). *Overview of Food Intake, Nutritional Status, and Learning Achievement of Students of State Elementary School No. 18 Pulau Burung Loe II, Pulau-Pulau IX District, Sinjai Regency*. 18, 1-112. <http://repositori.uin-alauddin.ac.id/4053/>
- Riskesdas. (2018). *Prevalence of Nutritional Status of Toddlers*. <https://sehatnegeriku.kemkes.go.id/baca/umum/20181102/0328464/potret-sehat-indonesia-riskesdas-2018/>
- Sari, Y. D., & Rachmawati, R. (2020). Contribution of Nutrition of Food Away From Home (Fafh) to Daily Total Energy Intake in Indonesia (Analysis of Individual Food Consumption Survey Data 2014) [Food Away From Home (Fafh) Contribution of Nutrition to Daily Total Energy Intake in Indonesia]. *The Journal of Nutrition and Food Research*, 43(1), 29-40. <https://doi.org/10.22435/pgm.v43i1.2891>
- Sugiyono. (2014). *Quantitative, Qualitative and R&D Research Methods*. Alfabeta.
- Sugiyono. (2019). *Educational Research Methods: (Quantitative, Qualitative, Combination, R&D and Educational Research)*. Alfabeta.
- Susilowati, E., Surani, E., & Hudaya, I. (2021). PKM of Cadre Groups and Mothers of Toddlers in Germas Ceting (Community Movement to Prevent Stunting) as an Effort to Prevent Toddler Stunting. *Proceedings of the National Seminar on Health*, 1, 959-968. <https://doi.org/10.48144/prosiding.v1i.776>
- Technology, R. D. A.

THE RELATIONSHIP BETWEEN KNOWLEDGE AND ATTITUDE WITH THE BEHAVIOR OF INCREASING HAND WASHING WITH SOAP

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ABSTRACT

The main part of our body that is most contaminated by germs and germs is the hands. When holding something, and shaking hands with someone, of course there are many sources of disease that stick to the skin of the hands, such as germs, parasites and viruses that contaminate our hands and will enter our bodies if we don't wash our hands before eating. Through the hands the source of the disease can enter the nostrils, mouth and eyes when the hands are dirty. According to the Director of Family Health, Ministry of Health of the Republic of Indonesia, Eni Gustina, until now the health status of children cannot be categorized as good, because there are still health problems in Indonesia where every year 1.7 million children die from diarrhea, especially at school age. The purpose of this study was to determine the relationship between the level of knowledge and the behavior of increasing hand washing with soap (Hand washing) at SMK Pelita Nusa Jalancagak. The type of research used was quantitative research methods with a Cross Sectional approach. 0.05 means H_0 is rejected, H_a is accepted. Based on the results of this study, a conclusion is obtained. There is a significant relationship between knowledge and behavior in washing hands with soap in Pelita Nusa Jalancagak Vocational School students with a P Value of $0.002 < 0.05$. There is a significant relationship between attitude and behavior of washing hands with soap in students of SMK Pelita Nusa Jalancagak with a P value of $0.042 < 0.05$. After knowing the results of the research that has been done, it is hoped that Pelita Nusa Vocational School students will be able to provide adequate facilities, especially for washing hands with soap.



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1. INTRODUCTION

The main part of our body that is most contaminated by germs and disease seeds is the hands. When holding something, and shaking hands with someone, there must be many sources of disease attached to the skin of the hands, such as germs, prasiit and viruses that contaminate the hands and will enter our bodies if we do not wash our hands first before eating. Through the hands of the source of the disease can enter the nostrils, mouth and eyes when the hands are dirty (Purwandari, et al 2013). According to the Director of Family Health, Ministry of Health of the Republic of Indonesia, Eni Gustina, until now the degree of child health cannot be categorized as good, because there are still health problems in Indonesia where every year children die as many as 1.7 million due to diarrhea, especially at school age.

According to the World Health Organization (2017) diarrhea is a condition where defecation with a more liquid consistency than usual, with three or more times in 24 hours a day. There was an increase in the incidence of diarrhea and deaths caused by it in toddlers from 2015 to 2017. In 2015 diarrhea caused about 688 million illnesses and 499,000 thousand deaths worldwide. Whereas in 2017 almost 1.7 billion cases of diarrhea occurred in children with a figure of around 525,000 thousand people annually experiencing death worldwide, especially in children under 5 years of age (Husniati L, 2018). The morbidity and mortality rate of diarrhea is included in the high category and is influenced by several factors, namely the lack of clean and healthy living behavior (PHBS). One of the PHBS activities is to improve the attitude of washing hands with soap with running water. Proper hand washing can reduce the risk of diarrhea by 42 to 47% (Kartika, et al 2016).

Clean and Healthy Living Behavior (PHBS) is included in all health behaviors that are carried out based on a person's understanding so that they can handle themselves in matters of health, so that they can play an active role in health activities for themselves and others. But not everyone understands what healthy living means, this is evidenced by many people who do various activities regardless of their health, one example is when a child finishes doing work outside the home, parents are not used to children washing their hands and feet when they enter the house and children are left to carry out new activities, another example is when bathroom cleanliness is not considered and left unattended, including the cleanliness of the bathtub. These behaviors seem trivial but can have a big impact when they become a habit (Tentama F, 2018).

Hand washing with soap is the act of disinfecting fingers with soap and running water. Hand washing with soap can protect us from various diseases of the digestive tract and diarrhea. To improve the behavior of HWWS the world organization set on October 15 every year. It is celebrated as World Handwashing Day with soap (global Handwashing Day) To reduce morbidity and mortality from diarrheal diseases Reduction was originally proposed by the 2008 Handwashing public-private partnership (PPPHW) (Ministry of Health, Bureau of Health Promotion and community empowerment). Percentage of handwashing based on Riskesdas 2018 data The correct way is to wash your hands 5 times. Effective handwashing has increased every year since 2007 23.3%, 47% in 2013, even 49.8% in 2018. From this data it can be seen that half of the Indonesian population does not wash their hands properly (Ministry of Health RI, 2018).

Washing hands with water alone is more common, but this has been shown to be ineffective in maintaining health compared to washing hands with soap. Using soap when washing hands actually causes people to spend more time when washing their hands, but using soap can be more effective because the attached fat and dirt will be released when the hands are rubbed and rubbed in an effort to remove them. It is in this inherent fat and dirt that germs live (Musrikawati, I.S, 2017).

According to research conducted by Lestari (2019) on the Relationship between Knowledge and Attitudes Towards Handwashing Behavior in the Pegirian Village Community, the results showed that most respondents had poor knowledge, namely 70.2%, while in the action variable, most respondents had good actions, namely 58.3%. This shows the fact that people still do not understand the behavior of washing hands with soap which is one of the efforts in personal hygiene. Behavior and practice are still not widely applied by the community in everyday life, while the act of washing hands properly includes behaviors that have a positive impact on health (Lestari, A.O.A.W 2019).

Based on a survey conducted by Murwanto (2017), he had 55.9% or sufficient handwashing soap (HWWS) behavior in junior high school, and based on influential factors, he had nine positives, including knowledge, values, and self. found that there are variables from. -Four roles: image, HWWS availability, reliability, HWWS availability, teachers, parents, and alumni. Three negative values, 50%, included cognition, attitude, and the role of health workers. Sinanto & Sitti's (2020) research on knowledge, attitudes and behavior about hand washing with soap in the COVID 19 prevention community in Yogyakarta found that community knowledge was in the good category 100%. The community's attitude was high at 92%, and the community's behavior was good at 98%. They have good knowledge, attitude and behavior about handwashing with soap to prevent COVID 19, and it is important to use media such as social media to streamline health promotion efforts to promote this.

This is based on a preliminary survey of 10th and 11th grade students conducted by researchers at SMK Pelita Nusa Jalancagak Subang. The researcher conducted interviews with 60 students and found data that from 10-15 students did not wash their hands with soap before and after eating, from 5-10 students did not wash their hands with soap after playing, exercising and doing activities. After defecating 5-10 students only wash their hands with water without using soap. This encouraged researchers to conduct a study entitled The relationship between knowledge and attitudes about hand washing with the behavior of increasing hand washing with soap (Hand washing) at SMK Pelita Nusa Jalancagak Subang.

2. METHOD

Quantitative research methods can be interpreted as research methods based on the philosophy of positivism, used to research on certain populations or samples, data collection using research instruments, quantitative / statistical data analysis, with the aim of testing predetermined hypotheses (Sugiyono, 2016). This study uses a cross sectional design, where the cross sectional design is a study to study the dynamics of the correlation between risk factors and effects, by means of an approach, observation or data collection at one time (point time approach). This means that each research subject is only observed once and measurements are made of the status of the character or subject variable at the time of the examination. This does not mean that all research subjects are observed at the same time (Notoatmodjo, 2018). The population in this study were 10th and 11th grade students with a total of 141 students. Based on the Slovin formula, the number of samples to be taken from the population is 60 respondents. The independent variables in the study were knowledge of Pelita Nusa Vocational School students, attitudes towards hand washing with soap and the dependent variable in this study was the behavior of increasing hand washing with soap. Instrument research in the form of a questionnaire or list of questions. The questionnaire includes 3 components, namely knowledge, attitude, and behavior of Handwashing with Soap. Furthermore, the knowledge variable consists of 8 statement items, the attitude consists of 6 statement items, and the behavior consists of 7 statement items. The statistical test used is the chi-square test which can only be used to determine whether or not there is a relationship between two variables (Hastono, 2016).

3. RESULTS AND DISCUSSION

3.1. Results

3.1.1 Univariate Analysis

In Univariate analysis, the frequency distribution of each variable will be displayed, both independent variables and dependent variables, while the results of univariate analysis are described as follows:

1. Frequency and Percentage Distribution of HWWS Knowledge

Variables	Frequency	Percentage (%)
Hand washing Knowledge		
- Less	0	0
- Simply	20	33,3
- Good	40	66,6
Total	60	100

Table 1
Frequency and Percentage Distribution of Hand Washing Knowledge

Based on table 1, it can be seen that the distribution of respondents based on Hand washing knowledge in the moderate category was 20 people (33.3%) and the good category was 40 people (66.6%).

2. Frequency and Percentage Distribution of Hand Washing Behavior Attitud

Table 2
Frequency and Percentage Distribution of Hand Washing Attitude

Variables	Frequency	Percentage (%)
Hand washing attitude		
- Less	0	0
- Simply	25	41,6
- Good	35	58,3
Total	60	100

Based on Table 2, it can be seen that the distribution of Hand washing attitude respondents in the moderate category was 25 people (41.6) and the good category was 35 people (58.3).

3. Frequency and Percentage Distribution of Frequency and Percentage Distribution of Hand Washing Behavior

Table 3
Frequency and Percentage Distribution of HWWS Behavior

Variables	Frequency	Percentage (%)
HWWS Behavior		
- Less	1	1,6
- Simply	29	48,3
- Good	30	50
Total	60	100

Based on table 3, it can be seen that the distribution of Hand washing behavior respondents in the poor category is only 1 person (1.6%), 29 people (48.3%) in the moderate category and 30 people (50%) in the good category.

4. Relationship between Knowledge and Behavior of Hand washing Improvement at SMK Pelita Nusa Jalancagak Subang in 2022

Table 4
Relationship between Knowledge Behavior of Hand washing Improvement at SMK Pelita Nusa Jalancagak Subang Year 2022

Hand washing Knowledge		Improved Hand washing Behavior			Total	<i>p-value</i>
		Less	Simply	Good		
Less		0	0	0	0	
Simply		0	16	4	20	0,002
Good		1	13	26	40	
Total		1	29	30	60	

Based on table 4, it was found that 26 respondents who had good knowledge also had good HWWS improvement behavior. 16 other respondents who have sufficient knowledge, have sufficient HWWS improvement behavior as well. The P value of 0.002 < 0.05 means that H_0 is rejected H_a is accepted, there is a relationship between knowledge about HWWS and student behavior.

5. Relationship between Attitude and Behavior of Hand washing Improvement at SMK Pelita Nusa Jalancagak Subang Year 2022

Table 5
Relationship between Attitude and Behavior of Hand washing Improvement at SMK Pelita Nusa Jalancagak Subang in 2022

Hand washing attitude		Improved Hand washing Behavior			Total	<i>p-value</i>
		Less	Simply	Good		
Less		0	0	0	0	
Simply		0	16	8	25	0,042
Good		1	13	22	35	
Total		1	29	30	60	

Based on table 5 data that 22 respondents who have a good attitude and have good HWWS improvement behavior as well. 16 other respondents who have a moderate attitude, have sufficient HWWS improvement behavior as well. The P value of $0.042 < 0.05$ means that H_0 is rejected H_a is accepted, there is a relationship between attitudes about Hand washing and student behavior.

3.2 Discussion

The results of the analysis of the relationship between knowledge and Handwashing with Soap Behavior obtained a P Value of 0.002, this shows that < 0.05 means that H_0 is rejected H_a is accepted, there is a relationship between knowledge about Hand washing and student behavior. Knowledge is the result of knowing objects through the senses that a person has (eyes, nose, ears, etc.) or the result of human perception. The resulting knowledge is influenced by the subject's attention and the duration of perception. Individual knowledge can be obtained through education and learning processes, experiences of oneself or others, and media which will then be stored in memory through the five senses. Without knowledge individuals have no basis for making decisions and determining actions on a problem at hand.

The results of this study are in line with research conducted by Barrett and Cheung (2021) on Knowledge, Socio-Cognitive Perceptions and the Practice of Hand Hygiene and Social Distancing During the COVID-19 Pandemic: a Cross-sectional Study of UK University Students, that the results of this study found no significant relationship between knowledge and Handwashing with Soap behavior with a p-value of 0.239 ($p > 0.05$).

The results of this study are supported by research conducted by Saptiningsih, et al (2019) on Factors Associated with Hand Washing Behavior in State Elementary School Children 03 Kertajaya Padalarang, that there was no significant relationship between knowledge and hand washing behavior at school with a large p-value of 0.475 ($p > 0.05$). The results of this study are also in line with research conducted by Waruwu (2019) on Factors Associated with Hand Washing Behavior with Soap (Hand washing) in Students of Al Ulum Private Elementary School, Medan Area District in 2018, that the results of this study found no significant relationship between knowledge and Hand Washing with Soap behavior with a p-value of 0.445 ($p > 0.05$). The results of this study are also supported by research conducted by Dajaan et al. (2018) on Hand Washing Knowledge and Practices Among Public Primary Schools in the Kintampo Municipality of Ghana, that there was no relationship between knowledge and Hand Washing with Soap behavior with a p-value of 0.298 ($p > 0.05$).

On the other hand, this study is not in line with research conducted by Zulhelmi (2020) on Factors Associated with Handwashing with Soap Behavior (Hand washing) in Students of State Elementary School 20 Banda Aceh, Kuta Alam District, Banda Aceh in 2019, that there is a significant relationship between knowledge and Handwashing with Soap behavior with a p-value of 0.012 ($p < 0.05$), as well as research conducted by Mukminah, et al (2016) on Factors Associated with Handwashing with Soap Practices in Elementary School Students in the Banyuurip Purworejo Health Center Working Area, that using a p-value of 0.012 ($p < 0.05$), and research conducted by Mukminah, et al. (2016) on Factors Associated with the Practice of Handwashing with Soap in Elementary School Students in the Banyuurip Purworejo Health Center Working Area, that by using the chi square test the results of this study found that there was a relationship between attitude and Hand washing practice with a p-value of 0.009 ($p < 0.05$).

Likewise, research conducted by Solikah Titin and Tri Wahyuni Suksesi (2018) on the Relationship between Knowledge Level, Attitude, and Motivation with Handwashing with Soap Behavior (Hand washing) in Tridadi Sleman DIY State Elementary School Students, also found a significant relationship between knowledge and Handwashing with Soap behavior with a p-value of 0.047 ($p < 0.05$), and similar research conducted by Haryani, et al (2021) on Knowledge and Handwashing Behavior of Vocational School Students as an Effort to Prevent COVID-19, that there is a relationship between knowledge and Handwashing with Soap behavior with a p-value of 0.003 ($p < 0.05$).

According to Notoadmodjo, behavior arises because there is a stimulus of knowledge that he has, after which it is processed in the mind and manifested in a behavior in this case is the behavior of washing hands with soap. Apart from that, knowledge has levels including: knowledge at the level of knowing, knowledge at the level of understanding, and knowledge at the level of application. Meanwhile, according to Bloom's theory, the important domain for the formation of action and acceptance of new behaviors based on knowledge has a long lasting nature for a person, namely knowledge. However, if the behavior is not based on knowledge and awareness, it will not last long. Comparison with Rogers' theory, which says that people who already know (awareness) about something do not necessarily have the right behavior before they do various stages until they finally take the right thing.

The results showed that there was a relationship between knowledge and behavior of Handwashing with Soap in students of SMK Pelita Nusa Jalancagak Subang in 2022. Respondents have not mastered knowledge and attitudes with the behavior of increasing Hand washing. The results of the analysis of the relationship between attitude and Handwashing with Soap Behavior obtained a P Value of $0.042 < 0.05$ means that H_0 is rejected H_a is accepted, there is a relationship between attitudes about Hand washing and student behavior. The results of this study are in line with research conducted by Solikah Titin and Tri Wahyuni Suksesi (2018) on the Relationship between Knowledge Level, Attitude, and Motivation with Handwashing with Soap Behavior (Hand washing) in Tridadi Sleman DIY State Elementary School Students, that there is a significant relationship between attitude and Handwashing with Soap behavior with a p-value of $0.001 (p < 0.05)$. The results of this study are supported by research conducted by Lestari (2019) on the Relationship between Knowledge and Attitudes Towards Handwashing Behavior in the Pegirian Village Community, that, there is a significant relationship between attitudes and Handwashing with Soap behavior with a p-value of $0.017 (p < 0.05)$.

The results of this study are also in line with research conducted by Barrett and Cheung (2021) on Knowledge, Socio-Cognitive Perceptions and the Practice of Hand Hygiene and Social Distancing During the COVID-19 Pandemic: a Cross-sectional Study of UK University Students, also found a significant relationship between attitudes and Handwashing with Soap behavior with a p-value of $0.001 (p < 0.05)$. The results of this study are also supported by research conducted by Friani (2020) on the Relationship of Knowledge and Attitudes of Class V SD Students Against Handwashing Behaviors Using Soap (Hand washing) at State SD 097319 Siopat Suhu Simalungun District in 2019, that there is a relationship between attitudes and Handwashing with Soap behavior with a large p-value of $0.002 (p < 0.05)$.

Apart from that, this study is in line with research conducted by Mukminah, et al (2016) on Factors Associated with Handwashing with Soap Practices in Elementary School Students in the Banyuurip Purworejo Health Center Working Area, that by using the chi square test the results of this study found that there was a relationship between attitude and Hand washing practices with a p-value of $0.009 (p < 0.05)$. Likewise, research conducted by Nuwagaba, Julius et al. (2020) on The Era of Coronavirus: Knowledge, Attitude, Practices, and Barriers to Hand Hygiene Among Makerere University Students and Katanga Community Residents, that there is a significant relationship between attitude and Handwashing behavior with a p-value of $0.003 (p < 0.05)$ supported also by research conducted by Nuwagaba, Julius et al. (2020) on The Era of Coronavirus. 0.05 is also supported by research conducted by Azam, et al (2016) on the Relationship between Knowledge Level, Attitude towards Handwashing Behavior with Soap (Hand washing) at SMPN 1 Surakarta and SMPN 6 Surakarta, that there is a relationship between attitude and Handwashing with Soap behavior with a p-value of $0.000 (p < 0.05)$.

However, this study is not in line with research conducted by Effendi, et al (2019) on Factors Associated with Handwashing Behavior Using Soap in Students at SD Negeri 08 Lubuk Linggau, that the results of this study found no significant relationship between attitude and Handwashing with Soap behavior with a p-value of $0.625 (p > 0.05)$. This study is also not in line with research conducted by Waruwu (2019) on Factors Associated with Handwashing Behavior with Soap (Hand washing) in Students of Al Ulum Private Elementary School, Medan Area District in 2018, that the results of this study found no significant relationship between attitude and Handwashing with Soap behavior with a p-value of $0.135 (p > 0.05)$.

Green's theory (1980) states that attitude is one of the predisposing factors that influence a person's behavior. Attitude is a person's closed response to a stimulus or object, both internal and external so that its manifestation cannot be seen immediately, but can only be interpreted first from this closed behavior, the attitude in reality shows the suitability of a response to a particular stimulus.

Attitude is the driving force to act or respond to a stimulus or object that arises from the experience and development of an individual. An individual's attitude can be said to be positive if he likes an object of psychology while an individual's attitude can be said to be negative if he does not like the object of psychology. Positive attitudes tend to have behaviors that are close or supportive while negative attitudes tend to have behaviors to stay away or not support. Attitude is a mental and nervous state of readiness that has been regulated through experience which can have a directional influence on a person's response to all objects and situations related to it. Students' attitudes towards handwashing with soap can affect whether or not the student's handwashing behavior is carried out.

Action is an individual's response to a stimulus. Knowledge and attitudes can increase the likelihood of taking action. The more a person knows about something, the more likely it is that action will be taken. As with attitudes, the better a person's attitude towards something, the more likely he or she is to act. Attitudes are reactions or judgments that a person still has that affect the disposition of a person's behavior. Behavior is a person's response to a stimulus, and a positive attitude towards the behavior increases the tendency to do it.

The results showed that there was a relationship between attitude and Handwashing with Soap behavior, this was due to respondents having a lack of attitude in Hand washing knowledge so that they had poor Hand washing behavior. The respondent's lack of attitude is due to the respondent's low knowledge of hand

washing with soap knowledge. Respondents who have a positive attitude but have poor HWWS behavior, respondents have considered that hand washing is important but respondents have not properly performed Handwashing with Soap, this is due to the respondents' low knowledge of how to wash their hands, so that the actions of how to wash their hands are not entirely correct. Respondents only wash their hands casually without using soap. Respondents' habit of washing their hands is only to remove germs, lazy or forget to use soap.

4. CONCLUSION

Based on the results of the research and discussion described in the previous chapters, the conclusions that can be drawn from this research are:

1. There is a significant relationship between knowledge and Handwashing with Soap behavior among students of SMK Pelita Nusa Jalancagak with a P value of $0.002 < 0.05$.
2. There is a significant relationship between attitude and Handwashing with Soap behavior among students of SMK Pelita Nusa Jalancagak with a P value of $0.042 < 0.05$.

REFERENCES

- Azwar Saifuddin. (2012). *Human Attitudes and Their Measurement Theory*. Yogyakarta: Learning Library
- Ekawati, et al. 2018. Differences in the Use of Video Media with Leaflets on Students' Knowledge Level Regarding Handwashing with Soap (Case Study at SDN Banyuanyar 1 Sampang in 2018). *Journal of Echo of Environmental Health* 16 (1): 181-188
- Husniati, L. 2018. *The Relationship between Environmental and Sociodemographic Factors with the Incidence of Diarrhea in Toddlers (1 - 4 Years) in the Pauh Kambar Health Center Working Area, Padang Pariaman Regency*. Thesis. Andalas University. Padang.
- Kartika, et al. 2016. Factors Associated with Handwashing with Soap Behavior in Students of State Elementary School Sambiroto 01 Semarang City. *Journal of Public Health Diponegoro University, Semarang*. 4 (5) : 339-346
- Indonesian Ministry of Health. 2018. *Indonesia Health Profile 2018. I. Health Statistics*. Pusdatin. Jakarta.
- Ministry of Health of the Republic of Indonesia. *6 Steps to Handwashing with Soap (Hand washing)*; 2021.
- Ministry of Health. Agency for health research and development. *Basic Health Research*. 2013.
- Indonesian Ministry of Health. *In Riskesdas Main Results*. 2018.
- Lestari, A. O. A. W. *The Relationship between Knowledge and Attitudes towards Handwashing Behavior in Pegirian Village Community*. *Journal of Promkes: The Indonesian Journal of Health Promotion and Health Education*, 2019. Vol. 7, No.1, pp.1-11
- Murwanto, Bambang. *Behavioral Factors of Handwashing with Soap (HWWS) in Junior High School*. *Journal of Health*. 2017;8(2):269-276
- Mustikawati, I. S. *Handwashing Behavior with Soap Qualitative Study on Mothers in Muara Angke Fishermen Village, North Jakarta; Qualitative Study*. *ARKESMAS (Public Health Archives)*, 2017. Vol.2, No.1, pp.115-125.
- Natsir, Fajaruddin M. 2018. *The Effect of Hand washing Counseling on Increasing Knowledge of Students of SDN 169 Bonto Parang, Jeneponto Regency*. *National Journal of Health Sciences (JNIK) Hasanuddin University, Makassar*. 1 (2) : 1-9.
- Purwandari, et al. 2013. *The Relationship Between Handwashing Behavior and Incidence of Diarrhea in School-Age Children in Jember Regency*. *Journal of Nursing University of Jember*. 4 (2) : 122-130.
- Tentama, F. *Implementation of Clean and Healthy Living Behavior (Phbs) for the Welfare of the Tuntang Subdistrict Community, Semarang Regency, Central Java*. *Journal of Empowerment: Publication of Community Service Results*, 2018. Vol. 1, No. 1, pp.13-18.
- Wawan, A and Dewi. *Theory & Measurement of Knowledge, Attitudes, and Human Behavior*. Yogyakarta: Nuha Medika; 2017.
- World Health Organization (WHO). 2009. *WHO Guidelines on Hand Hygiene in Health Care: First Global Patient Safety Challenge Clean Care is Safer Care*. Patient Safety.

FACTORS INFLUENCING THE ROLE OF MENTAL HEALTH CADRES IN HANDLING PATIENT WITH SCHIZOPHRENIA

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ABSTRACT

People with mental disorders are people who experience disturbances in mind, behavior and reasoning that manifest in the form of a set of symptoms and or meaningful behavioral changes, and can cause suffering and obstacles in carrying out the functions of as people. The purpose of the study was to find out the factors that affect the role of mental health cadres. Research method: this study uses quantitative with cross-sectional research methods, in determining samples using a total sampling technique, namely with a total of 30 cadres. The results of the study: There is a relationship between the knowledge of mental health cadres in carrying out roles with P-value 0.000, self-motivation of mental health cadres in carrying out roles with P-value 0.003, social support of mental health cadres in carrying out the role of P-value 0.001, there is no relationship between the availability of P-value 0.330 services and the incidence of patient with schizophrenia. The factors of knowledge, self-motivation, social support of mental health cadres in carrying out roles have a significant relationship with the incidence of patient with schizophrenia while the factors of the availability of cadre services in carrying out the role have no relationship with the incidence of patient with schizophrenia in the south Sumedang Health Center area. suggestions from this study are expected to improve comprehensive mental health services and it is hoped that a mental health will be formed.



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1. INTRODUCTION

People with Mental Disorders (patient with schizophrenia) are people who experience disturbances in thoughts, behavior and feelings that are manifested in the form of a set of symptoms and / or meaningful changes in behavior, and can cause suffering and obstacles in carrying out the functions of people as humans (Kemenkes RI 2019). Mental health problems have become an unresolved health problem in the midst of society, both at the global and national levels. Until now, in Indonesia, these cases are very concerning because of the lack of public concern, resulting in stigma and discrimination against people with mental disorders (Kemenkes RI 2021). Mental health is a condition in which an individual can develop physically, mentally, spiritually, and socially so that the individual realizes their own abilities, can cope with pressure, can work productively, and is able to contribute to their community (Law Number 18 of 2014 concerning Mental Health).

The prevalence of mental disorders worldwide according to WHO, (World Health Organization) in 2019, there were 264 million people with depression, 45 million people with bipolar disorder, 50 million people with dementia, and 20 million people with schizophrenia. Although the prevalence of schizophrenia is relatively low compared to the prevalence of other types of mental disorders according to the National

Institute of Mental Health (NIMH), schizophrenia is one of the top 15 causes of disability worldwide, people with schizophrenia have a greater tendency to increase their risk of suicide (NIMH, 2019). Data from the American Psychiatric Association (APA) in 2014 stated that 1% of the world's population suffers from schizophrenia.

Cases of mental disorders in Indonesia based on the results of the Basic Health Research (Riskesdas) in 2018 are increasing, this increase can be seen from the increase in household prevalence. This means that per 1,000 households there are 7 households with patient with schizophrenia, so the estimated number is around 450 thousand severe patient with schizophrenia. From the Rikesdas data on People with Mental Disorders (patient with schizophrenia) who received health services by Regency / City in West Java 2021, 3 areas were found to receive health services, including Depok City 110.3%, Cianjur Regency 100% and Cimahi City 98.2%. Meanwhile, areas that did not receive health services were Garut Regency 0%, Ciamis Regency 0% and Sumedang Regency 0%. Severe cases of People with Mental Disorders (patient with schizophrenia), from the South Sumedang Puskesmas UPT Health Office report, were 607 people (10.51%) of the total number of mental health disorder visits of 5,775 or 0.44% of the total outpatient visits in 2018 (Sumedang Regency Health Office Profile 2019).

Community health workers (kader) should be members of the community in which they work, are elected by the community, should be accountable to the community for their activities and should be supported by the health system but not necessarily be part of its organization, and have shorter training than professional workers (WHO, 2007). In line with Lewin et al (2005) any health cadre who performs functions related to the delivery of health services must be trained in some service actions and do not have official certificates as health professionals.

Mental health cadres in carrying out their role are influenced by various specific factors, namely knowledge, self-motivation, social support and service availability. From the results of research by Parwati, agung et al (2018) showed that the role of mental health cadres was more in the less category with a total of 31 people (59.6%), while the good category was 21 people (40.4%). The role and function of mental health cadres based on programs in the mentally healthy alert village includes cadres finding and reporting psychosocial cases and mental disorders that occur in the community; mobilizing individuals, groups, and communities to participate in mental health programs in the community; cadres conduct home visits in which cadres monitor the patient's ability to overcome problems, and monitor family involvement in caring for patients; In addition, cadres also refer cases of psychosocial and mental disorders in the community to CMHN (Community Mental Health Nursing) nurses or health services, cadres also make notes or reports on the development of the ability of mentally ill patients to assist both through home visits, mobilizing individuals, reporting cases in their area (Keliat, 2010).

Based on the results of the researcher's preliminary study, currently in the South Sumedang Health Center area, mental health cadres have been formed, but from the Puskesmas officer's report, the role of mental health cadres is still lacking, including mental health cadre knowledge, self-motivation, social support and service availability. According to the theory of Notoatmodjo (2017) explains that knowledge is the result of human sensing, or the result of someone knowing objects through the senses owned by the eyes, nose, ears, and so on. Based on the theory of Pratama and Widodo (2017) that knowledge is able to make someone have awareness so that they are able to behave in accordance with their knowledge. From the results of research by Nafiah, Hanna (2021) concluded that cadre knowledge plays a role in the recovery of patients with mental disorders in assisting both through home visits, individual mobilization, reporting cases in the area, and making referrals as well as recording or reporting on patient progress.

Based on the theory of Rahmayani (2013) explains that an important factor affecting the achievement of good work is the motivation factor because motivation plays a role in changing the behavior of a worker. Based on the motivation of the cadres driven by several factors, among others, wanting to help develop the soul, then feel that being a cadre is a field of reward, and the cadres do not feel burdened by the tasks assigned. The results of research conducted by Rahmayani (2013) show that there is an influence between self-motivation on the performance of CMHN cadres in Bireun Regency with a sig value of 0.00 ($p < 0.05$).

According to the theory of the writing team of the faculty of psychology, Diponegoro University (2018) states that the most important form of social support and is considered important is emotional support from family, close friends and social and health workers, because this support is related to the role of mental health cadres and clients' needs for affection and positive emotions from others so that they are valued. To make it easier for people to reach mental health services, a health post was established in Wonokromo village.

According to Law of the Republic of Indonesia number 36 of 2009 concerning health, a health service facility is a tool and / or place used to organize health service efforts, both promotive, preventive, curative and rehabilitative carried out by the Government, local government, and / or the community. The availability of services, the existence of health facilities or health posts, the community can reach mental health services more easily, from the results of research by Firdaus, Akhmad F, (2020) said that the provision of mental

health services is quite good, but it must be improved again, one example is the activeness of health workers / mental health cadres in visiting patients with people with mental disorders (patient with schizophrenia).

Based on the above background, the researcher assumes that the lack of role of mental health cadres is influenced by several factors, namely knowledge, self-motivation, social support and service availability. So this is an interesting material to be studied more deeply about the factors that influence the role of mental health cadres with the handling of People with Mental Disorders (patient with schizophrenia) in the South Sumedang Health Center area.

2. METHOD

The type of research used in this study is quantitative research. Quantitative research method is one type of research whose specifications are systematic, planned and clearly structured from the beginning to the making of the research design. Quantitative research methods are based on the philosophy of positivism, used to research on certain populations or samples, data collection using research instruments, data analysis is quantitative / statistical, with the aim of testing predetermined hypotheses (Sugiyono, 2011).

The research method used is the Cross Sectional approach, this method aims to determine the factors that influence the role of mental health cadres on the handling of People with Mental Disorders (patient with schizophrenia), these factors include knowledge, self-motivation, social support, and service availability. This research was conducted in the South Sumedang Health Center area. opulation of the whole subject or object with the characteristics studied (Notoatmodjo, 2014). The population in this study were all mental health cadres in the South Sumedang Health Center area, totaling 30 people spread across 8 villages. The sample is a portion taken from the overall object under study and is considered representative of the population. The sample of this study used total sampling, namely the total population of 30 people. The instrument validity test shows that the r alpha of all the variables above is greater than r table = 0.6319, meaning that the research instrument and can be continued in further research. The reliability test shows that the r alpha of all the variables above is greater than r table = 0.707, which means that the research instrument is reliable and can be continued in further research.

Bivariate analysis is carried out on two variables that are thought to be related or correlated (quoted by Sommeng, Faisal 2018). In this study to determine the relationship between knowledge, self-motivation, social support, availability of services with the incidence of people with mental disorders using the chi square test, with a significance level of $\alpha = 0.05$ meaning that there is a significant relationship between the two variables, then the hypothesis is accepted.

3. RESULTS AND DISCUSSION

3.1. Results

3.1.1 Univariate Analysis

In Univariate analysis, the frequency distribution of each variable will be displayed, both independent variables and dependent variables, while the results of univariate analysis are described as follows:

1. Frequency Distribution of Knowledge in South Sumedang Health Center Area

Table 1
Frequency Distribution of Knowledge in South Sumedang Health Center Area

Knowledge	Total	Percentage
Good	20	66,7
Simply	9	30,0
Less	1	3,3
Total	30	100,0

Based on table 1 on the frequency distribution of knowledge of mental health cadres, it is found that most cadres have good knowledge, namely 20 cadres (44.7%).

2. Frequency Distribution of Self-Motivation in South Sumedang Health Center Area

Table 2

Frequency Distribution of Self-Motivation in South Sumedang Health Center Area

Self-motivation	Total	Percentage
Good	20	66,7
Simply	7	23,3
Less	3	10,0
Total	30	100,0

Based on table 2 on the frequency distribution of self-motivation of mental health cadres, it is found that most cadres have good self-motivation, namely 20 cadres (66.7%).

3. Frequency Distribution of Social Support in South Sumedang Health Center Area

Table 3

Frequency Distribution of Social Support in Sumedang Selata Health Center Area

Social support	Total	Percentage
Good	17	56,7
Simply	12	40,0
Less	1	3,3
Total	30	100,0

Based on table 3 on the frequency distribution of social support for mental health cadres, it is found that most cadres have good social support, namely 17 cadres (56.7%).

4. Frequency Distribution of Service Availability in South Sumedang Health Center Area

Table 3

Frequency Distribution of Service Availability in South Sumedang Health Center Area

Service availability	Total	Percentage
Good	7	23,3
Simply	10	33,3
Less	13	43,3

Based on table 3 on the frequency distribution of service availability, it is found that most of the cadres in the South Sumedang health center area have less service availability, namely 13 cadres (43.3%).

5. Frequency Distribution of patient with schizophrenia Handling in the South Sumedang Health Center Area in 2022

Table 4

Frequency Distribution of patient with schizophrenia Handling in the South Sumedang Health Center Area in 2022

Incidence of patient with schizophrenia	Total	Percentage
Good	21	70,0
Less	9	30,0
Total	30	100,0

Based on Table 5 regarding the frequency distribution of patient with schizophrenia handling in the South Sumedang Health Center Region in 2022, it was found that most respondents thought that the incidence of patient with schizophrenia was in the good category, namely 21 (70%).

6. Relationship between the knowledge of mental health cadres in carrying out their roles and the handling of patient with schizophrenia in the South Sumedang Health Center area

Table 6

Relationship between the knowledge of mental health cadres in carrying out their roles and the handling of patient with schizophrenia in the South Sumedang Health Center area

Handling Skizophrenic Patient							
Knowledge	Good		Less		Total		P- value
	F	%	F	%	F	%	
Good	13	65,0	7	35,0	20	100,0	0,000
Simply	7	77,8	2	22,2	9	100,0	
Less	1	100,0	0	0,0	1	100,0	
Total	21	70,0	9	39,0	30	100,0	

Based on Table 6 on the relationship between the self-motivation of mental health cadres in carrying out their roles with the handling of people with mental disorders in the South Sumedang Health Center area in 2022, it was found that the self-motivation factor of mental health cadres in carrying out their roles had a good effect on the handling of patient with schizophrenia, namely 75%.

Based on the Chi Square statistical test with a 95% confidence level assessed at 0.05, the P value = 0.003 where the P value <0.05, so that the null hypothesis is rejected or H_a is accepted, meaning that there is evidence of a significant relationship between the self-motivation of mental health cadres in carrying out their roles with the handling of people with mental disorders (patient with schizophrenia) in the South Sumedang Health Center Area.

7. The relationship between the social support of mental health cadres in carrying out their roles and the treatment of patient with schizophrenia in the South Sumedang Health Center area

Table 7

The relationship between the social support of mental health cadres in carrying out their roles and the treatment of patient with schizophrenia in the South Sumedang Health Center area

Handling Skizophrenic Patient							
Social support	Good		Less		Total		Q- value
	F	%	F	%	F	%	
Good	14	82,4	3	17,6	17	100,0	0,001
Simply	8	66,7	4	33,3	12	100,0	
Less	0	00,0	1	100,0	1	100,0	
Total	22	73,3	8	26,7	30	100,0	

Based on Table 7 on the relationship between the social support of mental health cadres in carrying out their roles with the handling of people with mental disorders in the South Sumedang Health Center area in 2022, it was found that the social support factor of mental health cadres in carrying out their roles had a good effect on the handling of patient with schizophrenia, namely as much as 82.4%.

Based on the Chi Square statistical test with a confidence level of 95% assessed alpha = 0.05, the P value = 0.001 where the P value <0.05, so that the null hypothesis is rejected or H_a is accepted, meaning that there is a significant relationship between the social support of mental health cadres in carrying out their roles with the handling of people with mental disorders (patient with schizophrenia) in the South Sumedang Health Center Region in 2022.

8. Relationship between the availability of services in carrying out the role with the handling of patient with schizophrenia in the South Sumedang Health Center area

Table 8
Relationship between the availability of services in carrying out the role with the handling of patient with schizophrenia in the South Sumedang Health Center area

Handling patient with schizophrenia							
Availability service	Good		Less		Total		R- value
	F	%	F	%	F	%	
Good	6	85,7	1	14,3	1	100,0	0,330
Simply	6	54,5	5	45,0	11	100,0	
Less	9	75,0	3	25,0	12	100,0	
Total	21	70,0	9	30,0	30	100,0	

Based on Table 8 on the relationship between the availability of services in carrying out roles with the handling of people with mental disorders in the South Sumedang Health Center area in 2022, it was found that the availability of services in carrying out roles had less influence on the handling of patient with schizophrenia, namely 66.7%. Based on the Chi Square statistical test with a confidence degree of 95% assessed alpha = 0.05, the P value = 0.330 where the p-value <0.05, so that the null hypothesis is accepted or H_0 is rejected, meaning that there is no significant relationship between the availability of services in carrying out the role with the handling of people with mental disorders (patient with schizophrenia) in the South Sumedang Health Center Region.

3.2 Discussion

3.2.1 Relationship between the knowledge of mental health cadres in carrying out their roles with the handling of people with mental disorders (patient with schizophrenia)

Based on statistical tests showed a relationship between the knowledge of mental health cadres in carrying out the role with the handling of people with mental disorders with a value of ($p=0.000$). The frequency distribution of knowledge with the handling of people with mental disorders the highest percentage is good, this is influenced by the background of cadres with high school education, namely 60% of the total cadres. According to the theory of Notoatmojo (2007) that a person's knowledge is influenced by the level of education, experience, culture and economy.

The results showed that knowledge has an influence on the ability of mental health cadres to carry out their roles in the community. Knowledge is obtained from the learning process, in this case cadres attend basic mental health training. The training provided to mental health cadres is the basis for cadres in carrying out their role. Data obtained that cadres have attended training twice. This is sufficient, so that it can be seen in the field that cadres can carry out their roles well. Mental health cadres together with health workers from the puskesmas conduct visits with one of their assistants, namely certainty to consume drugs regularly, while for the healthy and at-risk categories the role of cadres is to conduct mental health counseling so that the community understands and knows how to prevent it.

In line with Nafiah's research, Hanna, 2021 concluded that cadre knowledge plays a role in the recovery of patients with mental disorders in assisting both through home visits, individual mobilization, reporting cases in the region, and making referrals as well as recording or reporting patient progress.

Based on the results of the research, the researchers found that the role of mental health cadres in the South Sumedang Health Center area in primary prevention is through home visits by identifying at-risk family members, providing motivation and health education to the families of patient with schizophrenia patients. From the results of the study, most patient with schizophrenia patients were cared for by their families, there was no increase in patient with schizophrenia cases due to heredity, getting health services, and the stigma from the outside community was low.

3.2.2 The relationship between self-motivation of mental health cadres in carrying out their roles with the treatment of people with mental disorders (patient with schizophrenia)

Based on the Chi Square statistical test with a confidence degree of 95% assessed as $= 0.05$, the P value $= 0.003$ where the P value < 0.05 , so that the null hypothesis is rejected or H_a is accepted, in other words, it is statistically proven that there is a significant relationship between the self-motivation of mental health cadres in carrying out their roles with the handling of people with mental disorders (patient with schizophrenia) in the South Sumedang Health Center Area. This factor is the most dominant factor in taking an action. The theory of motivation new directions for theory states that motivation represents a psychological process that will cause responsibility to arise and is the initial stage of willingness to act to achieve goals. Everyone wants to be trusted, included and recognized as a potential person so that self-confidence arises and is ready to take responsibility (Djuhaeni, 2010).

Motivation owned by mental health cadres is able to move cadres in carrying out their roles in the community. The caring attitude of cadres is based on the motivation of cadres who are happy with social activities, become cadres without coercion from anyone, and with the aim of increasing knowledge and socialization skills in the community. In line with research conducted by Rahmayani (2013) shows that there is an influence between self-motivation on the performance of CMHN cadres in Bireun Regency with a sig value of 0.00 ($p < 0.05$).

3.2.3 The relationship between social support of mental health cadres in carrying out their roles with the handling of people with mental disorders (patient with schizophrenia)

Based on the Chi Square statistical test with a confidence degree of 95% assessed $= 0.05$, the P value $= 0.001$ where the P value < 0.05 , so that the null hypothesis is rejected or H_a is accepted, in other words statistically proven there is a significant relationship between social support for mental health cadres in carrying out their roles with the handling of people with mental disorders (patient with schizophrenia) in the South Sumedang Health Center Area. According to the Indonesian Ministry of Health, 2014 states that social support is one of the factors that can help reduce the rate of relapse, so it is important for the community to provide social support for people with mental disorders. This is in line with research conducted by Fitri, et al (2012), namely family support can strengthen individuals, create family strength, increase self-esteem, have the potential as the main prevention strategy for the whole family in facing the challenges of daily life and relevance in a society that is in a stressful environment.

The reinforcing factor in this study is social support that influences mental health cadres in carrying out their roles. Cadres get support from family, the surrounding community and especially from related agencies, namely the social service, mental health cadres are also able to work together with officers from the puskesmas and with village midwives.

3.2.3 Relationship between the availability of services in carrying out roles with the treatment of people with mental disorders (patient with schizophrenia)

Based on statistical tests, there is no relationship between the availability of mental health services for mental health cadres in carrying out their roles with the handling of people with mental disorders with a value of ($p=0.330$). The distribution of the frequency of health services with the handling of people with mental disorders, the highest percentage is less, this is influenced by the absence of mental health services, namely mental health posts, including facilities and infrastructure.

Based on the results of the research that the researchers obtained that mental health services have been carried out only during home visits and services when patients are at the health center, whereas according to the theory of Keliat et al, 2012 comprehensive mental health services include 3 primary, secondary and tertiary prevention. Primary care settings can be the most important point of contact between clients with mental health problems and the health care system. The aim of the service is to prevent mental disorders, maintain and improve mental health. The target of the service is community members who have not experienced mental disorders according to age groups, namely children, adolescents, adults, and the elderly. Activities in primary prevention are health education programs, developmental stimulation programs, mental health socialization programs, stress management, preparation for parenthood (Keliat et al, 2012).

From the results of Marchira Calra R's research, 2011 states that for Indonesian countries with limited mental health resources, the most important thing is to integrate mental health services in primary care, mental health data surveys in the community, mental health training, mental posyandu, availability of medicines are things that must be considered in integrating mental health in primary care. Secondary prevention is directed at those who have been exposed to certain diseases so that their condition does not worsen (Setiadarma, 2002). According to Keliat et al, 2012, the focus of nursing services in secondary prevention is early detection and immediate treatment of psychosocial problems and mental disorders. The service goal is to reduce the incidence of mental disorders. Service targets are community members who are at risk or show signs of psychosocial problems and mental disorders.

Secondary services in the management of patient with schizophrenia patients in the South Sumedang Health Center Area have been implemented in home visits by mental health workers from the health center. These activities include early detection, teaching and reminding families in the administration of drugs Setiadarma, 2002 states that tertiary prevention applies to those who are severely affected by the disease so that their lives are not threatened. According to (Keliat et al, 2012). The target of its services is community members who experience mental disorders in the recovery stage, activities in tertiary prevention, namely, rehabilitation programs, socialization programs, programs to prevent stigma. According to the Activity Action Plan of the Directorate of Prevention and Control of Mental Health and Drug Problems of the Ministry of Health of the Republic of Indonesia for 2015-2019, one of the requirements that must be met by the puskesmas to be able to organize mental health services is that the puskesmas must have at least 2 (two) mental health workers (doctors and nurses or other health workers) who are trained in mental health services for a minimum of 30 (thirty) hours of study.

Based on the results of the research, the researchers found that mental health services in the South Sumedang Puskesmas area have health workers, namely nurses and village midwives who are competent and mental health cadres who are trained and able to cooperate in maximizing in handling mental health cases. From the results of the research results obtained by the researchers that in the South Sumedang Puskesmas area, mental health cadres are able to carry out their roles so that the incidence of patient with schizophrenia can be handled, including rehabilitation programs that have been implemented, patient with schizophrenia patients who experience relapse are referred for treatment at a mental hospital, there are no cases of patient with schizophrenia due to heredity and the stigma and discrimination of patient with schizophrenia patients from the surrounding community has decreased.

4. CONCLUSION

Based on the results of the research and discussion described in the previous chapters, the conclusions that can be drawn from this research are:

1. Knowledge of mental health cadres was in the good category 66.7% of cadres, self-motivation was in the good category 66.7% of cadres, social support was in the good category 56.7% of cadres, availability of services was in the poor category 43.3% and the incidence of patient with schizophrenia was in the good category 70% of respondents.
2. There is a relationship between the knowledge of mental health cadres in carrying out their roles with the incidence of people with mental disorders (patient with schizophrenia) in the South Sumedang Health Center area in 2022, the results of the chi square test P value = 0.000
3. There is a relationship between self-motivation of mental health cadres in carrying out their roles with the incidence of people with mental disorders (patient with schizophrenia) in the South Sumedang Health Center area in 2022, the results of the chi square test P value = 0.003.
4. There is a relationship between social support for mental health cadres in carrying out their roles with the incidence of people with mental disorders (patient with schizophrenia) in the South Sumedang Health Center area in 2022, the results of the chi square test P value = 0.001.
5. There is no relationship between the availability of services and the incidence of people with mental disorders (patient with schizophrenia) in the South Sumedang Health Center area in 2022, the results of the chi square test P value = 0.330.

REFERENCES

- Astuti, R. T., Amin, M. K., & Pinilih, S. S. (2014). The Effect of Cadre Training on Increasing Knowledge of Care for Mental Disorders in the Sawangan Health Center Area, Magelang Regency. *Journal of Holistic Nursing Science*, 1(1), 13-21.
- Budiyati, R. (2015). The Relationship between Motivation and Role Ability of Mental Health Cadres in the Kasihan Ii Bantul Community Health Center Yogyakarta (Doctoral dissertation, Universitas Muhammadiyah Yogyakarta).
- Creswell, J. W. (2002). *Research design. Qualitative & Quantitative Approaches*, Jakarta: KIK, 121-180.
- Fatimah, S. (2018). Factors Related to Work Motivation of Health Workers at the Langsa Lama Health Center, Langsa City, Aceh Province in 2018 (Doctoral dissertation, Helvetia Institute of Health).
- Firdaus, F. (2016). Rights fulfillment on health of people with schizophrenia in special region of Yogyakarta. *Scientific Journal of Legal Policy*, 10(1), 87-103.
- Idaiani, S., Yunita, I., Tjandrarini, D. H., Indrawati, L., Darmayanti, I., Kusumawardani, N., & Mubasyiroh, R. (2019). Prevalence of Psychosis in Indonesia based on the 2018 Basic Health Research. *Journal of Health Services Research and Development*, 9-16.

- Indrawati, P. A., Sulistiowati, N. M. D., & Nurhesti, P. O. Y. (2019). The Effect of Mental Health Cadre Training on Cadres' Perceptions in Caring for People with Mental Disorders. *Journal of Mental Nursing (JKJ): National Nurses Association of Indonesia*, 6(2), 71-75.
- Jeksi, A. (2017). Overview of Cadres' Knowledge and Attitudes about the Role of Mental Health Cadres in the Work Area of the Padang City Health Center in 2016 (Doctoral dissertation, Andalas University).
- Maramis, W. F., & Maramis, A. A. (2009). Notes on mental medicine 2nd edition. airlangga university Press.
- Nafiah, H., & Kamalah, A. D. (2021). Overview of the Knowledge and Role of Cadres in Handling Mental Disorders in the Kedungwuni II Health Center Working Area, Pekalongan Regency. *Proceeding of The URECOL*, 336- 340.
- Psychological, K. (2021). Chapter Ii. Thoughts of Professors of Universitas Gadjah Mada Towards Advanced Indonesia 2045: Health Sector, 38.
- Putri, D., & Emi, S. (2020). The influence of competence and motivation on the performance of mental health workers of Palembang city health centers (Doctoral dissertation, Bina Darma University).
- Republic of Indonesia. 2014. Law of the Republic of Indonesia Number 18 of 2014 concerning Mental Health. Jakarta: Ministry of Law and Human Rights.
- Republic of Indonesia.2009. Law of the Republic of Indonesia Number 36 Year 2009 on Health. Jakarta.
- Rismawan, W. (2015). Overview of Family Knowledge and Attitudes in the Care of Mental Illness Patients with Nursing Problems: Social Isolation at Rsud Kota Tasikmalaya. *Bakti Tunas Husada Health Journal: Journal of Nursing, Health Analyst and Pharmacy Sciences*, 9(1), 107.
- Sahriana, N. I. M. The role of mental health cadres in community mental health programs in the community. *Diss. Airlangga University*, 2018.
- Saputra, B. V. (2019). The Relationship between Fulfillment of Activities of Daily Living (ADL) of People with Mental Disorders (patient with schizophrenia) with the Role of Mental Health Cadres (In Bongkot Village, Peterongan District, Jombang Regency) (Doctoral dissertation, STIKes Insan Cendekia Medika Jombang).
- Sari, N. D. P. (2018). Level of Knowledge, Perception, and Attitude of People with Mental Disorders (patient with schizophrenia) in Rowosari Village, Semarang City (Doctoral dissertation, Universitas Muhammadiyah Semarang).
- Surahmiyati, S. (2017). The Role of Mental Health Cadres in Community-Based Mental Health Services at Wonosari Ii Health Center, Gunungkidul Regency (Doctoral dissertation, Gadjah Mada University).
- Tania, M. (2018, August). The Role of Health Cadres in Supporting the Recovery Process in patient with schizophrenia: Literature Review. In *Proceedings of the National Seminar and Health Research 2018* (Vol. 1, No. 1).

THE RELATIONSHIP BETWEEN FEEDING PATTERNS IN TODDLERS WITH THE INCIDENCE OF STUNTING

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ABSTRACT

Stunting is a form of malnutrition which is characterized by an indicator of height according to age. The TB/U indicator provides an indication of chronic nutritional problems as a result of long-standing conditions. The right diet plays an important role in the growth process in toddlers. Intake of nutrients from daily food in less amounts can result in growth delay. This study aims to determine the relationship between feeding patterns and the incidence of stunting in toddlers in the Jatinunggal Health Center Working Area in 2022. This research method is quantitative and the research design uses Cross Sectional. The population in this study were 312 stunting toddlers and the sample in this study was 76 respondents who were taken by purposive sampling technique. The dependent variable in this study is stunting. This research was conducted on a group of mothers who had stunted and non-stunted toddlers. Data was collected using a standardized questionnaire, namely the Child Feeding Questionnaire by (Camci, Bas and Buyukkaragoz, 2014) and toddlers were measured for height using a microtoise and converted into a standardized value (z-score). The data analysis technique used was univariate analysis and bivariate analysis using the Chi-Square test to determine the relationship between the variables studied. This study shows that there is a relationship between inappropriate feeding patterns in toddlers and the incidence of stunting with a significant value of P value = 0.00 and most of the toddlers are stunted in the short category. The results of this study are expected to provide useful information and it is necessary to re-educate health regarding the eating schedule so that mothers can adjust their eating patterns according to a predetermined time and can reduce stunting rates.



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1. INTRODUCTION

Diet in toddlers plays a very important role in the growth process in toddlers. Because food contains a lot of nutrients. Nutrition is a very important part of growth. Nutrition is closely related to health and intelligence. If exposed to nutritional deficiencies then the child will be susceptible to infection. If the diet in toddlers is not achieved properly, then the growth of toddlers will also be disrupted, thin body, malnutrition and can even occur short toddlers (stunting), so a good diet also needs to be developed to avoid malnutrition (Purwarni and Mariyam, 2013).

Good quality children can be obtained from fulfilling the needs of growth and development aspects so as to achieve an optimal future (Adriana, 2011). Body failure that occurs due to malnutrition at this time will have adverse effects on future life that are difficult to repair (Pribadi, 2019). Malnutrition can cause delays in brain development and decreased resistance to infectious diseases (Friyayi, 2021).

Stunting is an indicator of chronic malnutrition due to insufficient food intake for a long time, poor food quality, increased morbidity and an increase in height that is not in accordance with age (TB/U) (Evania, 2020). In general, the problem of linear growth in toddlers is often ignored because it is still considered normal as long as the child's weight meets the standards. According to several studies, stunting is associated with an increased risk of morbidity and mortality as well as inhibited growth of motor and mental abilities (Priyono, Sulistiyani and Ratnawati, 2015).

The short-term impact of stunting is the disruption of brain development, intelligence, impaired physical growth and metabolic disorders (Ministry of Health, 2016). The long-term impact of stunting is poor health, increased risk of non-communicable diseases, poor cognitive and educational achievement in childhood. (Bappenas and UNICEF, 2017). High risk of disability in old age, as well as less competitive work quality which results in lower economic productivity (Ministry of Health, 2016).

The World Health Organization (WHO) estimates the prevalence of stunted children worldwide at 22 percent or 149.2 million in 2020. Based on the 2021 SSGI results, the prevalence of stunting showed a decrease from 27.7% in 2019 to 24.4%. However, the prevalence of underweight has increased from 16.3% to 17%. When viewed according to WHO standards, only Bali Province has a good nutritional status with a prevalence of stunting below 20% (10.9%) and wasting below 5% (3%). West Java Province has the highest number of targeted districts/cities prioritized for stunting intervention with 13 districts/cities. The prevalence of stunting in West Java Province has decreased from 32.5% in 2018 to 24.5% in 2021 (Ministry of Health, 2018).

In the Sumedang area, it was recorded that in 2021 the stunting rate increased by 3.28% from 2019, which is around 8.7%, there are 9,044 or 12.5% of children spread across 26 sub-districts in Sumedang district. After I asked one of the midwives at the Jatinunggal Health Center for data via Whatsapp on April 08, 2022, it was obtained that the results of the February 2022 toddler weighing month (BPB) on toddlers / 0-59 months the number of children according to the nutritional status of BB / U very underweight was 1.3%, underweight was 9.5% and the risk of overweight was 4.1%. According to the nutritional status of TB/U very short height is 2.5%, short height is 7.9% (Puskemas Jatinunggal, 2022).

Research conducted by Farah Danita Rahman, et al (2018) found that there is a significant relationship between feeding patterns and the incidence of stunting in toddlers, the risk magnitude is 5.1, which means that families who apply good feeding patterns to toddlers will reduce the risk of stunting. Conversely, families who apply poor feeding patterns will increase the risk of stunting in toddlers. The coefficient of influence of 1.7 indicates that there is a unidirectional influence between feeding patterns on the incidence of stunting.

According to UNICEF, stunting has an impact on the level of intelligence, vulnerability to disease, decreased productivity and then hampers economic growth, increases poverty and inequality. Therefore, the incidence of stunting in the Jatinunggal Health Center working area needs special attention.

Based on the description above, there are several factors that influence the incidence of stunting in toddlers, one of which is feeding patterns. Therefore, the authors are interested in conducting research related to this problem in the form of a thesis with the title, "The Relationship between Feeding Patterns and the Incidence of Stunting in Toddlers in the Jatinunggal Health Center Working Area".

2. METHOD

This study uses quantitative research methods. Quantitative research according to Sugiyono (2017: 7) is a research method based on the philosophy of positivism, as a scientific or scientific method because it has fulfilled scientific rules concretely or empirically, objectively, measurably, rationally and systematically. Quantitative methods aim to research on certain populations and samples, collect data using research instruments, and analyze data that is quantitative or statistical.

This research design uses Cross Sectional, which is a study where the independent variable (risk factor) and the dependent variable (effect) are assessed simultaneously at the same time. This analytic method is used to measure the relationship (correlation) between the relationship between feeding patterns and the incidence of stunting in toddlers in the Jatinunggal Health Center Working Area. This study wants to analyze the relationship between feeding patterns and the incidence of stunting in toddlers in the Puskesmas Working Area. Researchers want to examine feeding patterns as an independent variable using a questionnaire instrument. Furthermore, assessing stunting in toddlers using microtoise measurements and converted into standardized values (Zscore) using WHO-2005 anthropometric standards for children under five.

The population in this study were mothers and toddlers in the Jatinunggal Health Center working area. The affordable population in this study were 312 children with stunting. The sample in this study was taken from toddlers with stunting in the Jatinunggal Health Center working area, totaling 76 respondents. Sampling technique is a sampling technique. The sampling technique used in this study is a random sampling technique (probability sampling). The random sampling method (probability sampling) is a sampling technique that

provides equal opportunities for each element in the population to be selected as a member of the research sample (Sani, 2018). The research instrument was carried out using a microtoise. Length or height was measured with a length/height measuring instrument or microtoise with an accuracy of 0.1 cm. Furthermore, height data were processed/converted into standardized values (Zscore) using the WHO-2005 anthropometric standards for children under five. Furthermore, based on the Zscore value of each indicator, the nutritional status of children under five was determined with the following limitations (Riskesdas Team 2013, 2014). Measurement of feeding patterns was measured using a questionnaire modified from the Child Feeding Questionnaire (CFQ) (Canco, Bas and Byukkaragoz, 2014). To prove the relationship between the two variables, this analysis uses a statistical test, namely the chi-square test with a significant level (α) = 0.05.

3. RESULTS AND DISCUSSION

3.1. Results

3.1.1 Univariate Analysis

The results of this study are presented in the form of univariate and bivariate analysis. The sample taken was 76 respondents. The age of respondents ranged from 12-59 months. This research was conducted in the Jatununggal Health Center Working Area in July 2022, with the following research results.

1. Frequency of Respondents' Stunting Incidence in Toddlers with Stunting Incidence

Table 1
Frequency of Respondents' Stunting Incidence in Toddlers with Stunting Incidence

Characteristics	Category	f	%
Stunting	Short	30	39,5
	Very Short	46	60,5
Total		76	100

Based on the table above, it was found that most of the stunted toddlers in the Very Short category were 46 respondents (60.5%).

2. Frequency of Feeding Patterns in Toddlers with the Incidence of Stunting

Table 2
Frequency Distribution of Feeding Patterns in Toddlers with the Incidence of Stunting

Characteristics	Category	f	%
Diet	Exactly	31	40,8
	Inappropriate	46	60,5
Total		76	100

Based on the table above, it was found that most respondents had inappropriate feeding patterns, namely 45 respondents (59.2%).

3. Relationship between feeding patterns and the incidence of stunting in toddlers

Table 3
The relationship between feeding patterns and the incidence of stunting in toddlers

Diet		Short	Very Short	P=Value
	Exactly	5	6	0.00
Inappropriate	25	40	0.00	
Total	30	46	0.00	

Based on the table above, it can be seen that most of the feeding patterns are inappropriate as many as 40 respondents in the very short category. The results of statistical tests using Chi-Square obtained a significant degree of P value = 0.00 which means H1 is accepted, so it can be concluded that there is a significant relationship between feeding patterns and the incidence of stunting.

3.2 Discussion

Based on the results of this study, feeding patterns are associated with the incidence of stunting in toddlers with a value of P value = 0.00 from these results illustrating the strong results of proper feeding patterns are feeding patterns that are in accordance with the type of food, the amount of food and the child's meal schedule, based on this study most respondents did not apply proper feeding patterns to stunting toddlers. This is because the feeding patterns obtained in this study only describe the current state of toddlers, while according to research from Fatimah (2015) the nutritional status of stunted toddlers is an accumulation of previous eating habits, so that feeding patterns on a particular day cannot directly affect their nutritional status. The key to success in fulfilling children's nutrition lies with the mother. Good eating habits are highly dependent on the mother's knowledge and skills on how to prepare foods that meet nutritional requirements (Priyono, 2015).

Researchers also found several facts from respondents related to the feeding patterns of stunting toddlers who felt the need for nutritional consultation and assistance. Some toddlers are accustomed to consuming only rice and vegetable soup, then there are toddlers who only like to consume rice and snacks at stalls, as well as less varied food processing from mothers of toddlers who prefer to buy more practical food (Loya, 2017). The type of food consumption also determines the nutritional status of children. This is because toddlers are a nutritionally vulnerable group so that the type of food provided must be in accordance with the needs of the child's body and digestibility (Khoirun, 2015). The type of food that is more varied and has sufficient nutritional value is very important to avoid nutritional deficiencies. Good feeding patterns must be carried out early on by providing varied foods and providing information to children about good eating times. Thus, children will get used to healthy eating patterns (Jayarni, 2018).

Based on the discussion of the data that the authors have done, it appears that every mother needs to learn to provide nutritious food at home starting from diverse types of food with the amount that suits the needs of each individual in the household. Uncontrolled consumption patterns of toddlers such as excessive snack habits should be watched out by parents, especially mothers. The ideal feeding schedule is three main meals and two nutritious snacks to complete the balanced nutritional composition in a day that has not been fulfilled in the main meal.

4. CONCLUSION

Based on the results of the research and discussion described in the previous chapters, the conclusions that can be drawn from this research are:

1. There were mostly inappropriate feeding patterns in stunted toddlers in the very short category.
2. There is a relationship between feeding patterns and the incidence of stunting in toddlers in the Jatinunggal Health Center Working Area with a P value = 0.00.

REFERENCES

- Adriana, D. (2011) *Child Growth and Development and Play Therapy*. Jakarta: Salemba Medika.
- Camci, N., Bas, M. and Buyukkaragoz, A. H. (2014) 'The psychometric properties of the Child Feeding Questionnaire (CFQ) in Turkey', *Appetite*. Elsevier Ltd, 78, pp. 49-54. doi: 10.1016/j.appet.2014.03.009.
- Ernawati, F., Rosmalina, Y. and Permanasari, Y. (2013) 'Effect of Pregnant Women's Protein Intake and Their Baby Length at Birth on the Incidence of Stunting Among Children Aged 12 Months', *Food and Nutrition Research*, 36(1), pp. 1-11.
- Evania, P. A. (2020). 'The Relationship between Diet and the Incidence of Stunting in Toddlers 24-59 Months in RW 07 Cipancing Village, UPTD Puskesmas Jatinangor Working Area'.
- Fatimah, S., Jamil, N., and Risivatunnisa, E. (2019) 'The Relationship between Maternal Parenting Patterns in Feeding with the Incidence of Stunting in Children aged 24-59 Months in the Leuwigajah Cimahi Selatan Health Center Area', In *Jurnal Kesehatan Budi Luhur* (Vol 2).
- Friyayi, A. And Wiwin, W. N. (2021) 'The Relationship between Feeding Patterns and Family Income with the Incidence of Stunting in Toddlers' In *Journal of Borneo Student Research*. (Vol. 3, No.1)
- Jayarni, D. E. and Sumarmi, S. (2018) 'The Relationship of Food Security and Family Characteristics with the Nutritional Status of Toddlers Aged 2 - 5 Years (Study in the Working Area of Wonokusumo Health Center, Surabaya City)', *amerta nutrition*, pp. 44-51. doi: 10.20473/amnt.v2.i1.2018.44-51.
- Khoirun, N. and Nadhiroh, S. R. (2015) 'Factors Associated with the Incidence of Stunting in Toddlers', *Indonesian Nutrition Media*, 10(1), pp. 13-19.
- Loya, P. R. R. And Nuryanto (2017) 'Parenting patterns of feeding in stunted toddlers aged 6-12 months in Central Sumba Regency, East Nusa Tenggara' In *Journal of Nutrition College* (Vol. 6 No. 1).

-
- Pribadi, P.R., Gunawan, H and Rahmat (2019) 'The Relationship between Maternal Feeding Parenting and the Incidence of Stunting in Toddlers Aged 2-5 Years' In *Aisyiyah Nursing Journal* (Vol.6 No. 2)
- Priyono, D. I. P., Sulistiyani and Ratnawati, L. Y. (2015) 'Determinants of Stunting among Children Aged 12-36 Months in Community Health Center of Randuagung, Lumajang District', *Journal of Community Health*, 3(2), pp. 349-355.
- Rakhmawati, W. (2008) 'Factors Contributing to the Nutritional Status of Toddlers in Ciawi Sub-district, Tasikmalaya Regency', 10(Xviii), pp. 37-51.
- Ramdaniati, N. S. and Nastiti. D. (2019) 'The Relationship of Toddler Characteristics, Maternal Knowledge and Sanitation to the Incidence of Stunting in Toddlers in Labuan District, Pandeglang Regency', In *Journal of Public Health* (Vol. 7 No. 2).
- Septiana, R., Djannah, R. S. N. and Djamil, M. D. (2010) 'Relationship between complementary feeding pattern and nutritional status of 6-24 months old toddlers', *KES MAS*, 4(2), pp. 76-143.
- Siregar. H. S. And Siagian. A, (2021) 'The Relationship between Family Characteristics and the Incidence of Stunting in Children 6-24 Months in Langkat District' In *journal Tropical Public Health* (Vol. 1. No. 1).

THE RELATIONSHIP BETWEEN MATERNAL KNOWLEDGE LEVEL AND THE INCIDENCE OF STUNTING IN TODDLERS AT SUKAMATRI HEALTH CENTER

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ABSTRACT

Stunting is a developmental disorder in children caused by malnutrition, recurrent infections, and inadequate psychosocial simulations. If a child has a height of more than -2 standard deviations of the median growth of the child, it is said to be stunted. The variables of this study are knowledge, maternal age, economic status. The purpose of this study was to determine the relationship between factors related to the incidence of stunting toddlers. The design of this study uses quantitative with cross-sectional research methods. The population of this study was mothers who had stunted toddlers totaling 488 people and the sample of this study was 83 respondents in the work area of the Sukamantri health center. The results of this study show a meaningful picture and relationship between maternal knowledge, mother's age and economic status with stunting events. The conclusion of this study concluded that there is a relationship between maternal knowledge and economic status and there is no relationship between maternal age and stunting events. It is hoped that health workers can provide education and information to the public, especially to mothers who have stunted toddlers either through counseling or during the implementation of posyandu, or using other information media besides that, it is hoped that they pay attention to the media and health promotion facilities, especially health promotion media. As well as further enhanced again in health promotion.



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1. INTRODUCTION

Toddlers are children aged 0-59 months, at this time characterized by a very rapid process of growth and development and accompanied by changes that require nutrients that are more in quantity with high quality. However, toddlers belong to a group that is prone to nutrition and easily suffer from nutritional disorders due to lack of food needed. Food consumption plays an important role in the physical growth and intelligence of children so that food consumption has a major effect on the nutritional status of children to achieve physical growth and intelligence of children (Ariani, 2017).

According to the World Health Organization (WHO), stunting is a developmental disorder in children caused by poor nutrition, repeated infections, and inadequate psychosocial simulation. If a child has a height of more than -2 standard deviations of the child growth median set by WHO, then he is said to be stunted. The problem of stunting in Indonesia is a serious threat that requires proper handling. Based on data from the Indonesian Toddler Nutrition Status Survey (SSGBI) in 2019, the prevalence of stunting in Indonesia reached

27.7%. This means that about one in four children under five (more than eight million children) in Indonesia are stunted. This figure is still very high when compared to the threshold set by WHO, which is 20%. (WHO, 2021).

In 2020, globally 149.2 million children under the age of 5 were stunted. More than half of the world's stunted toddlers or around 83.6 million children come from Asia (54%) while more than a third (40%) come from Africa. (WHO, 2020)

In an effort to tackle stunting in Indonesia, the government itself has targeted the Stunting Reduction Program to 14% by 2024. Meeting this target is a big challenge for the government and the people of Indonesia in the midst of this pandemic. Moreover, activities at the Integrated Service Post (Posyandu) are not maximized at this time. In fact, Posyandu is the main milestone for monitoring the growth and development of toddlers in a smaller area. In addition, the economic conditions in Indonesia during the pandemic are not good. In the midst of increasing poverty and unemployment, it cannot be denied that an increase in the prevalence of stunting in Indonesia is possible. Family economic factors are closely related to the occurrence of stunting in children. This is because a person's economic condition affects the nutritional intake and nutrients they get. In Indonesia itself, access to balanced nutritious food is not evenly distributed. Even though the main factor in stunting is the lack of nutritional intake of children in the first 1000 days of life (HPK). (ITS Campus, 2021)

Puskesmas is a facility that can support the realization of health service delivery, namely through the Community Health Center. The general objective of health services through health centers in accordance with the Minister of Health Regulation Number 75 of 2014 concerning Puskesmas is for the implementation of quality, affordable public health efforts and community participation. Puskesmas is also one of the means of providing health services closest to the community. (Yusuf Hariyoko, p: 170, 2021).

Stunting is a chronic malnutrition problem caused by a lack of nutritional intake over a long period of time, which causes future problems in achieving optimal physical and cognitive development. Stunted children have a lower Intelligence Quotient (IQ) than the average IQ of normal children. (Indonesian Ministry of Health, 2018). West Java Province has the highest number of target districts/cities prioritized for stunting intervention, namely 13 districts/cities. West Java Province has several factors that influence the incidence of stunting, one of which is the highest stunting in Indonesia. The prevalence of stunting in West Java Province has decreased from 32.5% in 2018 to 24.5% in 2021. (Ministry of Health, 2018)

In the Sumedang Region, it was recorded that in 2021 the stunting rate increased by 3.28% from 2019, which is around 8.7%, there are 9,044 or 12.5% of children spread across 26 districts throughout the district and Sumedang experiencing stunting. Based on data from the Conggeang Health Center, the results of the Toddler Weighing Month (BPB) at BADUTA (Two-Year-Old Babies) / 0-23 months in February 2021, the number of children according to nutritional status according to BB / U starts from very underweight 1.1%, underweight 6.2%, risk of overweight 9%. According to the nutritional status of TB/U, the first very short amounted to 1.7%, short 5.1%. And according to TB/BB nutritional status, undernutrition amounted to 2.8%. (Sumedang, 2020)

Based on the data from the report at the Sukamantri Health Center, the stunting data in 2021 was 11.9%, in February 2022 the stunting data was 12.3%. According to a survey of nutrition officers at the Sukamantri Health Center, this occurred due to lack of knowledge, maternal age and economic status. And the results of the data show an increase of 0.4%. (Sukamantri Health Center Report). Based on the above background, the researcher is interested in conducting research on "Factors Associated with the Incidence of Toddler Stunting in the Sukamantri Health Center Working Area".

2. METHOD

The type of research used in this study is quantitative, quantitative research according to Sugiyono (2017), is a research method based on the philosophy of positivism, as a scientific or scientific method because it has fulfilled scientific rules concretely or empirically, objectively, measurably, rationally, and systematically. Quantitative methods aim to test predetermined hypotheses that are used to research on certain populations and samples, collect data using research instruments, and analyze data that is quantitative or statistical.

According to Nursalam (2017), the cross sectional approach is one of the research designs, namely by making measurements or observations in this case to find the relationship between the independent variable and the dependent variable and taken at the same time. This study was conducted in the work area of the Sukamantri Health Center, Sumedang Regency in 2022. In research, population is defined as the group of subjects to be subjected to generalization of research results. (Badriah 2019). As a population, the subject group must have characteristics or characteristics

which distinguishes it from other subject groups. These characteristics can include, location characteristics, individual characteristics, or also certain character traits. The population in this study amounted to 448 people.

The population in this study amounted to 488 toddlers from 5 villages in the Sukamantri puskesmas working area consisting of Sukamantri Village 128 people, Tanjungmekar Village 104 people, Cigentur Village 64 people, Cipanas Village 106 people and Gunturmekar Village 86 people. If the population in this study is 488 people, while the desired error rate is 0.1%, then the number of samples to be taken is 83 respondents using simple random sampling technique. In this study to determine the relationship between knowledge and the incidence of stunting in toddlers using the chi square correlation test, with a level of significance $\alpha = 0.5$ means that there is a significant relationship between the two variables, then the hypothesis is accepted.

3. RESULTS AND DISCUSSION

3.1. Results

3.1.1 Univariate Analysis

In Univariate analysis, the frequency distribution of each variable will be displayed, both independent variables and dependent variables, while the results of univariate analysis are described as follows:

1. eDistribution of Frequency of Respondents' Knowledge in the Occurrence of Toddler Stunting in the Sukamantri Health Center Working Area

Table 1
Frequency Distribution of Respondents' Knowledge in the Prevention of Toddler Stunting in the Sukamantri Health Center Working Area

Category	Frequency (F)	Percentage %
Good	41	49.40 %
Simply	27	32.53 %
Less	15	18.07 %

Based on table 1, it shows that the level of knowledge in the incidence of stunting in the Sukamantri Health Center Working Area, the majority of respondents have good knowledge as many as 41 respondents (49.40%).

2. Frequency Distribution of Stunting Events Respondents in the Incidence of Stunting Toddlers in the Sukamantri Health Center Working Area

Table 2
Frequency Distribution of Stunting Events Respondents in the Incidence of Stunting Toddlers in the Sukamantri Health Center Working Area

Category	Frequency (F)	Percentage %
Short	30	36,1 %
Very Short	53	56,9%
TOTAL	83	100 %

Based on Table 2, it shows that the level of stunting in the Sukamantri Health Center Working Area, the majority of respondents have very short stunting as many as 53 respondents (56.9%).

3. Relationship between Knowledge and the Incidence of Stunting in the Sukamantri Health Center Working Area

Table 3
Relationship between Knowledge and the Incidence of Stunting in the Sukamantri Health Center Working Area

Knowledge	Short		Very Short		Total		P- Value
	N	%	N	%	N	%	
Don't know	7	46,6	8	53,4	15	100	0,000
Know	26	38,2	42	67,8	68	100	
Total	33	39,7	50	60,3	83	100	

Based on table 3, it explains that there is a relationship between knowledge and the incidence of stunting in the Sukamantri Health Center Working Area. It was found that respondents with knowledge did not know as many as 8 respondents (53.4%), and respondents with knowledge knew as many as 42 respondents (67.8%) From the statistical calculation, it was found that the p value was 0.000 with an alpha value = 0.05, meaning that the p value had a relationship between knowledge and the level of stunting in the Sukamantri Health Center Working Area in 2022.

3.2 Discussion

Based on table 1 shows that the level of knowledge in the incidence of stunting toddlers in the working area of the Sukamantri Health Center, the majority of respondents have good knowledge as many as 41 respondents (49.40%). Knowledge is one of the factors that is very important for the formation of a person's actions. Nutrition knowledge based on understanding will foster a positive attitude in stunting prevention efforts with the cooperation of the health team carried out through specific nutrition interventions to overcome nutritional problems of children aged 0-23 months by providing nutrition counseling to individuals and families can help to recognize nutritional health problems and help individuals and families solve their problems so that behavioral changes occur to be able to implement behavior change according to Ramayulis, et al (2018) Knowledge or cognitive is a very important domain for the formation of a person's actions because from his experience and research it turns out that it is based on knowledge that will be more lasting than those that are not based on knowledge according to Notoatmodjo (2012).

The relevant research that shows other research was conducted by Zogara AU (2020) entitled "Factors associated with the incidence of stunting in toddlers" It can be seen that mothers who have stunting toddlers have more knowledge of low nutrition (66.2%). Meanwhile, mothers who have toddlers who are not stunted have more knowledge of good nutrition (60.8%). In this study, more stunted toddlers had family members > 4 people (59.5%). Because it is said that more stunted toddlers in children will have an impact on metabolic disorders, low immunity and physical size of the body which is not optimal later.

In this study, the researcher assumes that good knowledge is not enough to make mothers prevent stunting due to the respondent's lack of trust or belief in stunting. There are still those who have good knowledge but do not prevent stunting, which is proven that their children are stunted. This is due to the lack of motivation or support from the mother herself, even the lack of knowledge of mothers in preventing stunting from the results of the questionnaire found that mothers who do not prevent stunting early on in their children feel no need to prevent it. A number of respondents with good knowledge, the role of mothers is very influential in preventing stunting.

Based on Table 2, it shows that the incidence of stunting in the Sukamantri Health Center Working Area, the majority of respondents had very short stunting as many as 53 respondents (56.9%). Stunting is a condition of growth failure in children under five years old (infants under 5 years old) as a result of chronic malnutrition so that children are too short for their age. Malnutrition occurs since the baby in the womb in the early period after the baby is born, however, the stunting condition only appears after the baby is 2 years old. Short (stunted) and very important (survey stunted) toddlers are toddlers with body length (PB / U) and height (TB / U) according to general compared to WHO-MGRS standard standards in 2006).

This is in line with Kinanti Rahmadita's research (This is in line with Kinanti Rahmadita's research (2020) on the problem of stunting and its prevention. Because the prevention of stunting can be done by improving nutritional intake in pregnant women and toddlers and making preventive efforts to catch diseases in toddlers such as diarrhea, worms, etc. Fulfillment of nutritional needs for pregnant women. The problem of stunting is one of the nutritional problems that is the focus of the Government of Indonesia, Stunting is a

nutritional status based on the PB / U or TB / U index where in the anthropometric standard of child nutritional status assessment, the measurement results are at the threshold (Z-Score) <-2 SD up to -3 SD (short) and <-3 SD (very short).

So, this researcher assumes that the incidence of stunting can result in reduced growth in children 2-under 2 years old. Therefore the problem of stunting is a public health problem associated with an increased risk of morbidity, mortality and obstacles to growth both motor and mental.

Based on the results of the Chi Square test with the degree of confidence used 95% and 0.05, it was found that the P value was 0.000 where $0.000 > 0.05$, which means that the null hypothesis (H1) is accepted or statistically there is a significant relationship between knowledge and the incidence of stunting in the Sukamantri Health Center Region in 2022. Knowledge or cognitive is a very important domain for the formation of a person's actions because from his experience and research it turns out that it is based on knowledge that will be more lasting than those that are not based on knowledge according to Notoatmodjo (2012).

The relevant research that shows other research was conducted by Zogara AU (2020) entitled "Factors associated with the incidence of stunting in toddlers" It can be seen that mothers who have stunted toddlers have more knowledge of low nutrition (66.2%). Meanwhile, mothers who have toddlers who are not stunted have more knowledge of good nutrition (60.8%). In this study, more stunted toddlers had >4 family members (59.5%). Because it is said that more toddlers are stunted, stunting in children will have an impact on metabolic disorders, low immunity and physical size of the body which is not optimal later. Researchers assume that knowledge has an effect on the incidence of stunting. Because the lower the knowledge, the higher the stunting rate is seen from child parenting and nutritious food provision. And as for the impact of stunting, namely cognitive impairment or low thinking ability so that children are difficult to focus on learning and are more susceptible to disease.

4. CONCLUSION

Based on the results of the research and discussion described in the previous chapters, the conclusions that can be drawn from this research are:

1. The knowledge of respondents in the good category was 41 respondents (49.40%).
2. Overview of Stunting There were 53 (56.9%) respondents in the very short category.
3. There is a relationship between knowledge of the incidence of stunting in the Sukamantri health center area with a P value of 0.000.

REFERENCES

- Agustia, A. (2020). Factors Associated with the Incidence of Stunting in Toddlers in the Pantai Cermin Health Center Working Area in 2020.
- Ariani, 2017 Toddlers aged 0-59 MONTHS repository.pkr.ac.id/1049/7/chapter II theory review.pdf.
- Daeli, D. K. (2019). The Relationship of Toddler Characteristics (Sex, Birth Weight) and Maternal Height with the Incidence of Stunting in Children Aged 6- 23 Months in the Jati Makmur Health Center Working Area, North Binjai.
- Hidayat, A. N., & Ismawati, I. (2019). Factors of Stunting Incidence in Toddlers in the Kramatwatu UPT PUSKESMAS Work Area, Serang Regency. *ssJournal BIMTAS: Umtas Midwifery Journal*, 3(1), 28-35.
- INDRA BUDI ANTARI, L. U. H. (2020). The Relationship between Parenting Patterns and the Incidence of Stunting in Toddlers Aged 24-59 Months (Doctoral dissertation, Denpasar Polytechnic).
- Ministry of Health RI. 2010. Decree of the Minister of Health of the Republic of Indonesia. NUMBER: 1999/MENKES/SK/XII/2010 on Anthropometric Standards for Assessment of Child Nutrition Status. Jakarta: Indonesian Ministry of Health.
- Ministry of Health RI. 2018. Riskesdas 2018 Report. Jakarta: Indonesian Ministry of Health. Ministry of Health. 2018. The situation of stunting in Indonesia. Jakarta: Ministry of Health. Puskesmas Report 2021-2022.
- Minister of Health number 1995/MENKES/SK/XII Anthropometric Standards for Child Nutrition Status Assessment. Year 2010
- Indonesian Minister of Health. 2020. Categories and Thresholds of Toddler Nutrition Status Based on the Index. Minister of Health 2020
- Indonesian Minister of Health. 2020. Category and Threshold of Toddler Nutrition Status Based on Index. Minister of Health 2020.
- Ngaisah, S., & Nurochim, N. (2018). Assistance in analyzing the situation of high stunting areas. *JMM*

- (Jurnal Masyarakat Mandiri), 2(1), 71-76.
- Ni'mah, K., & Nadhiroh, S. R. (2015). Factors associated with the incidence of stunting in toddlers. *Indonesian Nutrition Media*, 10(1), 13-19.
- Raharjo, K., & Mulyoto, M. (2016). The Effect of Health Counseling on Clean and Healthy Living Behavior (PHBS) in terms of Socio-Economic Status (Experimental Study on DIII Nursing Program Students of Bhakti Mulia Sukoharjo Poltekkes). *IJMS-Indonesian Journal on Medical Science*, 3(2).
- Rahma, W. H. A. (2020). CHARACTERISTIC FINDINGS OF MOTHERS WHO HAVE STUNTING CHILDREN IN THE KEBONHARJO VILLAGE OF THE SAMIGALUH II PUSKESMAS IN 2020 (Doctoral dissertation, Poltekkes Kemenkes Yogyakarta).
- Sriyanti, T., Sayekti, E. S., & Kholida, D. (2017). THE RELATIONSHIP BETWEEN FAMILY NUTRITION AWARENESS (KADARZI) AND STUNTING IN TODDLERS AGED 0-24 MONTHS IN THE WORKING AREA OF SINGOTRUNAN HEALTH CENTER, BANYUWANGI DISTRICT. *Healthy*, 5(2), 56-71.
- Sulistianingsih, A., & Sari, R. (2018). Exclusive breastfeeding and birth weight influence stunting in toddlers 2-5 years old in Pesawaran Regency. *Indonesian Journal of Clinical Nutrition*, 15(2), 45.
- Sulistiyawati, A. (2018). Factors associated with the incidence of stunting in toddlers. *Journal of Midwifery Science*, 5(1), 21-30.
- WHO, 2021. developmental disorders in children caused by poor nutrition, recurrent infections, and inadequate psychosocial stimulation.

THE RELATIONSHIP BETWEEN THE LEVEL OF KNOWLEDGE AND THE LEVEL OF ANXIETY OF WOMEN IN FACING MENOPAUSE IN THE MARGALAKSANA VILLAGE AREA, SUMEDANG REGENCY.

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ABSTRACT

Menopause is known as the end of menstruation or menstruation, and is often considered a scourge in a woman's life. Most women start experiencing menopause symptoms in their 40s and peak at the age of 50. Many women complain that with the arrival of menopause they will become anxious. Anxiety that arises in postmenopausal women is often the presence of facing situations that were not previously feared. Such women are very sensitive to the emotional effects of hormonal fluctuations. Generally they do not get the correct information so that it is a negative effect that will be experienced after entering menopause. The purpose of this study was to determine the relationship between women's anxiety levels in dealing with menopause. The design of this study used a cross sectional research design which was conducted by sampling involving 74 respondents. Data collection was carried out in June 2022. Data was obtained using a questionnaire. Based on statistical tests using chi square, p value = 0.000 was obtained, there was a significant relationship between the level of knowledge and the level of anxiety in menopausal women in the Margalaksana village area, Sumedang district. that knowledge is an important domain that influences women's factors in dealing with menopause. The results of this study are from 1 independent variable, namely the level of knowledge there is 1 level of anxiety in menopausal women in the Margalaksana village area, Sumedang district.



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1. INTRODUCTION

Menopause is a Greek term derived from the words *menos*, meaning "moon", and *pause*, meaning "stop", which can be translated as the cessation of the menstrual cycle. In the colloquial sense, the word menopause refers more to the process than to a specific moment in the menstrual cycle. Medically, menopause refers to one specific moment, the date of menstruation (Rosenthal, 2009). Menopause is known as the time of permanent cessation of menstruation that occurs following the loss of ovarian activity. According to the World Health Organization (WHO) menopause is defined as not having menstruation for 12 consecutive months due to the ovaries progressively failing to produce the hormone estrogen, follicles in the ovaries experience a decrease in activity that can cause menstruation to stop so that women do not experience menstruation forever.

Indonesia currently has 7.4% of menopausal women from the total population and in 2020 it is estimated to reach 11.52% with an average age of menopause of 49 years. The increase in the population of menopausal women is generally accompanied by various levels and types of complex problems that have an impact on the increase in health problems experienced by menopausal women. Menopause is known as the end of menstruation or menstruation, and is often considered a scourge in a woman's life. Most women begin to experience menopausal symptoms in their late 40s and peak at age 50 (Williams, 2007). Most menopausal women experience symptoms less than 50 years and about 25% more than 50 years. But if taken on average, generally a woman will experience menopause around the age of 45-50 years.

Physically, psychologically and sexually will cause women who are facing menopause to experience anxiety and worry. Menopause is very complex for women because they will experience changes in physical health that will affect their psychological health. Adequate knowledge about menopause can help premenopausal women prepare for menopause.

Some women think that menopause will cause anxiety and worry. This will become stressful and more burdensome if the woman thinks negatively and does not get the right support from the closest people. There are several factors associated with anxiety when facing menopause, namely social life habits, economic environment, knowledge, attitudes, family support and lifestyle (Mahadewi et al., 2010). As a result of changes from menstruation to not menstruating anymore, automatic changes in female reproductive organs occur (William et al, 2007; Rossow, et al, 2007; Kronenberg and Downey, 1987).

Changes in ovarian function will affect internal hormones which then affect the organs of the female body in general (Guthrie, Dennerstein, Hopper, and Burger, 1996; Visvnathan, Not only that, these changes often affect the psychological state of a woman. Medically, menopause is characterized by declining estrogen levels that result in a chaotic menstrual schedule, hot flashes, and vaginal dryness. Other signs and symptoms can result from increased levels of follicle stimulating hormone (FSH, follicle stimulating hormone) resulting in emotional changes such as irritability, sadness, and mood swings (Rosenthal, 2009). According to Brown identifies the signs and symptoms of menopause in 3 symptoms, namely, physical, psychological, and sexual symptoms.

Physical symptoms include hot flushes (hot flushes on the face, neck and chest that last for a few minutes; feeling dizzy, weak, sick), night sweats, palpitations (increased/fastened heartbeat), insomnia, more frequent urination, discomfort when urinating, inability to control urination (incontinence). Psychological symptoms include irritability, depression, anxiety, erratic mood, forgetfulness, and difficulty concentrating. Meanwhile, sexual symptoms can include vaginal dryness resulting in discomfort during sexual intercourse and decreased libido (Brown P, 2007).

Depression or stress is one of the signs and symptoms that often occur in menopausal women. This is related to the decrease in estrogen levels which affect neurotransmitters in the brain, causing feelings of anxiety which is the cause of depression or stress (Mulyani, 2013). Many women complain that with the arrival of menopause they will become anxious. Anxiety that appears in menopausal women is often associated with worry in the face of a situation that was never previously worried about. Women like this are very sensitive to the emotional effects of hormonal fluctuations. Generally, they do not get the right information so that they imagine the negative effects that will be experienced after entering menopause.

One of the factors that influence the anxiety level of pre-menopausal women facing menopause is the level of education (Adikusumo, 2003). High education can change the attitudes and behavior of pre-menopausal women in facing menopause so that pre-menopausal women can face menopause without experiencing anxiety. Meanwhile, low education can also affect the health behavior of pre-menopausal women towards menopause.

The level of education affects the level of knowledge. Knowledge both academically and religiously can affect a person's anxiety level. then if the educational status is low, it can cause a person to be easily stressed due to lack of knowledge. (Hawari, 2008). The results of this study are in line with Triana's research (2009), entitled anxiety in women experiencing menopause, in conclusion it is revealed that one of the things that affects menopausal anxiety is the mind of knowledge and cognitive changes experienced by women.

The level of education affects the increase in knowledge, changes in attitudes, changes in mindset and various other positive things that influence each other on the behavior of mothers aged 40-45 years in making efforts to prepare themselves in facing menopause so that mothers do not experience severe anxiety levels. This is in accordance with the opinion (Kasdu 2002) that highly educated women understand more about menopause, this is very possible because women who are at this level are easier to get means or access and supporting facilities such as newspapers, magazines, health books and others to obtain information and knowledge about menopause. Based on the results of preliminary studies by researchers, from the total number of Margalaksana Village from 6 RW and 24 RT a total of 290 women who have menopause. The results of the study found that more than half of the respondents (61.7%) had low knowledge, more than half of the respondents (66%) experienced moderate anxiety, it can be concluded that knowledge can affect menopausal anxiety.

2. METHOD

The research design used is quantitative research. According to Sugiyono (2018; 13) quantitative data is a research method based on positivistic (concrete data), research data in the form of numbers that will be measured using statistics as a calculation test tool, related to the problem under study to produce a conclusion. This study used a cross sectional research design. According to (Notoatmodjo, 2018), a cross sectional survey is a study to study the dynamics of the correlation between risk factors and effects, by means of an approach, observation or data collection at one time (point time approach) using analytical survey methods. The approach taken in this study used a cross sectional approach. The cross sectional approach is that each object is only observed once and measurements are taken simultaneously (Notoatmodjo, 2012). The independent variable in this study is the physical changes of menopausal women and the dependent variable in this study is menopausal anxiety. This research was conducted in Margapala Hamlet RT 01 RW 01 Margalaksan Village, South Sumedang District, Sumedang Regency.

Researchers will determine the population in this study are menopausal women in Margalaksana Village, South Sumedang District, Sumedang Regency, there are 290 people with the number of samples in this study, namely 74 respondents. In this study, the instrument used was a questionnaire of Knowledge Level with Anxiety Level of Women in Facing Menopause. In this questionnaire consists of general words, women's knowledge about menopause.

This analysis is carried out on two variables that are suspected of being related or correlated according to (Notoatmojo, 2014) Bivariate analysis using the chi square formula if the p value <0.005 then H_0 is rejected and H_a is accepted, which means that there is a relationship between the independent variable and the related variable, while if the p value <0.005 then it means that H_0 is accepted and H_a is rejected, which means that there is no relationship between the independent variable and the related variable.

3. RESULTS AND DISCUSSION

3.1. Results

3.1.1 The level of knowledge of women in facing menopause in the Margalaksana Village area, Sumedang Regency

Table 1.

The level of knowledge of women in facing menopause in the Margalaksana Village area, Sumedang Regency

Knowledge	f	%
Good	30	40 %
Simply	34	46 %
Less	10	14 %
Total	74	100 %

Based on the table above, it can be seen that menopausal women who have sufficient knowledge, there are 34 (46%) people and there are 10 people (14%) in the Margalaksana village area, Sumedang Regency.

3.2.2 Anxiety Level of Women in facing Menopause in Margalaksana Village Area, Sumedan Regency

Table 2.

Anxiety Level of Women facing Menopause in Margalaksana Village Area, Sumedang Regency

Anxiety	f	%
Lightweight	30	40 %
Medium	34	46 %
Weight	10	14 %
Total	74	100 %

Based on table 4.2 above, it is known that the level of anxiety in menopausal women in the Margalaksana village area, Sumedang Regency in 2022, there were 30 people (40%) with mild anxiety.

3.2.3 yThe relationship between the level of knowledge and the level of anxiety of women in facing menopause in the Margalaksana Village area, Sumedang Regency

Table 3.

The relationship between the level of knowledge and the level of anxiety of women in facing menopause in the Margalaksana Village area, Sumedang Regency

Knowledge Level	Anxiety Level			Total	P-Value
	Lightweight	Medium	Weight		
Good	30	0	0	30	0,00
	0 %	0 %	0 %	100 %	
Simply	0	30	4	34	
	0%	88%	12%	100 %	
Less	0	0	10	10	
	0 %	0 %	100 %	100 %	
Total	30	30	14	74	
	40 %	40 %	20 %	100 %	

Based on table 4.4 obtained 30 menopausal women The results of the chi square statistical test analysis obtained p - value 0.00 ($p < 0.05$). So it can be concluded that H_a is accepted, meaning that there is a significant relationship between the level of knowledge and the level of anxiety in menopausal women in the Margalaksana village area, Sumedang Regency.

3.2. Discussion

3.2.1 The level of knowledge of women in facing menopause in the Margalaksana Village area of Sumedang Regency in 2022

Knowledge is the result of knowing and this occurs after people perceive a certain object. Sensing occurs through the five human senses, namely the senses of sight, hearing, smell, touch and taste (Notoadmodjo, 2008). In this study, respondents' knowledge was measured by the percentage of respondents' answers. The level of categorization is good knowledge, sufficient knowledge, and lack of knowledge. The level of good knowledge is if the total percentage of answers is $>76\%$, sufficient knowledge if the percentage of answers is 56-75%, while knowledge is lacking if the total percentage of respondents' answers is $<55\%$ (Arikunto, 2008).

Rhofiatun (2012) states that menopausal women have a level of knowledge about menopause in the sufficient category. Knowledge can be influenced by educational factors. The results showed that 19 people were educated to secondary education. In general, someone with a higher education will have broader knowledge and the easier the process of receiving information so that the more knowledge they have. Conversely, lack of education will hinder the development of a person's attitude towards new values that are introduced (Wawan, 2009). Notoadmodjo (2008) states that it does not mean that a person with a low education must have a low level of knowledge.

that menopausal women have a level of knowledge about menopause in the moderate category. Knowledge can be influenced by educational factors.

The results showed that 19 people were educated up to secondary education. They also have low knowledge. Because increasing one's knowledge is not absolutely obtained in formal education but can also be obtained from other sources of information. For this reason, it is not always influenced by educational factors. Experience is also a factor that affects the level of knowledge, experience that will later be attached to knowledge in individuals subjectively so that the more experience, of course, the more knowledge that can be obtained. This can be related to the theory of Notoadmodjo (2003), namely knowledge is the result of "knowing" and this occurs after a person senses an object. certain. Good knowledge in a person can be obtained from anywhere, such as stories that are widely circulated among the people.

Women who have experienced menopause are accompanied by increasingly sophisticated information technology that helps understand menopause. The process of interaction is one that affects the learning process, from not knowing to knowing. The process of interaction that is created can be obtained through shopping activities, posbindu, posyandu, studies that can all increase knowledge, in addition to those obtained through print and electronic media.

3.2.2 Women's anxiety level in facing menopause in the Margalaksana Village area of Sumedang Regency in 2022

Anxiety that occurs in a person is not the same in some situations. anxiety that occurs is influenced by one factor, namely the threat to personal integrity which includes physiological disabilities or interference with basic needs such as physical illness and assesses anxiety as a subjective experience that may be based on perceptions of the situation that occurs (Stuart & Sundeen, 2007). Psychological problems including anxiety appear more in women of menopausal age, the reduced ability of women at menopause causes changes that lead to anxiety about the role of menopausal women in the future (Nehle Et al 2014). Anxiety about the arrival of menopause generally occurs in women entering the age of 50 years. The fears experienced include, among others, fading beauty and the worry of losing a husband due to decreased sexual desire (Pribakti, 2012).

Women who experience the menopause period, the emergence of psychological problems is strongly influenced by changes in the physiological physical aspects as a result of the reduction and cessation of the production of the hormone estrogen, because the reduction of this hormone causes various symptoms and complaints (Irianto, 2014). In fact, not all women experience anxiety, fear when facing menopause. There are women who do not feel any disturbance in their psychological condition. The severity of stress experienced by women in facing and overcoming menopause is strongly influenced by how they perceive menopause (Hawari, 2008).

The level of anxiety of respondents in facing menopause can be influenced by attitudinal factors, family support, knowledge and lifestyle. Attitude, namely individuals who view a problem from a positive side, will have a positive influence on themselves and individuals who view a problem from a negative side will also have a negative influence on themselves including their anxiety. Family support relates to how much the family understands and provides a sense of security and comfort to the mother in facing menopause. Meanwhile, lifestyle is how the lifestyle carried out by an individual.

3.2.1 The relationship between the level of knowledge and the level of anxiety of women in facing menopause in the Margalaksana Village area of Sumedang Regency in 2022

Based on the statistical test obtained p value = 0.00 where p value < 0.05 , so that it is proven that there is a significant relationship between the level of knowledge and the level of anxiety in menopausal women in the margalaksana village area of Sumedang Regency in 2022 This is in accordance with the opinion Anxiety is not only emotionally sick but because there is an error in knowledge, the more knowledge he knows, the anxiety will be easier to overcome. Every woman who will enter menopause must have adequate knowledge about menopause in order to undergo this period more calmly so that the woman does not experience anxiety (Baziad, 2009). The results of this study are in line with research conducted by Betristasia Puspitasari (2020).

From the results of the Spearman Rank statistical test obtained ρ -value of $0.000 < \alpha (0.05)$ and $r = 0.553$, it can be concluded that H1 is accepted, meaning that there is a relationship between knowledge and the anxiety level of premenopausal women in facing menopause in RT 15-17 Ds. Joho, Kec. Wates, Kab. Kediri. Based on the results of the study, information about menopause should be further enhanced by counseling so that premenopausal women can face menopause without excessive anxiety. Good knowledge about menopause will be the basis for mothers to face menopause calmly, in Fenti Herawati's research (2020) this is quantitative research of an analytical nature with a literature review design obtained from google scholar. The sample in this literature review amounted to 46 people. The results of this study found that respondents with less knowledge were (60.0%) and (40.0%) in the good knowledge category.

Based on literature review studies there is a relationship between the level of knowledge and the level of anxiety of women in facing menopause. It is hoped that health workers will play a more active role in increasing women's knowledge about menopause and how to deal with women's anxiety in facing menopause. This research is supported by Kasdu's (2020) statement which states that good knowledge will help women understand and prepare themselves in undergoing premenopause or menopause and if the woman has a lack of knowledge about menopause she will experience anxiety in undergoing menopause.

This is supported by Dedi (2020), namely efforts to reduce complaints in women after menopause are prevention as early as possible by providing correct knowledge and health information. Although the level of knowledge about premenopause is the dominant factor influencing the respondents' anxiety level in facing and undergoing premenopause, other factors such as age can also be a contributing factor to anxiety in premenopause.

According to Prawirohardjo (2003) a younger age is more prone to stress disorders than someone who is older. Various efforts can be made related to premenopause and anxiety, namely by holding a health promotion which includes counseling, health education and explanation of premenopause and menopause

itself. How to reduce complaints without using drugs, for example by exercising regularly, eating healthy and nutritious foods and thinking positively in old age.

This research is not in line with the research of Daniel Akbar Wibowo, Syifa Nadhilah (2020) The results of data analysis obtained a p-value of $p=0.211$ (>0.05) statistically states that there is no significant relationship between knowledge about menopause and anxiety in premenopausal women in Kertasari sub-district, Ciamis district.

Health workers should further increase health promotion to women of menopausal age about menopausal knowledge to increase menopausal knowledge to be ready to face psychological problems. So based on the description of the discussion above, the results of the study which showed a relationship between the level of knowledge about menopause and the level of anxiety of women in facing menopause indicate that the knowledge factor is an important domain that affects women's anxiety in facing menopause.

It can be concluded that between the level of knowledge and the level of anxiety in menopausal women there is a significant relationship. The level of knowledge in menopausal women will affect the level of anxiety in menopausal women, good knowledge will make the anxiety experienced in menopausal women lighter, information about menopause should be improved with counseling so that premenopausal women can face menopause without excessive anxiety. Good knowledge about menopause will be the basis for mothers to face menopause calmly, health workers should further increase health promotion to women of menopausal age about menopausal knowledge to increase menopausal knowledge to be ready to face psychological problems. a strong encouragement is needed from various parties. This encouragement can be in the form of encouragement of activities related to this in order to achieve goals.

4. CONCLUSION

Based on the results of the research and discussion described in the previous chapters, the conclusions that can be drawn from this research are:

1. The level of knowledge of menopausal women in the margalaksana village area is 46%.
2. Anxiety level of menopausal women in the margalaksana village area most have a moderate level of anxiety 40%.
3. There is a relationship between the level of knowledge and the level of anxiety in menopausal women in the Margalaksana Village area, Sumedang Regency in 2022 with p value = 0.00.

REFERENCES

- Arikunto, Suharsimi. 2006. *Research Procedure A Practical Approach*. Jakarta: Rineka
- Donsu, J.D.T (2016). *Nursing Research Methodology*. Yogyakarta: New Library Press.
- Hawari, H (2001) *Management of stress, anxiety, and depression*. Jakarta: Faculty of Medicine, University of Indonesia
- Hawari, D., 2011. *Stress Management Anxiety and Depression*. Jakarta: FKUI Publishing House.
- Hidayat, A.A. 2007, *Nursing Research Methods and Data Analysis techniques*. Publisher Salemba Medika
- Kasdu, Dini. 2002. *Healthy and Happy Tips at the Age of Menopause*. Jakarta: Puspa Swara.Cipta.
- Mulyani S. 2013. *Menopause End of Menstrual Cycle in Women in Middle Age*. Yogyakarta: Nuha Medika.
- Notoadmodjo, S. 2010. *Health Research Methodology*. Jakarta: Rineka Cipta
- Notoatmodjo, S. (2010). *Health Education and Behavior*. Jakarta: Rineka Cipta.
- Nursalam. 2013. *Concepts and Applications of Nursing Research Methodology, Edition*. Jakarta: Salemba Medika
- Nursalam. 2014. *Nursing Science Research Methods: A Practical Approach*. Jakarta: Salemba Medika.
- Nursalam. (2016). *Concept and Application of Nursing Science Research Methodology: Guidelines for Thesis, Thesis, and Instrument*. 2nd edition: Salemba Medika.
- Rosenthal, MS. 2009. *The Hormone Therapy Revolution*. B-First. Yogyakarta.
- Sugiyono, 2005, *Methods of Community Research*. PT.Gramedia Jakarta: Main Library.
- Sugiyono. 2010. *Quantitative Qualitative and R&D Research Methods*. Bandung: CV Alfabeta.

Sugiyono. (2018). *Quantitative Research Methods*. Bandung: Alfabeta.

Swarjana, I. K. 2016. *Health Research Methodology (Revised Edition)*. Yogyakarta: ANDI

THE RELATIONSHIP BETWEEN DIET AND THE INCIDENCE OF GASTRITIS IN TEENAGE GIRLS

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ABSTRACT

Gastritis is an inflammation of the gastric mucosa that is acute, chronic, diffuse or localized. Gastritis occurs in people who have an irregular diet and eat foods that stimulate the production of stomach acid. The purpose of this study was to determine the relationship between diet and the incidence of gastritis in female students at Al-Ma'mun Islamic Boarding School, Tangungkerta District, Sumedang Regency. This study used a descriptive analytic design using a cross sectional approach. The number of respondents in this study were 63 respondents. The sampling technique used in this research is simple random sampling. The statistical test used in this study is the Chi Square Test. The results showed that the incidence of gastritis in Al-Ma'mun Islamic Boarding School, Tangungkerta District, Sumedang Regency reached 34 respondents (54.0%). The results of the chi square test showed a p-value of 0.002. If $p < 0.005$ then H_0 is rejected. H_a is accepted so that it can be interpreted that there is a relationship between diet and the incidence of gastritis. There is a relationship between diet and the incidence of gastritis in Al-MA'mun Islamic Boarding School, Tangungkerta District, Sumedang Regency. For female students, it is hoped that they can improve their diet so that they can reduce the incidence of gastritis.



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1. INTRODUCTION

Islamic boarding school is a non-formal educational institution that deepens Islamic religious knowledge or education and practices it as a guide to daily life by prioritizing morals in social life (Ummah Karimah, 2018). Pesantren can also be categorized as an educational institution that focuses on basic religious and social sciences, where the sciences of aqidah, worship, and akhlaq are instilled (Santoso, 2018). The santri culture is basically a culture where there are students who have a strong desire to study religious knowledge with a teacher who is considered capable and respected. This situation causes a student (in this case called santri) to always be by the side of a teacher (kyai) wherever the teacher goes, in other words, a student/santri must always follow, obey and obey a teacher/kyai and always be under his supervision (Hasan, 2021).

Santri according to the Big Indonesian Dictionary is a person who studies Islam; a person who worships earnestly; and a pious person. Santri in general is a term for someone who follows Islamic religious education in pesantren. Santri usually stay in that place until their education is complete. Some of the diseases that often appear in boarding schools include scabies/gudiken, shortness of breath, fever, cough and cold, and gastritis/stomach ulcers. Gastritis or more often we call it ulcer disease is a disease that can interfere with activities and can be fatal if not treated properly. People who often consume foods that can stimulate stomach acid production and have an irregular diet can usually get gastritis (Wicaksono, 2020).

Gastritis can also be caused by several microorganism infections. One of the symptoms of gastritis is pain in the solar plexus, besides that there can also be nausea, vomiting, weakness, decreased appetite, pale face, cold sweat, frequent burping and in severe conditions vomiting of blood can occur. Gastritis is an inflammation of the stomach lining (SiennyAgustin, 2021). Gastritis can be acute characterized by severe attacks lasting one or two days, or chronic with the most common symptoms being long-term loss of appetite, epigastric pain, nausea, vomiting, bloating, anorexia, and heartburn (Mahmoud, S. S., Gasmi, F. M., Solan, Y. O., et al., 2016). If left untreated, gastritis can last for years and lead to serious complications, such as peptic ulcers. Gastritis is divided into two types, namely acute and chronic gastritis (Pittara, 2021).

Diet is a way or effort in regulating the amount and type of food with a picture of information including maintaining health, nutritional status, preventing or helping cure disease (DepKes RI, 2009). The definition of diet according to Handjani is the behavior of a person or group of people in fulfilling food which includes attitudes, beliefs, and food choices, while according to Suhardjo, diet is defined as a way for a person or group of people to choose food and consume food against physiological, psychological, cultural and social influences (Putri, 2020).

In general, diet has 3 (three) components consisting of: type, frequency, and amount of food. The factors that influence the formation of eating patterns are economic, socio-cultural, religious, educational, and environmental factors (Sulistyoningsih in Muchlisin Riadi, 2019). The nutritional needs of each age group can be seen in the recommended nutritional adequacy number (AKG). Which is based on age, occupation, gender, and living conditions as mentioned (Karlina Lestari, 2020).

Several countries in the world and get the results of the percentage of the incidence of gastritis in the world, found that the number of gastritis sufferers in the United Kingdom 22%, China 31%, Japan 14.5%, Canada 35%, and France 29.5% (Mawey, 2019). The percentage of gastritis incidence in Indonesia according to WHO is 40.8%. The incidence of gastritis in several regions in Indonesia is quite high with a prevalence of 274,396 cases out of 238,452,952 people (WHO, 2020).

Based on data on the incidence of gastritis in Indonesia, to be precise in the province of West Java, gastritis disease reached 31.2%. Based on the results of data from the Sumedang Regency Health Office in 2019 there were 35 health centers in Sumedang with a total of 81,620 people with a total of 21,643 men and 44,475 women (Ministry of Health, 2015). Judging from the results of data on the incidence of gastritis, which shows that the incidence of gastritis in women is 2 times more, researchers are interested in conducting research on female respondents.

Based on preliminary studies conducted by researchers at the Al-Ma'mun Islamic Boarding School, Tangungkerta District, Gunturmekar Village, Gunungdatar Hamlet on May 8, 2022, of 10 teenage girls at the Al-Ma'mun Islamic Boarding School obtained the results of 9 teenage girls at the Al-Ma'mun Islamic Boarding School having a history of gastritis where the characteristics of the eating patterns of teenage girls sometimes have breakfast, have a frequency of eating less than 3 times a day, always consume spicy and sour foods. And 1 has no history of gastritis, is healthy and has a regular diet.

Based on the facts found in the field, researchers took samples of adolescent girls, not male students because many adolescent girls often complain of heartburn accompanied by nausea, bloating, belching, and decreased appetite. Based on the results of the study on May 8, 2022, the facts found in the field are that many santri at the age of 12 to 18 years generally have an unhealthy lifestyle, such as paying less attention to the food consumed, both from the diet and the type of food.

Time availability is also very influential in the opinion of some adolescent girls, and some adolescent girls postpone breakfast time on the grounds that there is less time due to Quranic activities and cleaning in the morning. The variety of food is also very influential, because providing a variety of foods that are less attractive can cause boredom, thus reducing appetite, and some of them prefer fast food.

2. METHOD

This research is a quantitative study with a descriptive correlation design using a Cross Sectional approach. Where all variables were observed, measured at the time of the study. This study uses primary data to determine the relationship between diet and gastritis in adolescent girls of Al-Ma'mun Islamic Boarding School. Where the independent variable is diet and the dependent variable is the occurrence of gastritis will be collected at the same time.

Cross sectional is a study conducted by taking a certain time that is relatively short and a certain place, carried out on several objects of different levels (Sujarweni, 2014). This research was conducted through the distribution of questionnaires at the Al-Ma'mun Islamic Boarding School, Tangungkerta District, Sumedang Regency. Population is a collection of subjects, variables, concepts, or phenomena. We can examine each member of the population to determine the nature of the population in question (Morissan, 2012). The population in this study were 173 adolescent girls of the Al-Ma'mun Islamic Boarding School, Tangungkerta District, Sumedang Regency with a sample size of 63 people.

The diet questionnaire that has been tested by Renzi Avionita S1 Keperawaan Stikes Bhakti Husada Mulia Madiun. The questions tested for validity were 17 about eating patterns. The results of the validity test for the eating pattern questionnaire were obtained from r hitung 0.571-0.895 valid question items if r count is greater than t table at $n = 20$, namely 0.444 thus the eating pattern questionnaire is said to be valid. In this study, bivariate analysis was conducted to determine the relationship between diet and the incidence of gastritis. Knowledge of this bivariate data analysis using SPSS computerized assistance. The statistical test used is the chi square test (Notoatmodjo, 2012).

3. RESULTS AND DISCUSSION

3.1. Results

3.1.1 Frequency Distribution of Diet in adolescent girls at Pondok Pesantren Al-Ma'mun Tanjungkerta District, Sumedang Regency

Table 1.
Frequency Distribution of Diet in adolescent girls at Al-Ma'mun Islamic Boarding School
Tanjungkerta District, Sumedang Regency

No.	Knowledge	f	%
1	Good	22	35%
2	Less	41	65%
Total		63	100 %

Based on table 1, it can be seen that the characteristics of respondents who showed a poor diet were 41 adolescent girls (65.1%).

3.1.2 Frequency Distribution of Respondents Based on Gastritis at Al-Ma'mun Islamic Boarding School, Tanjungkerta District, Sumedang Regency

Table 2.
Frequency Distribution of Respondents Based on Gastritis at Al-Ma'mun Islamic Boarding School,
Tanjungkerta District, Sumedang Regency

NO	Gastritis	Total	Percentage
1	Gastritis	34	54,0%
2	No Gastritis	29	46,0%
Total		63	100%

Based on table 2, it can be seen that the characteristics of respondents who showed gastritis were 34 respondents (54.0%).

3.1.3 Relationship between Diet and the Incidence of Gastritis at Al-Ma'mun Islamic Boarding School, Tanjungkerta District, Sumedang Regency

Table 3.
Relationship between Diet and the Incidence of Gastritis in Al-Ma'mun Islamic Boarding School,
Tanjungkerta District, Sumedang Regency

Diet	Incidence of Gastritis				Total	
	Gastritis		No Gastritis			
	Frequency	%	Frequency	%	Frequency	%
Good	6	18%	16	55%	22	35%
Bad	28	82%	13	45%	41	65%
Total	34	54%	29	46%	63	100%
p value	0,002					

Based on table 3 above, it shows that the results of cross tabulation of the relationship between diet and the incidence of gastritis are known from 63 respondents, 28 respondents (82%) with a bad diet with gastritis, 16 respondents (55%) with a good diet do not have gastritis. And 13 respondents (45%) with a bad diet with no gastritis, 6 respondents (18%) with a good diet gastritis. To determine the relationship between diet and the incidence of gastritis at Al-Ma'mun Islamic Boarding School using the chi square analysis test. This test is used to prove the hypothesis of whether there is a relationship between diet and the incidence of gastritis. The results of statistical tests obtained a value of $p = 0.002 < \alpha = 0.05$ so that H_0 is rejected and H_a is accepted, which means that there is a relationship between diet and the incidence of gastritis at Al-Ma'mun Islamic Boarding School.

3.2. Discussion

3.2.1 Diet in adolescent girls at Al-Ma'mun Islamic Boarding School, Tangungkerta District, Sumedang Regency

The results and this study showed that of the 63 respondents at the Al-Ma'mun Islamic Boarding School, Tangungkerta District, Sumedang Regency, 22 respondents had a good diet, while 41 respondents had a poor diet. From the observations made by researchers related to the frequency of eating, some respondents often did not eat one day 3 times. Types of food such as vegetables, fruit, meat, tofu and tempeh, most young women cannot consume them every day. And the portion of food that is not in accordance with the recommendations is one of the causes of gastritis. Some respondents also often have no appetite or tend to get bored with the menu provided by the boarding school. Most of the respondents who had a good diet were 22 respondents, this can be seen from the results of the questionnaire which shows several questions that show dietary habits, types of food and meal portions.

According to the theory of Hudha (2012), the above can affect the diet is the way or behavior taken by a person or group of people in choosing, using food ingredients in food consumption every day which includes meal frequency, meal portions, and types of meals based on social, cultural factors where they live.

This is supported by previous research conducted by Bagas (2016) on the relationship between diet and the incidence of gastritis in adolescents at the Al-Hikmah Trayon Islamic Boarding School Karanggede Boyolali, which found that respondents with a poor diet were 20 respondents (66.7%), and respondents with a good diet were 10 respondents (33.3%), which means that a poor diet is twice as much as a good diet respondent.

Based on the explanation above, according to the researcher, the relationship between diet and the incidence of gastritis with the results obtained 22 respondents have a good diet, this can be seen from the results of the questionnaire which shows the respondents' good dietary habits such as, the frequency of eating 3 times a day and on time, the type of food consisting of carbohydrates, protein, vitamins and minerals, with portion sizes according to what has been recommended. While 41 respondents had a bad diet. this can be seen from the results of the questionnaire which shows bad dietary habits such as, the frequency of eating less than 3 times a day and not on time, the type of food that does not or rarely consists of carbohydrates, protein, vitamins and minerals, with portion sizes that are not in accordance with what has been recommended. With this, the researcher hopes that teenage girls will pay attention and maintain their daily diet.

3.2.2 Incidence of gastritis in adolescent girls at Al-Ma'mun Islamic Boarding School, Tangungkerta District, Sumedang Regency

Based on the research results in table 4.2, it shows that most of the teenage girls at the Al-Ma'mun Islamic Boarding School, Tangungkerta District, Sumedang Regency in 2022 had gastritis as many as 34 respondents. This can be seen from the questionnaire that mentions several questions that show the signs and symptoms of gastritis experienced by respondents, namely decreased appetite, heartburn, feeling nauseous,

vomiting, bloating, cold sweat, burping, most of the respondents, answered "yes" which means that the respondents experienced these symptoms.

This is in accordance with the theory of Widjadja (2015) such as burping or hiccups, hot throat, nausea, stomach feels kneaded, vomiting, no appetite, frequent cold sweats, weight loss, upper abdomen does not feel comfortable, stomach feels hot, bloated, full quickly and stomach often sounds. Other symptoms that rarely occur, but feel heavy are pain in the solar plexus accompanied by nausea, symptoms of anemia, namely dizziness and weakness, reduced body balance, as if fainting, vomiting. Based on the above results, it is concluded that most respondents have gastritis, this can be seen through signs and symptoms.

This is supported by previous research conducted by Bagas (2016) on the relationship between diet and the incidence of gastritis in adolescents at the Al-Hikmah Trayon Karanggede Boyolali Islamic Boarding School, which is known that 19 respondents with gastritis (63.3%), and 11 respondents with no gastritis (36.7%) can be interpreted as students with gastritis 2 times the respondents of students without gastritis.

The researcher believes that respondents often ignore eating badly and do not take gastritis prevention as an effort to avoid gastritis. And respondents often consume foods that tend to cause gastritis, such as spicy foods.

3.2.3 Relationship between Diet and the Incidence of Gastritis in adolescent girls at Al-Ma'mun Islamic Boarding School, Tangungkerta District, Sumedang Regency

Based on the results of the cross table analysis of the relationship between diet and the incidence of gastritis in adolescent girls at the Al-Ma'mun Islamic Boarding School, Tangungkerta District, Sumedang Regency, 28 respondents had a poor diet with gastritis and 16 respondents had a good diet without gastritis. From the analysis shows that a poor diet can cause gastritis. From the analysis shows that a poor diet can cause gastritis. From the results of statistical tests using chi square test analysis to obtain a p-value of 0.002. If $p < 0.005$ then H_0 is rejected and H_a is accepted so that it means there is a relationship between the relationship between diet and the incidence of gastritis at the Al-Ma'mun Islamic Boarding School, Tangungkerta District, Sumedang Regency.

Syamsu (2017) argues that eating patterns (meal frequency, meal type, and meal portions) or various information that provides an overview of the various kinds and amounts of food eaten every day by one person and is typical for a group. The results showed that diet is very influential on the incidence of gastritis.

This is supported by previous research conducted by Bagas (2016) on the relationship between diet and the incidence of gastritis in adolescents at the Al-Hikmah Trayon Karanggede Boyolali Islamic Boarding School, which found that respondents with a poor diet were associated with a low incidence of gastritis totaling 7 respondents (15.0%), while the incidence of gastritis in the high category was 13 respondents (85.0%). On a good diet associated with the incidence of gastritis in the low category amounted to 4 respondents (20.0%), while the incidence of gastritis in the high category amounted to 6 respondents (80.0%). From this data it can be seen that the high incidence of gastritis is indicated by a poor diet. This means that there is a relationship between diet and the incidence of gastritis.

The researcher believes that the incidence of gastritis is largely due to an irregular diet such as most respondents only eating once a day or not at all. In addition, the amount of carbohydrates, protein, vitamins and minerals in the food consumed is not balanced. Researchers also argue that respondents often ignore eating badly and do not take gastritis prevention as an effort to avoid the occurrence of gastritis. And respondents often consume spicy foods that tend to cause gastritis.

4. CONCLUSION

Based on the results of the research that has been conducted and described in the discussion exposed in the previous chapter, the authors can provide the following conclusions:

1. Diet in adolescent girls at the Al-Ma'mun Islamic Boarding School, Tangungkerta District, Sumedang Regency was poor, namely 65.1%.
2. Gastritis in adolescent girls at the Al-Ma'mun Islamic Boarding School, Tangungkerta District, Sumedang Regency was gastritis, namely 54.0%.
3. There is a significant relationship between diet and the incidence of gastritis in adolescent girls at the AL-Ma'mun Islamic Boarding School, Tangungkerta District, Sumedang Regency with a p-value = $0.002 < \alpha 0.05$.

REFERENCES

- Almatsier, Sunita. 2010. Basic Principles of Nutrition Science. Jakarta: PT Sun.
- Ambarwati. Respati. Fitri. 2011. Nutrition and Reproductive Health. Surabaya: Cakrawala Science.

- Ariani, Putri, Ayu. 2016. Nutrition Science. Muara Bungo : Numed.
- Arikunto, Suharsimi. 2010. Research Procedures A Practical Approach. Jakarta: Rineka Cipta.
- Asady, A. N., & No, J. I. S. (2017). Sms Gateway Based Santri Licensing and Violation Application with Borland Delphi. Lampung Utara, 1-17.
- Azwar, Saifuddin. 2013. Research Methods. Yogyakarta: Student Library Offset.
- Bagas.2016. The Relationship of Diet with the Incidence of Gastritis in Adolescents at AL-HIKMAH Cottage Trayon Karanggede Boyolali. (online) <http://eprints.ums.ac.id/47262/> (accessed on December 16, 2018).
- Dahlan.Sopiyudin.M. 2014. Statistics for Medicine and Health. Jakarta: Salemba Mendika.
- Desty, E. R. (2020). Relationship between Diet and the Incidence of Gastritis in Adolescents Class X at MA Walisongo, Kebonsari District, Madiun Regency in 2019 (Doctoral dissertation, STIKES BHAKTI HUSADA MULIA MADIUN). 2019 (Doctoral dissertation, STIKES BHAKTI HUSADA MULIA MADIUN).
- Diatsa, B., Abi Muhlisin, S. K. M., Kep, M., & Yulian, V. (2016). Relationship between Diet with the incidence of gastritis in adolescents at Pondok Al-hikmah, Trayon, Karanggede, Boyolali (Doctoral dissertation, University of Surakarta). Muhammadiyah Surakarta).
- Diaz, H. R. (2019). Abraham, C. & Shanley E. 1997. Social Psychology for Nurses. Jakarta: EGC medical book. Adnani, H. 2011. Public Health Science. Yogyakarta: Nuha Medika. Arikunto, S. 2010. Research Procedure: A Practice Approach. Jakarta: PT Rineka Cipta. Atipah. 2016. Factors Affecting Community Interest in Jamkesda Program Participation in Banjarlor Village, Banjarharjo Sub-district, Brebes Regency. Thesis, Semarang State University. Azwar, S. 2012. Reliability and Validity. (Doctoral dissertation, Stikes Bhakti Husada Mulia Madiun).
- Gusti, P. N. F., Rawi, R. D. P., & Sofia, S. (2021). The Effect of Human Relations and Work Motivation on Employee Performance at PT. Bank Rakyat Indonesia (Persero) TBK Sorong Branch. Journal of Effective Economics, 3(4), 456-463.
- Hendro, Adeleida. Bryan. 2015. Relationship between Eating Habits and Prevention of Gastritis in Class X Students at Likupang High School (online) <https://ejournal.unsrat.ac.id/index.php/jkp/article/view/5215> (accessed on December 16, 2018)
- Herniti, E. (2013). Sexist Language in the Big Indonesian Dictionary. Adabiyat: Journal of Language and Literature, 12(1), 116-133.
- Irianto.Djoko. 2011. Complete Nutrition Guide for Families and Sportsmen. Yogyakarta: Andi Yogyakarta.
- Jannah, M. (2017). Adolescents and their developmental tasks in Islam. Psychoislamedia: Journal of Psychology, 1(1).
- Karimah, U. (2018). Islamic boarding schools and education: its relevance in education goals. MISYKAT: Journal of Al-Quran, Hadith, Shari'ah and Tarbiyah Sciences, 3(1), 137.
- Kusmiran, Eny. 2013. Reproductive Health of Adolescents and Women. South Jakarta: Salemba Medika.
- Kusumawardani, M. P., & Hendratno, H. (2020). THE EFFECT OF DEBT TO EQUITY RATIO, CURRENT RATIO, TOTAL ASSET TURNOVER, AND SIZE ON RETURN ON EQUITY. Journal of Management Partners, 4(8), 1234-1248.
- Loanda, E., Margaret, A. L., & Hidayat, J. (2016). Daily sugar intake from complementary ingredients. Andalas Medical Magazine, 39(1), 21-27.
- Mardalena. Ida. 2017. Nursing Care for Patients with Digestive System Disorders Digestive System Disorders. Yogyakarta: PT New Library.
- Musyayyib, R., Hartono, R., & Pakhri, A. (2018). Knowledge and Diet with Adolescent Nutritional Status at Nahdlatul Ulum Islamic Boarding School Soreang Maros. Makassar Health Polytechnic Health Media, 12(2), 29-38.
- Notoatmodjo, S. (2012). Health research methodology.

- Nursalam. 2013. *Nursing Science Research Methodology Practical Approach*. Third Edition. South Jakarta: Salemba Medika.
- Potter & Perry. 2005. *Fundamentals of Nursing, Concepts, Processes and Practice*. Jakarta: EGC.
- Putri, R. F., & Putri, R. F. (2019). THIRD LEVEL IN FINANCIAL ACCOUNTING CONCEPTUAL FRAMEWORK FACTORS. *Journal of Social Humanities Education Research*, 4(2), 525-530.
- Restiana, D.E. (2019). Thesis on the relationship between diet and the incidence of gastritis in class X adolescents in MA Walisongo, Kebonsari District, Madiun Regency.
- Rista, Rumpiati, Syamsu. 2017. The Relationship of Diet with the Incidence of Gastritis in Adolescents (online) <http://jurnal.csdforum.com/index.php/GHS/article/view/100> (accessed on December 16, 2018).
- Rofii, M. (2021). *Theory and Philosophy of Nursing*.
- Sandi, D. E. (2020). The Relationship of Dietary Regularity with the Incidence of Functional Dyspepsia in Adolescents: A Systematic Review.
- Saputro, K. Z. (2018). Understanding the characteristics and developmental tasks of adolescence. *Aplikasia: Journal of Applications of Religious Sciences*, 17(1), 25-32.
- Soetjningsih, C. H. (2018). *Developmental psychology series: child development from conception to late childhood*. Kencana.
- Sugiyono. 2010. *Statistics for Research*. Jakarta: Alfabeta CV.
- Sujarweni W. 2014. *Nursing Research Methodology*. Jakarta: Gava Media.
- Sutana, I. G., & Dwipayana, A. P. (2020). Consumption Behavior of Jamu Covid-19. *COVID-19: Perspectives on Religion and Health*, 41.
- Syafnidawati, S., & Mahardhika, E. A. Promotion of Water World Citra Raya Tangerang in the Form of Video Advertising. *Cyberpreneurship Innovative and Creative Exact and Social Science*, 5(2), 204-211.
- Waspadji, Suyono, Sukardji. 2010. *Assessment of Nutritional Status Epiemiologic Studies and Research in Hospital*. Jakarta: FKUI Publishing House.
- Widjadja R. 2009. *Chronic Disease*. Jakarta: Bee Media Indonesia
- Wijaya, A., & Santoso, S. (2015). Marriage Sirri Among Santri Case Study Nidaul Ummah Boarding School Gilang Harjo Pandak Bantul (Marriage Sirri Among Santri Case Study Nidaul Ummah Boarding School Gilang Harjo Pandak Bantul). *Ulumuddin Journal*, 4, 33-44.
- Winasih, R., Nursalam, N., & Kurniawati, N. D. (2015). Cultural organization and quality of nursing work life on nurses performance and job satisfaction in Dr. Soetomo Hospital, Surabaya. *Ners Journal*, 10(2), 332-342.
- Yusfar, K. M. (2019). THE RELATIONSHIP BETWEEN GASTRITIS RISK FACTORS AND THE INCIDENCE OF GASTRITIS IN HIGH SCHOOL AND JUNIOR HIGH SCHOOL STUDENTS. *Healthy Journal*, 7(1), 9-21.

FACTORS ASSOCIATED WITH COMMUNITY PARTICIPATION IN THE COVID-19 VACCINE PROGRAM

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ABSTRACT

Vaccination is a public health effort that is considered the most effective and efficient in preventing the transmission of dangerous diseases. Covid-19 vaccination aims to minimize the spread of Covid-19, reduce the number of positives and deaths due to Covid-19, achieve herd immunity. The purpose of this study was to determine the factors associated with community participation in the Covid-19 Vaccine program in Sukaluyu Village, Ganeas District, Sumedang Regency. This research is a quantitative study using a cross sectional design. In this study, there were 67 samples obtained by filling out questionnaires. Data analysis using Spearman Rank and Chi Square. It showed that out of 67 respondents, there were 7 respondents (10.4%) who did not participate in the Covid-19 vaccine program, while 60 respondents (89.6%) participated in the Covid-19 vaccine program. The variable associated with community participation in the Covid-19 vaccine program is the knowledge variable (P-value=0.015). The unrelated variables are anxiety (P-value=0.068), comorbidities (P-value=1.000). Knowledge is related to community participation in the Covid-19 vaccine program, therefore it is necessary to provide regular information to all communities about the usefulness, safety of the covid-19 vaccine and all updated information about the Covid-19 vaccine.



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1. INTRODUCTION

Corona Virus Disease 2019 or commonly abbreviated as COVID-19 is an infectious disease caused by SARS-CoV-2, a type of coronavirus. People with COVID-19 can experience fever, dry cough, and difficulty breathing. The infection spreads from one person to another through droplets from the respiratory tract that are often produced when coughing or sneezing. The droplet range is usually up to 1 meter. Droplets can stick to objects, but will not stay in the air for long. The time from exposure to the virus to the onset of clinical symptoms is between 1-14 days with an average of 5 days. So, people who are sick are required to wear masks to minimize the spread of droplets. Until now, the cause of the Corona virus is unknown, but it is known that this virus is spread by animals and is able to spread from one species to another, including humans. It is known that the Corona virus originated in Wuhan City in China and appeared in December 2019.

The World Health Organization (WHO) has declared Covid-19 a Global Pandemic. Indonesia is one of the countries that contracted the coronavirus in early 2020. On March 2, 2020 Indonesia reported 2 cases of Covid-19. Starting from this case, the number of cases of people affected by the corona virus increased every day until July 13, 2021. Indonesia is also said to be the country with the highest Covid-19 cases in Southeast Asia, which of course this condition greatly affects the entire world community. According to data from the Indonesian Ministry of Health, the number of cases affected by Covid-19 in Indonesia has reached 2,615,529

cases, and confirmed cases of death caused by Covid-19 with a total death of 68,219 cases (2.6%). (Indonesian Ministry of Health, 2020, in Argista, 2021).

The government has declared a Covid-19 public health emergency in Indonesia through Presidential Decree Number 11 of 2020 concerning the Determination of Corona Virus Disease 2019 (Covid-19) Public Health Emergency, so that countermeasures must be carried out in accordance with the provisions of laws and regulations (Ministry of Health of the Republic of Indonesia 2021). The determination of the Covid-19 public health emergency is carried out considering the extraordinary spread of Covid-19 characterized by the number of cases and the number of deaths that have increased and expanded to cross-regional and cross-country and have an impact on political, economic, social, cultural, defense and security aspects, as well as the welfare of the people in Indonesia.

In addition, considering the spread of Covid-19 has an impact on increasing the number of victims and property losses, expanding the scope of affected areas, and having implications on broad socio-economic aspects in Indonesia, the government issued Presidential Decree Number 12 of 2020 concerning the Determination of the Non-natural Disaster of the Spread of Corona Virus Disease 2019 (Covid-19) as a National Disaster (Ministry of Health of the Republic of Indonesia 2021). Covid-19 countermeasures continue to be carried out with various strategies. The rapid spread of Covid-19 means that simply complying with health protocols is not enough. Quick and effective steps are needed in a short time to minimize the impact it causes. One very possible way to prevent the spread of this virus is to develop a vaccine. This is because vaccines not only protect those vaccinated, but also protect the wider community by reducing the spread of the disease in the population.

Vaccination is considered the most effective and efficient public health effort in preventing the transmission of dangerous diseases. History has recorded the great role of vaccination in saving people from morbidity, disability, and even death due to diseases that can be prevented by vaccination (PD3V). In the effort to overcome the Covid-19 pandemic, Covid-19 vaccination aims to minimize the spread of Covid-19, reduce the number of positives and deaths due to Covid-19, achieve herd immunity and protect the community from Covid-19 to remain socially and economically productive. Covid-19 vaccination efforts have been carried out by various countries, including Indonesia (Ministry of Health of the Republic of Indonesia, 2021). However, the problem faced by Indonesia since the emergence of the discourse on vaccination is that there are still many people who refuse vaccination. One of the factors that cause people to be reluctant to vaccinate is the spread of hoaxes that vaccines are harmful to human health, vaccines contain pig oil, vaccines have tracking devices (chips), vaccines contain very high side effects, causing death. Such hoaxes influence the public and make them afraid to be vaccinated. The Indonesian government also received a lot of criticism for its handling of Covid-19 and this lasted until the Covid-19 vaccination stage.

The Covid-19 vaccination has now reached the 3rd dose (booster vaccine). According to the source of the Ministry of Health's website regarding the National Covid-19 Vaccination data as of April 10, 2022 at 18.00 WIB. For the achievement of the 1st Dose Vaccination rate in Indonesia, it has reached 94.83%, 2nd Dose Vaccination has reached 77.52%, 3rd Dose Vaccination has only reached 13.00% of the total vaccination target of 208,265,720 Indonesian residents consisting of health workers, the elderly, public officials, vulnerable communities and the general public, ages 12 - 17 years and children - children. The achievement rate of Covid-19 vaccination in West Java Province for Dose 1 vaccination reached 94.04%, Dose 2 vaccination reached 79.08% and Dose 3 vaccination only reached 14.24% of the total vaccination target of 37,907,814 residents of West Java Province. The achievement rate of Covid-19 vaccination in Sumedang Regency for Dose 1 vaccination reached 90.59%, Dose 2 vaccination reached 78.45%, and Dose 3 vaccination only reached 13.27% of the West Java provincial target. The achievement rate of Covid-19 vaccination in Cihanja Hamlet RT 01 RW 04 Sukaluyu Village, Ganeas Subdistrict, Sumedang Regency, Dose 1 vaccination reached 78.8% of the target of 203 people, Dose 2 vaccination 74.3% of the target of 203 people, while Dose 3 vaccination has only reached 0.1% of the target of 167 people.

Based on the data mentioned above, the achievement rate of dose 3 vaccination in Sumedang Regency, especially in Cihanja Hamlet RT 01 RW 04 Sukaluyu Village, Ganeas Subdistrict is still less than the target target, so we are interested in conducting research on what factors are associated with community participation in the Covid-19 Vaccine program in Cihanja Hamlet.

2. METHOD

This research is a quantitative study with a descriptive correlation design using a Cross Sectional approach. Where all variables were observed, measured at the time of the study. This study uses primary data to determine the relationship between diet and gastritis in adolescent girls of Al-Ma'mun Islamic Boarding School. Where the independent variable is diet and the dependent variable is the occurrence of gastritis will be collected at the same time.

This type of research is quantitative research. This research design uses a cross sectional design. Cross Sectional is a type of research that emphasizes the time of measurement or observation of data on independent and dependent variables only once at a time. In this type, the independent and dependent variables are assessed simultaneously at a time, so there is no follow-up (Nursalam, 2020).

In this study, researchers wanted to know the factors associated with community participation in the Covid-19 Vaccine program in Cihanja Hamlet RT 01 RW 04 Sukaluyu Village, Ganeas District, Sumedang Regency. The population in the study is a subject that meets predetermined criteria (Nursalam, 2020). The population in this study were the people of Cihanja Hamlet RT 01 RW 04 Sukaluyu Village, Ganeas District, Sumedang Regency who were the target of the Covid-19 vaccine program, namely 203 people. Type of purposive sampling. Purposive sampling is a sample placement technique by selecting samples among the population according to the researcher's wishes (objectives/problems in the study, so that the sample can represent the characteristics, population that has been previously known.(Nursalam, 2020). This study involved a total of 67 samples.

The questionnaire used is the Hamilton Rating Scale for Anxiety (HRS-A) questionnaire and a questionnaire that has been used by previous researchers, namely the questionnaire in the research article by Nabila Hi Daud, a student of the Pharmacy Study Program, Faculty of Health, Ngudi Waluyo University with the title of the article "Level of Knowledge of the Saketa Village Community, West Gane District About the Covid-19 Vaccine" which has been tested validity and reliability tests. The measuring instrument in this study did not require a reliability test because it used the standardized Hamilton Rating Scale for Anxiety (HRS-A) questionnaire and a questionnaire that had been used by previous researchers, namely researcher Nabila Hi Daud who had passed the reliability test stage. The results of the reliability test of the Covid-19 Vaccine Understanding variable obtained reliable or consistent results with a Cronbach's Alpha value of 0.902. Data analysis to see the relationship between the variables of knowledge level, anxiety and community participation, the analysis used is Spearman Rank.

3. RESULTS AND DISCUSSION

3.1. Results

3.1.1 Overview of community participation in the implementation of the Covid-19 vaccine program

Table 1.

Overview of community participation in the implementation of the Covid-19 vaccine program

No.	Community Participation	Frequency	Percentage (%)
1	No	7	10,4
2	Yes	60	89,6
Total		67	100

Based on table 1 above, it can be seen that 7 respondents (10.4%) did not participate in the Covid-19 vaccine program, while 60 respondents (89.6%) participated in the Covid-19 vaccine program. It can be concluded that respondents in this study want to participate in the Covid-19 vaccine program.

3.1.2 Overview of the level of public knowledge in the implementation of the Covid-19 vaccine program

Table 2.

An overview of the level of public knowledge in the implementation of the Covid-19 vaccine program

NO	Knowledge Level	Frequency	Percentage (%)
1	Less	9	13,4
2	Simply	58	86,6
Total		67	100

Based on table 2 above, it can be seen that the respondents' level of knowledge of the Covid-19 vaccine after being categorized, namely those with a lack of knowledge were 9 respondents (13.4%), those with a sufficient level of knowledge were 58 respondents (86.6%) while those with a good level of knowledge did

not exist (0%), because the average respondent answered Know not Very Know. It can be concluded that respondents in this study have a sufficient level of knowledge of the Covid-19 vaccine.

3.1.3 Overview of public anxiety in the implementation of the Covid-19 vaccine program

Table 3.

An overview of community anxiety in the implementation of the Covid-19 vaccine program

Category	Frequency	Percentage (%)
No anxiety	30	44,8
Mild anxiety	12	17,9
Moderate anxiety	13	19,4
Severe anxiety	12	17,9
Total	67	100

Based on table 3 above, it can be seen that respondents' anxiety about the Covid-19 vaccine after being categorized, namely those who did not have anxiety were 30 respondents (44.8%), who had mild anxiety were 12 respondents (17.9%), who had moderate anxiety were 13 respondents (19.4%), while those who had severe anxiety were 12 people (17.9%). It can be concluded that the respondents in this study were mostly respondents who did not have anxiety about the Covid-19 vaccine.

3.1.4 Overview of community comorbidities in the implementation of the Covid-19 vaccine program

Table 4

Overview of community comorbidities in the implementation of the Covid-19 vaccine program

Comorbid	Frequency	Percentage (%)
No	60	89,6
Yes	7	10,4
Total	67	100

Based on table 4 above, it can be seen that people who do not have comorbidities are 60 respondents (89.6%) while people who have comorbidities are 7 respondents (10.4%). It can be concluded that most respondents in this study were respondents who did not have comorbidities.

3.1.5 Relationship between knowledge level and community participation in the implementation of the Covid-19 vaccine program

Table 5

Relationship between knowledge level and community participation in the implementation of the Covid-19 vaccine program

Knowledge Level	Community Participation				Total		P Value
	No		Yes		n	%	
	n	%	n	%			
Less	3	4,4	6	9,0	9	13,4	0,015
Simply	4	6,0	54	80,6	58	86,6	
Total	7	10,4	60	89,6	67	100	

Based on the results of the analysis of the relationship between the level of knowledge and community participation in the Covid-19 vaccine program in Cihanja Hamlet, it shows that there are as many as 3 (4.4%) people who have a lack of knowledge who do not participate in the Covid-19 vaccine program and there are as many as 6 (9.0%) people who have a lack of knowledge who participate in the Covid-19 vaccine program. Meanwhile, there are as many as 4 (6.0%) people who have a sufficient level of knowledge who do not participate in the Covid-19 vaccine program and there are as many as 54 (80.6%) people who have a sufficient level of knowledge who participate in the Covid-19 vaccine program.

The results of the Spearman Rank statistical test obtained a p-value (0.015), it can be concluded that there is a relationship between the level of knowledge and community participation in the Covid-19 vaccine program in Cihanja Hamlet RT 01 RW 04 Sukaluyu Village, Ganeas District, Sumedang Regency.

3.1.6 Relationship between anxiety and community participation in the Covid-19 vaccine program

Table 6
The relationship between anxiety and community participation in the Covid-19 vaccine program

Anxiety	Community Participation				Total		P Value
	No		Yes		n	%	
	n	%	n	%	n	%	0,068
No anxiety	1	1,5	29	43,3	30	44,8	
Mild anxiety	0	0,0	12	17,9	12	17,9	
Moderate anxiety	5	7,5	8	11,9	13	19,4	
Severe anxiety	1	1,5	11	16,4	12	17,9	
Total	7	10,4	60	89,6	67	100	

Based on the results of the analysis of the relationship between anxiety and community participation in the Covid-19 vaccine program in Cihanja Hamlet, it shows that there are 1 (1.5%) people who do not have anxiety who do not participate in the Covid-19 vaccine program and there are 29 (43.3%) people who do not have anxiety who participate in the Covid-19 vaccine program. There are as many as 12 (17.9%) who have mild anxiety participating in the Covid-19 vaccine program.

There are 5 (7.5%) who have moderate anxiety participating in the Covid-19 vaccine program and there are 8 (11.9%) people who have moderate anxiety participating in the Covid-19 vaccine program. While there are as many as 1 (1.5%) who have severe anxiety participating in the Covid-19 vaccine program and there are as many as 11 (16.4%) people who have severe anxiety participating in the Covid-19 vaccine program.

The results of the Spearman Rank statistical test obtained a p-value (0.068), it can be concluded that there is no relationship between anxiety and community participation in the Covid-19 vaccine program in Cihanja Hamlet RT 01 RW 04 Sukaluyu Village, Ganeas District, Sumedang Regency.

3.1.7 Relationship between comorbidities and community participation in the Covid-19 vaccine program

Table 7
Relationship between comorbidities and community participation in the Covid-19 vaccine program

Comorbid	Community Participation				Total		P Value
	No		Yes		n	%	
	n	%	n	%	n	%	
No	7	10,4	53	79,2	60	89,6	1,000
Yes	0	0,0	7	10,4	7	10,4	
Total	7	10,4	60	89,6	67	100	

Based on the results of the analysis of the relationship between comorbidities and community participation in the Covid-19 vaccine program in Cihanja Hamlet, it shows that there are 7 (10.4%) people who do not have comorbidities who do not participate in the Covid-19 vaccine program and there are 53 (79.2%) people who do not have comorbidities who participate in the Covid-19 vaccine program.

While there are as many as 7 (10.4%) who have comorbidities participating in the Covid-19 vaccine program. The results of the Chi square statistical test with Fisher's Exact obtained a p-value (1.000), it can be concluded that there is no relationship between comorbidities and community participation in the Covid-19 vaccine program in Cihanja Hamlet RT 01 RW 04 Sukaluyu Village, Ganeas District, Sumedang Regency.

3.2. Discussion

3.2.1 Overview of community participation in the implementation of the Covid-19 vaccine program in Cihanja Hamlet RT 01 RW 04 Sukaluyu Village, Ganeas District, Sumedang Regency

Community participation according to Isbandi (2007) is the participation of the community in the process of identifying problems and potential in the community, selecting and making decisions about alternative solutions to deal with problems, implementing efforts to overcome problems and community involvement in the process of evaluating changes that occur. The type of community participation in the Covid-19 vaccine program is participation in implementation. This type of participation is a continuation of the previously agreed plan, both with regard to planning, implementation, and goals. In implementing the

program, the involvement of various elements is needed, especially the government in its position as the focus or main source of development. By increasing community participation through their involvement in the COVID-19 vaccination program, the health sector has the opportunity to provide vaccination services that are realistic, relevant and in accordance with the needs and challenges of the target group.

According to the results of previous research conducted by Zisi Lioni Argita (2021) with the title "Public Perceptions of the Covid-19 Vaccine in South Sumatra" showed that there were as many as 85 (86.7%) people who were not willing to be vaccinated and as many as 78 (22.8%) people who were willing to be vaccinated. Meanwhile, in the research conducted by the researcher, it was found that the community who did not participate in the Covid-19 vaccine program was 7 respondents (10.4%) while the community who participated in the Covid-19 vaccine program was 60 respondents (89.6%). There are differences in the research conducted by Zisi and the research conducted by researchers where in this study there were more respondents who were willing to participate (willing) to be vaccinated with a total of 89.6%.

People who are willing to vaccinate against COVID-19 organized by the government believe that vaccines can prevent the body from COVID-19 infection, to protect the family from Covid-19 infection. In this study, there are still people who do not participate in the Covid-19 vaccine program. In this case, the doubts of the community in participating in the Covid-19 vaccine program are due to the halalness of the vaccine itself, which affects public acceptance of the covid-19 vaccine, then public doubts about the efficacy of vaccines that are still unproven. This of course affects the community's willingness to vaccinate covid-19, because people do not want to take risks by vaccinating and some people also think that they are healthy and in good condition so they only need to carry out health protocols and increase the body's immune system by taking vitamins. And also the fear of being injected is one of the reasons for not participating in the Covid-19 vaccine.

3.2.2 An overview of the level of public knowledge in the implementation of the Covid-19 vaccine program in Cihanja Hamlet RT 01 RW 04 Sukaluyu Village, Ganeas District, Sumedang Regency.

Knowledge is facts, truths or information obtained through experience or learning called a posteriori, or through introspection called a priori. Knowledge is information that a person knows or is aware of. Knowledge is seen when someone uses their intellect to recognize certain objects or events that have never been seen or felt before. An example of knowledge is when someone tastes a new dish, they gain knowledge in the form of the shape, taste and aroma of the dish (Maier, 2007). The type of knowledge that must be possessed in the Covid-19 vaccine program is procedural knowledge. The community must know what the Covid-19 vaccine is, the benefits and how the procedure in doing the Covid-19 vaccine.

According to research conducted by Nabila Hi Daud with the title "Level of Knowledge of the Saketa Village Community, West Gene District About the Covid-19 Vaccine", the results of the level of knowledge of the Covid-19 vaccine were found to be less knowledgeable with a score of 51.31%, and the respondent's level of knowledge of Covid-19 was moderately knowledgeable with a score of 58.84%. Meanwhile, in the research conducted by the researcher, it was found that those who had a lack of knowledge were 9 respondents (13.4%), who had a sufficient level of knowledge were 58 respondents (86.6%). In the category of sufficient knowledge level, the results of this study are greater than the results of Nabila Hi Daud's research.

In the research conducted by researchers, the level of knowledge in the moderate category was 86.6%, this shows that the community already knows the Covid-19 vaccine. Knowledge about the Covid-19 vaccine can now be easily accessed by the public through communication media such as electronic media (television, cellphones, videos played back in public spaces), also obtained through outdoor media such as billboards, banners. And many media are carried out by the government to campaign for the Covid-19 vaccine program with the aim of spreading basic information about the Covid-19 vaccine so that the public knows about the Covid-19 vaccine. But in this study, 13.4% of people were still found to have less knowledge about the Covid-19 vaccine, this is because some people in Cihanja Hamlet RT 01 RW 04 Sukaluyu Village do not have communication media such as cellphones or television so that information about the Covid-19 vaccine is not conveyed, and also they do not find out information about the Covid-19 vaccine, they are more focused on meeting their daily economic needs.

3.2.3 Overview of community anxiety in the implementation of the Covid-19 vaccine program in Cihanja Hamlet RT 01 RW 04 Sukaluyu Village, Ganeas District, Sumedang Regency

Anxiety is a negative emotion felt by humans, the emergence of tense feelings and thoughts, usually accompanied by symptoms of fast heartbeat, sweating, and tightness (Annisa & Ifdil, 2016). Anxiety is a normal feeling that humans have, because when feeling anxious humans are made aware and reminded that there is a threatening dangerous situation. However, when anxiety that was normal and can be controlled turns into anxiety that is continuous and cannot be controlled, it will interfere with daily activities (Dewi & Fauziah, 2018).

According to research conducted by Dina Kholidiyah, et al (2021) with the title "The Relationship between Community Perceptions of the Covid-19 Vaccine and Anxiety When Undergoing Covid-19 Vaccination in Bangkok Village, Glagah District, Lamongan Regency", the results showed that most respondents experienced moderate anxiety, namely 114 respondents (80.3%) and a small proportion of respondents experienced mild anxiety, namely 10 respondents (7.0%). Whereas in the research conducted by researchers, it was found that those who did not have anxiety were 30 respondents (44.8%), who had mild anxiety were 12 respondents (17.9%), who had moderate anxiety were 13 respondents (19.4%), while those who had severe anxiety were 12 people (17.9%). This shows the difference in research results, especially for moderate anxiety where the results of research conducted by Dina Kholidiyah, et al as much as 80.3% are greater than the results obtained in research conducted by researchers for moderate anxiety as much as 19.4%. The anxiety experienced by respondents in this study is a natural thing that can occur considering that the current Covid-19 pandemic is a type of disease pandemic that has never been experienced by the community before.

3.2.4 Overview of community comorbidities in the implementation of the Covid-19 vaccine program in Cihanja Hamlet RT 01 RW 04 Sukaluyu Village, Ganeas District, Sumedang Regency

Comorbid diseases are comorbidities or congenital diseases that can worsen the condition of COVID-19 infection and can also reduce the immune system (Marzuki et al., 2021, p. 93). The Indonesian Ministry of Health states that one of the groups that are vulnerable to exposure to COVID-19 is people who have comorbid diseases, this group is also at a higher risk of death (Indonesian Ministry of Health, 2020, p.1). According to research conducted by Zisi Lioni Argita (2021) with the title "Public Perception of the Covid-19 Vaccine in South Sumatra", it is known that out of 440 respondents who have non-communicable disease conditions, where respondents who have autoimmune disease conditions are 20 people (4.5%), Chronic Lung Disease (Asthma, emphysema, COPD) are 21 people (4.8%), Immunocompromised as many as 5 people (1.1%), cancer as many as 5 people (1.1%), Cycle Cell Disease as many as 2 people (0,5), diabetes as many as 7 people (1.6%), High Blood Pressure as many as 19 people (4.3%), obesity as many as 21 people (4.8%), heart disease as many as 9 people (0.9%), kidney disease as many as 4 people (0.9%), and Chronic Liver Disease (Hepatitis, etc.) as many as 6 people (1.4%) and it can be concluded that respondents who have a history of non-communicable diseases are 31 people (7%) while respondents who do not have a history of non-communicable diseases are 409 people (93%). This disease history is a comorbid in participating in the Covid-19 vaccine program.

In a study conducted by researchers, it was found that people who did not have comorbidities were 60 respondents (89.6%) while people who had comorbidities were 7 respondents (10.4%). There is a difference in results for people who do not have comorbidities as much as 89.6% smaller than the research conducted by Zisi Lioni Argita (2021) as much as 93%. Most of the people in Cihanja Hamlet RT 01 RW 04 Sukaluyu Village do not have comorbidities, due to the healthy lifestyle adopted by the community. People who have comorbidities include hypertension and Diabetes Mellitus.

3.2.5 The relationship between knowledge level and community participation in the implementation of the Covid-19 vaccine program in Cihanja Hamlet RT 01 RW 04 Sukaluyu Village, Ganeas Subdistrict, Sumedang Regency.

Knowledge is an idea that arises to obtain information and understand known things that can be remembered in the mind so that new ideas or information can be taken. Knowledge is also one of the factors that can influence a person's perception in understanding something. According to Rahman Widyar (2021), said that when viewed from the level of knowledge, 98.7% of people are aware of the vaccination program that has been implemented by the government in Indonesia. Because it can be seen from the level of public knowledge regarding the importance of health protocols, namely by implementing 3M even though they have been vaccinated, how to administer the covid-19 vaccine and the importance of administering vaccines in an area. Then some people also know the name of the vaccine that has been injected in Indonesia (Rahman, 2021).

Based on the results of bivariate analysis using the Spearman Rank statistical test, the p-value (0.015) shows that there is a relationship between the level of knowledge and community participation in the Covid-19 vaccine program in Cihanja Hamlet RT 01 RW 04 Sukaluyu Village, Ganeas District, Sumedang Regency. This is in accordance with research conducted by Rizky Yusufasari (2022) with the title "The Relationship between the Level of Community Knowledge about the Covid-19 Vaccine and the Willingness to Vaccinate in Sibolga City" showing that there is a significant relationship between the level of knowledge and the willingness of the community to do the Covid-19 Vaccine in Sibolga City Community" with a p value of 0.00.

Good and sufficient knowledge about the Covid-19 vaccine will make the community moved to realize it with real actions such as the willingness of the community to participate in vaccinating Covid-19. This shows that the higher the level of knowledge, the higher the community participation. On the other hand,

people whose level of knowledge is less allows people to not care about the Covid-19 virus and do not know the preventive actions that can be taken, as well as reluctant to carry out health protocols and lack of interest in vaccinating Covid-19.

3.2.6 The relationship between anxiety and community participation in the implementation of the Covid-19 vaccine program in Cihanja Hamlet RT 01 RW 04 Sukaluyu Village, Ganeas Subdistrict, Sumedang Regency.

Anxiety is a subjective emotional response and individual judgment that is influenced by the subconscious and the factors that cause it are not specifically known. (Lestari, 2015). According to the Decree of the Director General of the Covid Vaccination Technical Guidelines (Ministry of Health, 2021) anxiety is one of the factors associated with the implementation of the Covid-19 Vaccine. Covid-19 vaccination efforts have been carried out by various countries, including Indonesia (Ministry of Health of the Republic of Indonesia, 2021). However, the problem faced by Indonesia since the emergence of the discourse on vaccination is that there are still many people who refuse vaccination. One of the factors that cause people to be reluctant to vaccinate is the spread of hoaxes that vaccines are harmful to human health, vaccines contain pig oil, vaccines have tracking devices (chips), vaccines contain very high side effects, causing death. These hoaxes affect the public and make them afraid to get vaccinated.

Based on the results of the analysis using the Spearman Rank statistical test, the p-value (0.068) shows that there is no relationship between anxiety and community participation in the Covid-19 vaccine program in Cihanja Hamlet RT 01 RW 04 Sukaluyu Village, Ganeas District, Sumedang Regency. This is in line with research conducted by Yohanes, et al (2021) with the title "The Relationship between Covid-19 Vaccination and Anxiety Level in Post-Vaccination Elderly at Budi Agung Social Home in Kupang City" stating that there is no significant relationship between Covid-19 vaccination and the anxiety level of post-vaccination elderly at Budi Agung Social Home in Kupang City with a significance value of $p=0.071$ or $p>0.05$. In contrast to the results of research conducted by Kirana Eka, et al (2021) entitled "Public Anxiety About Covid-19 Vaccination" states that there is a relationship between willingness to be vaccinated and anxiety with a p-value of 0.000.

In the research conducted by researchers, it shows that there is no relationship between anxiety and community participation in the Covid-19 vaccine program, because currently public anxiety about vaccination is decreasing with the existence of socialization activities, providing motivation and education about the importance of vaccines and the safety level of vaccines so as to raise public awareness to participate in the Covid-19 vaccine program.

3.2.7 The relationship between comorbidities and community participation in the Covid-19 vaccine program in Cihanja Hamlet RT 01 RW 04 Sukaluyu Village, Ganeas District, Sumedang Regency

Comorbid diseases are comorbid or congenital diseases that are owned, and have acute to chronic signs and symptoms that last for years. Examples of comorbid diseases include hypertension, diabetes, chronic lung disease, heart disease, kidney failure, cancer, and stroke (Maryono, 2021). According to the Decree of the Director General of the Covid Vaccination Technical Guidelines (Ministry of Health, 2021), community groups that are at high risk of exposure to Covid-19 (comorbidities) are one of the factors associated with the implementation of the Covid-19 Vaccine.

Based on the results of the analysis using the Chi square statistical test with Fisher's Exact, the p-value (1.000) shows that there is no relationship between comorbidities and community participation in the Covid-19 vaccine program in Cihanja Hamlet RT 01 RW 04 Sukaluyu Village, Ganeas District, Sumedang Regency. This is different from the research conducted by Aziza (2022) entitled "Factors Associated with Covid-19 Vaccination in the Elderly in Biringkanaya District" which states that there is a relationship between comorbidities and Covid-19 Vaccination in the Elderly in Biringkanaya District with a p-value of 0.000.

In research conducted by researchers, it shows that there is no relationship between comorbidities and community participation in the Covid-19 vaccine program, because currently comorbidities are not an obstacle for people to take the Covid-19 vaccine as long as they have requirements, for example in hypertensive patients, patients routinely take drugs so that their high blood pressure is controlled and there are no symptoms that indicate acute. Type 2 Diabetes Mellitus patients can be given the vaccine if they are controlled and HbA1C is below 58 mmol/mol or 7.5 percent and there are no complications of the disease. Of course, this must be on the recommendation of the doctor examining the patient.

4. CONCLUSION

Based on the results of the research that has been conducted and described in the discussion exposed in the previous chapter, the authors can provide the following conclusions:

1. The distribution of community participation in the implementation of the Covid-19 vaccine program in Cihanja Hamlet RT 01 RW 04 Sukaluyu Village, Ganeas Subdistrict, Sumedang Regency illustrates that most people participate in the Covid-19 vaccine program with a total of 60 respondents (89.6%).
2. The distribution of the level of community knowledge in the implementation of the Covid-19 vaccine program in Cihanja Hamlet RT 01 RW 04 Sukaluyu Village, Ganeas Subdistrict, Sumedang Regency illustrates that most people have a sufficient level of knowledge with a total of 58 respondents (86.6%).
3. The distribution of community anxiety in the implementation of the Covid-19 vaccine program in Cihanja Hamlet RT 01 RW 04 Sukaluyu Village, Ganeas District, Sumedang Regency illustrates that most people do not have anxiety with a total of 30 respondents (44.8%).
4. The distribution of community comorbidities in the implementation of the Covid-19 vaccine program in Cihanja Hamlet RT 01 RW 04 Sukaluyu Village, Ganeas District, Sumedang Regency illustrates that most people do not have comorbidities with a total of 60 respondents (89.6%).
5. There is a relationship between the level of knowledge and community participation in the Covid-19 vaccine program in Cihanja Hamlet RT 01 RW 04 Sukaluyu Village, Ganeas District, Sumedang Regency with a p-value (0.015).
6. There is no relationship between anxiety and community participation in the Covid-19 vaccine program in Cihanja Hamlet RT 01 RW 04 Sukaluyu Village, Ganeas District, Sumedang Regency with a p-value (0.068).
7. There is no relationship between comorbidities and community participation in the Covid-19 vaccine program in Cihanja Hamlet RT 01 RW 04 Sukaluyu Village, Ganeas District, Sumedang Regency with a p-value (1.000).

REFERENCES

- Bratha, S. D. (2022). *Public Knowledge and Attitudes about Covid Vaccination*. Pekalongan: PT Nasya Expanding Management.
- Editorial, T. (2022, June). Definition of Likert Scale and How to Calculate the Questionnaire. Retrieved from edited.com: <https://www.diedit.com/skala-likert/>
- Epadini, S. (2022). Analysis of Risk Factors for Death with Covid-19 Comorbid Diseases Using the ECLAT Algorithm. *Journal of Information and Technology*, Vol. 4, No. 1, 52-57.
- HEALTHY LIVING COMMUNITY MOVEMENT. (2022). ABOUT THE IMPLEMENTATION OF COVID-19 VACCINATION. MINISTRY OF HEALTH OF THE REPUBLIC OF INDONESIA.
- Kaeh, D., Ruru, J. M., & Rompas, W. Y. (n.d.). COMMUNITY PARTICIPATION IN DEVELOPMENT PLANNING IN PINTARENG VILLAGE, SOUTH-EAST TABUTAN SUB-DISTRICT. 14-24.
- Mujiburrahman, Riyadi, M. E., & Ningsih, M. U. (2020, October). Knowledge Associated with Increased Covid-19 Prevention Behavior in the Community. *Journal of Integrated Nursing*, Vol. 2, No. 2, 130-140.
- Nursalam. (2020). *Nursing Science Research Methodology* (5th ed.). (P. P. Lestari, Ed.) Jakarta, Jakarta, Indonesia: Salemba Medika.
- Putri, K. E., Ziliwu, Y. S., Elpita, M., Frare, D. Y., Wiranti, K., Purdani, R. S., & Niman, S. (2021, August). PUBLIC ANXIETY ABOUT THE COVID-19 VACCINE. *Journal of Mental Nursing*, Vol. 9, No. 3, 539-548.
- Rahayu, R. N., & Sensusiyati. (2021, February). COVID 19 VACCINE IN INDONESIA: A HOAX NEWS ANALYSIS. *JOURNAL OF ECONOMICS, SOCIAL & HUMANITIES*, Vol. 2, No. 07, 39-49.
- Rizki, A. F., Bersemilah, S., Khoirunisa, Fajrin, D. N., & Nur, S. (2021, November). Perception of Muktiwari Village Community towards. *Proceedings UIN Sunan Gunung Djati Bandung*, Vol.1, No. 28, 13-22.
- Sugiono. (2019). *Quantitative Qualitative and R&D Research Methods*. Bandung, West Java, Indonesia: ALFABETA, CV.
- Sugiyono. (2007). *Statistics for Research*. Bandung: CV Alfabeta.

EFFECTIVENESS OF LAVENDER AROMATHERAPY INHALATION ON HEMODIALYSIS SIDE EFFECTS IN PATIENTS WITH CHRONIC RENAL FAILURE

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ABSTRACT

Chronic renal failure (CKD) is a chronic condition resulting in loss of kidney function that requires complex medical and nursing management. It affects 10% of the population worldwide and is expected to increase to 30% by 2050. This study aimed to determine effectiveness of lavender aromatherapy inhalation on hemodialysis side effect in patient with chronic renal failure. Methods of this study using quasi experimental involving 19 patient with CRF in Haemodialysis unit. Based on the results of analysis using the Paired T-Test Sample statistical test paired obtained p-value = 0.000 ($p < 0.05$) which means there is a difference in average anxiety and has effectiveness before being given Lavender aromatherapy and after being given Lavender aromatherapy. The use of lavender aromatherapy is an independent nursing intervention that has no side effects, is easy to use, non-invasive, and cost-effective. The shortcomings in this study are that the study was only conducted for one day and only measured anxiety, for other side effects such as fatigue, sleep quality disorders, AVF puncture pain were not carried out by the group due to limited practice time in the room.



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1. INTRODUCTION

Chronic renal failure (CKD) is a chronic condition resulting in loss of kidney function that requires complex medical and nursing management. It affects 10% of the population worldwide and is expected to increase to 30% by 2050 (Mohamed & Hafez, 2019; Wijaya & Padila, 2019). In 2018, the Global Burden of Disease estimated that there were 5-10 million deaths/year caused by kidney disease (Luyckx et al., 2018). In Indonesia, the prevalence of Chronic Kidney Failure disease based on a doctor's diagnosis in the population aged ≥ 15 years in 2013 was 2.0% and increased in 2018 by 3.8% or around one million people. Meanwhile, Chronic Renal Failure patients who underwent hemodialysis in 2015 were 51,604 patients, then increased in 2017 to 108,723 patients. In the Kenanga room of Sumedang Regency Hospital, Chronic Kidney Failure is included in the top 5 diseases that are often treated. Data in February 2023 patients with Chronic Kidney Failure were 16 people. Of the 16 patients who underwent hemodialysis were 5 people. The Haemodialysis Installation at Sumedang Regency Hospital serves 22 hemodialysis patients per day. Most patients are scheduled to undergo hemodialysis 2x/week.

Hemodialysis is the most commonly used therapeutic intervention for patients with end-stage renal disease. Although HD is generally a safe procedure, complications related to hemodialysis therapy are common. The most commonly associated complications include hypotension, muscle cramps, nausea and vomiting, headache, pruritus, fever, chills, depression, sleep problems and fatigue, pain and anxiety (Raja & Seyoum, 2020). Drug-treated hemodialysis complications are associated with side effects and in the long run lead to dependence and exacerbation of disease-related complications, in addition hemodialysis complications are also associated with high treatment-related costs that must be incurred annually. Replacing the original treatment with Complementary and Alternative Medicine (CAM) has gained popularity over the past decade (Dehghan et al., 2020). One of the CAM therapies is using aromatherapy because aromatherapy is a cheap and popular method that is often used by the public.

Aromatherapy as a non-pharmacological method, has been exploited in many studies due to its harmless and convenient use. Aromatherapy uses fragrant oils extracted from flowers and plants to treat various diseases. Aromatherapy is part of herbal medicine with the same basis of action as modern pharmacology and can produce physiological or psychological benefits. One of the essential oils that is often used is lavender essential oil.

Lavender is one of the herbs used in aromatherapy. Lavender belongs to the lamiaceae family with the scientific name *lavandula angustifolia*. Many studies have discussed its anti-pain, antianxiety and antidepressant effects, and sleep enhancement. Some researchers believe that lavender exerts its psychological effects through effects on the limbic system, especially the amygdala and hippocampus (Jafari-Koulaee et al., 2020; Beyliklioglu & Arslan, 2019; Özkaraman et al., 2018).

The use of lavender oil inhalation has attracted the attention of many researchers, this is because this technique is easy to do and has been shown to have a positive effect on several complaints felt by patients, especially hemodialysis patients. Research conducted by hemodialysis Özdemiir & Akyol (2021) found that lavender oil inhalation can affect hemodialysis complications in the form of a significant decrease in AVF puncture pain in patients. Similar research results on hemodialysis complications were conducted by hemodialysis Varaei et al., (2021) this study found that inhaling lavender aromatherapy can reduce fatigue in hemodialysis patients.

This study is a systematic review study that specifically discusses the effects of lavender aromatherapy on hemodialysis side effects, besides that this study also collects articles that only discuss one type of aromatherapy with one specific technique, namely the administration of lavender aromatherapy with inhalation techniques so that the conclusions obtained in the systematic review can be used as a detailed evidence-based practice so that it is expected to be easier to apply in nursing interventions.

2. METHOD

This type of research uses pre-experiments with the design design used in this study is one group pre test-post test in this design there is no comparison group (control). One group is the treatment group. Before treatment in the treatment group, an initial measurement (pre-test) was carried out to determine the ability or initial value of the respondent before. Furthermore, the treatment group was intervened in accordance with the planned trial protocol. In addition to the treatment, a final measurement (post test) was carried out on the treatment group to determine the effect of the treatment on the respondents.

The population in this study were all patients who performed hemodialysis in the Haemodialysis room of the Sumedang Regency Hospital on April 6, 2023. The sample in this study were patients who were running hemodialysis in the Haemodialysis room of the Sumedang Regency Hospital on April 6, 2023 afternoon shift with a total of 19 respondents with the criteria being registered as patients in the Haemodialysis Installation of the Sumedang Regency Hospital and able to communicate well.

The instrument used was the Back Anxiety Inventory (BAI) questionnaire with 21 statement items, with the answer options Never = 1, Almost Never = 2, Sometimes = 3, Often = 4. Bivariate analysis was conducted to determine the effectiveness of Lavender aromatherapy on anxiety in patients undergoing hemodialysis. Bivariate analysis used Paired T Test statistical test to see the difference between pre test and post test.

3. RESULTS AND DISCUSSION

3.1. Results

3.1.1 Frequency Distribution of Anxiety Before Being Given Lavender Aromatherapy in the Hemodialysis Room at Sumedang Regency Hospital

Table 1.

Frequency Distribution of Anxiety Before Being Given Lavender Aromatherapy in the Hemodialysis Room

Sumedang Regency Hospital

Anxiety	Frequency	Percentage (%)
Low	1	5,3
Medium	4	21,1
High	14	73,7
Total	19	100

Based on table 1 above, it can be seen that the frequency distribution of anxiety before being given Lavender aromatherapy in the Hemodialysis room at Sumedang Regency Hospital is mostly in the high category as many as 14 people (73.7%).

3.1.2 Frequency Distribution of Anxiety After Being Given Lavender Aromatherapy in the Hemodialysis Room at Sumedang Regency Hospital

Table 2.
Frequency Distribution of Anxiety after Lavender Aromatherapy in Hemodialysis Room
Sumedang Regency Hospital

Anxiety	Frequency	Percentage (%)
Low	17	89,5
Medium	0	0
High	2	10,5
Total	19	100

Based on table 4.2 above, it can be seen that the frequency distribution of anxiety after being given Lavender aromatherapy in the Hemodialysis room at Sumedang Regency Hospital is mostly in the low category as many as 17 people (89.5%).

3.1.3 Effectiveness of Lavender Aromatherapy Inhalation on Anxiety in the Hemodialysis Room at Sumedang Regency Hospital

Table 3.
Effectiveness of Lavender Aromatherapy Inhalation on Anxiety in the Hemodialysis Room
Sumedang Regency Hospital

Anxiety	N	Mean	SD	Correlation	P-Value
Pre Test	19	23,368	17,020	0,446	0,000
Post Test					

Based on the results of analysis using the Paired T-Test Sample statistical test paired obtained p-value = 0.000 ($p < 0.05$) which means there is a difference in average anxiety and has effectiveness before being given Lavender aromatherapy and after being given Lavender aromatherapy. Before being given Lavender aromatherapy, most of the respondents' anxiety frequency was in the high category, while after being given Lavender aromatherapy, most of the respondents' anxiety frequency was in the low category, so it can be concluded that there is an effectiveness of Lavender aromatherapy on anxiety in Chronic Kidney Failure patients undergoing hemodialysis. The results of the Paired T-Test Sample statistical test also found that r count = 0.446, which is positive, which means that the more often Lavender aromatherapy is given, the success in reducing anxiety increases.

3.2. Discussion

Anxiety is a negative emotion felt by humans, the emergence of tense feelings and thoughts, usually accompanied by symptoms of fast heartbeat, sweating, and tightness (Annisa & Ifdil, 2016). anxiety is a normal feeling that humans have, because when feeling anxious humans are made aware and reminded that there is a threatening dangerous situation. However, when anxiety that was normal and can be controlled

turns into anxiety that is continuous and cannot be controlled, it will interfere with daily activities (Dewi & Fauziah, 2018).

Anxiety in hemodialysis patients is a complex phenomenon related to behavioral, psychological, physical, and mental. Changes in family marriage and social life; dependence on the dialysis machine, health care team, and family; sexual dysfunction; and economic problems that occur with hemodialysis therapy cause patients to suffer from anxiety. Anxiety is one of the most common complications of hemodialysis, accounting for 38%.

In a study conducted by Senturk et al (2018) with the title Effect of Lavender Oil Application Via Inhalation Pathway on Hemodialysis Patients' Anxiety Level and Sleep Quality. The study was conducted on 34 Hemodialysis patients who were divided into 2 groups, namely the intervention group and the control group, the results showed that lavender oil inhalation for a week can reduce anxiety as seen from the decrease in anxiety scores on the psychological and somatic subscales. Lavender oil inhalation can also improve sleep quality with increased sleep duration and increased average sleep score with VAS.

Research conducted by Ahmady et al (2019) with the title Comparing Effects Of Aromatherapy With Lavender Essential Oil And Orange Essential Oil On Fatigue Of Hemodialysis Patients. Where Respondents in this study totaled 82 patients at Imam Reza Hospital with most of the subjects being male. It was mentioned that lavender oil inhalation can reduce the severity of fatigue among patients undergoing hemodialysis. Fatigue is one of the inevitable consequences of hemodialysis, and most hemodialysis patients suffer from high levels of fatigue. Some of the factors that cause it include nutritional deficiencies, physiological changes, abnormal haemoglobin and ureum levels, sleep disorders and depression. Lavender aromatherapy inhalation is a method that is easy to perform, affordable and effective in reducing patient fatigue levels.

Research conducted by Karadag et al (2019) with the title The Effect of Aromatherapy on Fatigue and Anxiety in Patients Undergoing Hemodialysis Treatment. The study was conducted on 30 intervention group patients and 30 control group patients in Turkish hospitals. The results showed a statistically significant difference between the pretest and posttest scores of the fatigue severity scale ($t=7.177$, $P=0.001$) and Beck Anxiety Inventory ($t=10.371$, $P=0.001$). The mean scores of fatigue and anxiety decreased after aromatherapy was administered.

In a study conducted by Sahin et al (2021) entitled Effect of Lavender Aromatherapy on Arteriovenous Fistula Puncture Pain and the Level of State and Trait Anxiety in Hemodialysis Patients. It was stated that from the intervention carried out on 32 intervention group patients, it was found that the use of lavender aromatherapy could significantly reduce the pain score due to arteriovenous fistula (AVF) puncture, namely 6.24 ± 1.24 in the first session, to 3.56 ± 1.28 in the second session in intervention group patients. The average STAI score decreased in intervention group patients after aromatherapy was 39.12 ± 6.71 in the state anxiety subscale and 30.04 ± 1.39 in the trait anxiety subscale.

In a study conducted by Niken et al (2022) with the title The Effect Of Lavender Essential Oil Aromatherapy On Sleep Quality In Hemodialysis Patients. Where the purpose of the study was to determine the effect of lavender essential oil aromatherapy on sleep quality in hemodialysis patients. The study was conducted on 32 hemodialysis patients who were divided into two groups, namely 16 intervention groups and 16 control groups. The intervention was carried out for 3 times during intra hemodialysis. The instrument used was the Pittsburgh Sleep Quality Index (PSQI) which was applied before and after the intervention. Analysis of test data using an independent sample test showed that there was a difference in the average sleep quality score with a p value of 0.000, meaning that there was an improvement in sleep quality in patients undergoing hemodialysis in the intervention group. Lavender Essential Oil Aromatherapy can be applied as an effective nursing intervention to overcome sleep quality disorders in patients undergoing hemodialysis.

Lavender aromatherapy inhalation is proven to reduce the level of anxiety experienced by hemodialysis patients, this can be seen from the four articles evaluated, four articles showed that anxiety in hemodialysis patients decreased after lavender aromatherapy inhalation. These results are similar to the results of other studies in different patient groups, namely, lavender aromatherapy inhalation can reduce anxiety in patients experiencing anxiety due to burn pain, patients undergoing chemotherapy, in patients experiencing preoperative anxiety and in postpartum mothers (Tsai et al., 2020; Jaruzel et al., 2019; Özkaraman et al., 2018).

Researchers argue that the administration of lavender aromatherapy inhalation has a significant effect on reducing the anxiety of Chronic Renal Failure patients undergoing hemodialysis. Lavender is thought to have a diazepam effect. The limbic system provides tranquilizing effects and relaxing effects by interacting with the cerebral cortex and affecting heart rate, blood pressure, breathing, stress, and hormonal levels (Karadag & Baglama, 2019). The use of lavender aromatherapy is an independent nursing intervention that has no side effects, is easy to use, non-invasive, and cost-effective. The shortcomings in this study are that the study was only conducted for one day and only measured anxiety, for other side effects such as fatigue, sleep quality disorders, AVF puncture pain were not carried out by the group due to limited practice time in the room.

4. CONCLUSION

Lavender aromatherapy inhalation is effective in overcoming hemodialysis complications of fatigue, anxiety, AVF puncture pain and improving sleep quality. Lavender is thought to have a diazepam effect. The limbic system provides tranquilizing and relaxing effects by interacting with the cerebral cortex and affecting heart rate, blood pressure, breathing, stress, and hormonal levels (Karadag & Baglama, 2019).

The results of research conducted on the Effectiveness of Lavender Aromatherapy Inhalation on Hemodialysis Side Effects in Chronic Kidney Failure Patients in the Hemodialysis Room at Sumedang Regency Hospital can be concluded as follows.

1. The description of anxiety before being given Lavender aromatherapy in the Hemodialysis room at Sumedang Regency Hospital was mostly in the high category 73.7%.
2. The description of anxiety after being given Lavender aromatherapy in the Hemodialysis room at Sumedang Regency Hospital is mostly in the low category 89.5%.
3. There is an Effectiveness of Lavender Aromatherapy Inhalation on Hemodialysis Side Effects (Anxiety) in Chronic Kidney Failure Patients in the Hemodialysis Room at Sumedang Regency Hospital with a p-value of 0.000 ($p < 0.05$).

REFERENCES

- Aalami, H., Moghadam, H. M., & Moghaddam, M. B. (2018). Effect of Hybrid Aromatherapy on Sleep Quality of Patients with Acute Coronary Syndrome Admitted to Cardiac Care Unit. *World Family Medicine Journal/Middle East Journal of Family Medicine*, 16(1), 268-275. <https://doi.org/10.5742/mewfm.2018.93231>
- Abedian, S., Abedi, P., Jahanfar, S., Irvani, M., & Zahedian, M. (2020). The Effect of Lavender on Pain and Healing of Episiotomy: A Systematic Review. *Complementary Therapies in Medicine*, 53 (March). <https://doi.org/10.1016/j.ctim.2020.102510>
- Ahmady, S., Rezaei, M., & Khatony, A. (2019). Comparing Effects Of Aromatherapy With Lavender Essential Oil And Orange Essential Oil On Fatigue Of Hemodialysis Patients: A Randomized Trial. *Complementary Therapies in Clinical Practice*, 36, 64-68. <https://doi.org/10.1016/j.ctcp.2019.05.005>
- Aliasgharpour, M., Abbaszadeh, R., Mohammadi, N., & Kazemnejad, A. (2016). Effect of Lavender Aromatherapy on the Pain of Arteriovenous Fistula Puncture in Patients on Hemodialysis. *Nursing Practice Today*, 3(1), 26-30. <https://npt.tums.ac.ir/index.php/npt/article/view/125>
- Arslan, D. E., & Akca, N. K. (2018). Pain Following Needle Insertion into a Hemodialysis Fistula and Influencing Factors. *International Journal of Caring Sciences*, 11(3), 1662-1670. <http://search.ebscohost.com/login.aspx?direct=true&db=rzh&AN>
- Asazawa, K., Kato, Y., Koinuma, R., Takemoto, N., & Tsutsui, S. (2018). Effectiveness of Aromatherapy Treatment in Alleviating Fatigue and Promoting Relaxation of Mothers during the Early Postpartum Period. *Open Journal of Nursing*, 08(03), 196-209. <https://doi.org/10.4236/ojn.2018.83017>
- Bagheri-Nesami, M., Shorofi, S. A., Nikkhah, A., Moghaddam, H. R., & Mahdavi, A. (2018). Effect of Lavender Aromatherapy on Well-Being among Hemodialysis Patients: A Randomized Clinical Trial. *Pharmaceutical and Biomedical Research*, 4(2), 0-4. <https://doi.org/10.18502/pbr.v4i2.215>
- Bagheri-Nesami, M., Shorofi, S. A., Nikkhah, A., & Espahbodi, F. (2017). The Effects of Lavender Essential Oil Aromatherapy on Anxiety and Depression in Haemodialysis Patients. *Pharmaceutical and Biomedical Research*, 3(1), 8-13. DOI:10.18869/acadpub.pbr.3.1.8
- Bagheri-Nesami, M., Shorofi, S. A., Nikkhah, A., Espahbodi, F., & Koolae, F. S. G. (2016). The Effects of Aromatherapy with Lavender Essential Oil on Fatigue Levels in Haemodialysis Patients: A Randomized Clinical Trial. *Complementary Therapies in Clinical Practice*, 22, 33-37. <https://doi.org/10.1016/j.ctcp.2015.12.002>
- Collister, D., Rodrigues, J. C., Mazzetti, A., Salisbury, K., Morosin, L., Rabbat, C., Brimble, K. S., & Walsh, M. (2019). Single Questions for the Screening of Anxiety and Depression in Hemodialysis. *Canadian Journal of Kidney Health and Disease*, 6. <https://doi.org/10.1177/2054358118825441>

- Dehghan, M., Namjoo, Z., Bahrami, A., Tajedini, H., Shamsaddini-lori, Z., Zarei, A., Dehghani, M., Ranjbar, M. S., & Rafiee, S. N. F. (2020). The Use of Complementary and Alternative Medicines, and Quality of Life in Patients Under Hemodialysis: A Survey in Southeast Iran. *Complementary Therapies in Medicine*, 51(May). <https://doi.org/10.1016/j.ctim.2020.102431>
- Donelli, D., Antonelli, M., Bellinazzi, C., Gensini, G. F., & Firenzuoli, F. (2019). Effects of Lavender on Anxiety: A Systematic Review and Meta-Analysis. *Phytomedicine*, 65(July), 153099. <https://doi.org/10.1016/j.phymed.2019.153099>
- Genç, F., Karadağ, S., Kiliç Akça, N., Tan, M., & Cerit, D. (2020). The Effect of Aromatherapy on Sleep Quality and Fatigue Level of the Elderly: A Randomized Controlled Study. *Holistic Nursing Practice*, 34(3), 155-162. <https://doi.org/10.1097/HNP.0000000000000385>
- Hur, M. H., Hong, J. H., & Yeo, S. H. (2019). Effects of Aromatherapy on Stress, Fructosamine, Fatigue, and Sleep Quality in Prediabetic Middle-Aged Women: A Randomized Controlled Trial. *European Journal of Integrative Medicine*, 31, 100978. <https://doi.org/10.1016/j.eujim.2019.100978>
- Karadag, E., & Baglama, S. (2019). The Effect of Aromatherapy on Fatigue and Anxiety in Patients Undergoing Hemodialysis Treatment: A Randomized Controlled Study. *Holistic Nursing Practice*, 33(4), 222-229. <https://doi.org/10.1097/HNP.0000000000000334>
- Kazemina, M., Abdi, A., Vaisi-Raygani, A., Jalali, R., Shohaimi, S., Daneshkhah, A., Salari, N., & Mohammadi, M. (2020). The Effect of Lavender (*Lavandula stoechas* L.) on Reducing Labor Pain: A Systematic Review and Meta-Analysis. *EvidenceBased Complementary and Alternative Medicine*, 2020. <https://doi.org/10.1155/2020/4384350>
- Kiani, F., Shahrakipour, M., & Zadeh, M. A. H. (2016). The Effect of Inhaling Lavender on Hemodialysis Patient's Anxiety. <https://www.researchgate.net/publication/306215643>
- Luyckx, V. A., Tonelli, M., & Stanifer, J. W. (2018). The Global Burden of Kidney Disease and the Sustainable Development Goals. *Bulletin of the World Health Organization*, 96(6), 414-422C. <https://doi.org/10.2471/BLT.17.206441>
- Matsushita, H., Latt, H. M., Koga, Y., Nishiki, T., & Matsui, H. (2019). Oxytocin Mohamed, H. G., & Hafez, M. K. (2019). Effect of Aromatherapy on Sleep Quality, Fatigue and Anxiety among Patients Undergoing Hemodialysis. *IOSR Journal of Nursing and Health Science (IOSR-JNHS)*, 8(5), 17-25. <https://doi.org/10.9790/1959-0805101725>
- Niken et al., The Effect Of Lavender Essential Oil Aromatherapy On Sleep Quality In Hemodialysis Patients. <https://doi.org/https://doi.org/12.31539/jks.v3i1.807>
- Raja, S. M., & Seyoum, Y. (2020). Intradialytic Complications among Patients on Twice-Weekly Maintenance Hemodialysis: An Experience from a Hemodialysis Center in Eritrea. *BMC Nephrology*, 21(1), 1-6. <https://doi.org/10.1186/s12882-020-01806-9>
- Riskesdas. (2018). Ministry of Health of the Republic of Indonesia 2018 Riskesdas Report. In *National Riskesdas Report 2018*, 53(9), 154-165. [http://www.yankes.kemkes.go.id/assets/downloads/PMK No. 57 Year 2013.pdf](http://www.yankes.kemkes.go.id/assets/downloads/PMK_No.57_Year_2013.pdf)
- Şahin, S., Tokgöz, B., & Demir, G. (2021). Effect of Lavender Aromatherapy on Arteriovenous Fistula Puncture Pain and the Level of State and Trait Anxiety in Hemodialysis Patients: A Randomized Controlled Trial. *Pain Management Nursing*, 22(4), 509-515. <https://doi.org/10.1016/j.pmn.2021.01.009>
- Sánchez-Vidaña, D. I., Po, K. K. T., Fung, T. K. H., Chow, J. K. W., Lau, W. K. W., So, P. K., Lau, B. W. M., & Tsang, H. W. H. (2019). Lavender Essential Oil Ameliorates Depression-Like Behavior and Increases Neurogenesis and Dendritic Complexity in Rats. *Neuroscience Letters*, 701(February), 180-192. <https://doi.org/10.1016/j.neulet.2019.02.042>
- Saputra, M., Harahap, I. A., & Kasiman, S. (2020). Valsalva Maneuver to Decrease Pain Intensity During Arteriovenous Fistula Insertion in Hemodialysis Patients. *Indonesian Nursing Journal*, 23(2), 136-144. <https://doi.org/10.7454/jki.v23i2.645>
- Semaan, V., Noureddine, S., & Farhood, L. (2018). Prevalence of Depression and Anxiety in End-Stage Renal Disease: A Survey of Patients Undergoing Hemodialysis. *Applied Nursing Research*, 43 (April 2018), 80-85. <https://doi.org/10.1016/j.apnr.2018.07.009>

- Şentürk, A., & Kartın, P. T. (2018). The Effect of Lavender Oil Application Via Inhalation Pathway on Hemodialysis Patients' Anxiety Level and Sleep Quality. *Holistic Nursing Practice*, 32(6), 324-335. <https://doi.org/10.1097/HNP.0000000000000292>
- Sukandar E. *Clinical nephrology*. 3rd edition. Bandung: Scientific Information Center, Internal Medicine section, Faculty of Medicine, UNPAD/RS. Dr. Hasan Sadikin; 2006.
- Varaci, S., Jalalian, Z., Yekani-Nejad, M. S., & Shamsizadeh, M. (2021). Comparison of the Effects of Inhalation and Massage Aromatherapy with Lavender and Sweet Orange on Fatigue in Hemodialysis Patients: A Randomized Clinical Trial. *Journal of Complementary and Integrative Medicine*, 18(1), 193-200. <https://doi.org/10.1515/jcim-2018-0137>
- Wijaya, A., & Padila, P. (2019). The Relationship between Family Support, Education Level and Age with Compliance in Limiting Fluid Intake in ESRD Clients Undergoing Hemodialysis Therapy. *Silampari Nursing Journal*, 3(1), 393-404. <https://doi.org/https://doi.org/10.31539/jks.v3i1.883>
- Widya, Ira. (2019). The Effectiveness of Lavender Aromatherapy on Insomnia in the Elderly at the Elderly Posyandu Lebak Ayu Village, Sawahan District, Madiun Regency. Retrieved from Repository: <http://repository.stikes-bhm.ac.id/679/1/1.pdf>.