FACTORS RELATED TO EXCLUSIVE BREAST-FEEDING IN INFANT AT PUBLIC HEALTH CENTER IN CIMALAKA

Ely Walimah *[1], Kikin Maulana [2]

[1]Public Health Study Program, Faculty of Health Sciences, Sebelas April University

[2] Student of Public Health Study Program, Faculty of Health Sciences, Sebelas April Universit

e-mail: elywalimah@unsap.ac.id

Article Info	ABSTRACT
	To reduce child morbidity and mortality, United Nation Children Found (UNICEF) and the World Health Organization (WHO) recommend that children should be breastfed only breast milk for at least 6 months. Solid food should be given after the child is 6 months old, and breastfeeding should be continued until the age of 5 years. To find out the factors related to exclusive breastfeeding in the working area of the Cimalaka Health Center in 2022. The design of this study was quantitative with cross sectional research method, the population of this study are breastfeeding mothers who have babies aged 6-24 months totaling 162 respondents. The sample required is 62 respondents. By using Stratified Random Sampling technique. Data were collected by questionnaire, then analyzed using chi-square. It shows that there is no significant relationship between education and exclusive breastfeeding (0.338>0.05), there is no relationship between knowledge and exclusive breastfeeding (0.276>0.05), there is a relationship between mother's attitude and exclusive breastfeeding (0.002<0.05), there is a relationship between employment status and exclusive breastfeeding (0.027<0.05), there is no relationship between family income and exclusive breastfeeding (0.336>0.05), there is no relationship between the attitude of health workers and exclusive breastfeeding (0.295>0.05).). It is suggested that exclusive breastfeeding can be increased, it is necessary to increase health promotion efforts so that public knowledge and awareness about the role of exclusive breastfeeding increases.

Corresponding Author:

Ely Walimah
Public Health Study Program,
Faculty of Health Science, Universitas Sebelas April
Jalan Cipadung No 54 Kota Kaler
Email: elywalimah@unsap.ac.id

1. INTRODUCTION

Mother's milk is the best food for babies up to 6 months and is perfected until the age of 2 years. Breast milk in addition to containing complete nutrition, also contains immunity for the baby's immune system. Another advantage of breast milk is adapted to the baby's digestive system so that nutrients are quickly absorbed. This is different from formula milk or additional food that is given early to babies. Formula milk is very difficult to be absorbed by the baby's intestines. In the end, the baby has difficulty defecating. If formula milk is not sterile, babies are prone to diarrhea. The nutritional content is not the same as the nutritional content in breast milk.

Failure to breastfeed is also caused by factors in the mother's nutritional status before pregnancy, during pregnancy and during breastfeeding. This happens because during breastfeeding, there is a mobilization of maternal body fat to produce breast milk and maternal fat stores with a lower nutritional

status than body fat stores in normal mothers. The nutritional status of the mother during breastfeeding is the effect of the nutritional status of the mother before pregnancy and during pregnancy (weight gain during pregnancy). Maternal weight gain during pregnancy depends on the nutritional status of the mother before pregnancy. Mothers who have good nutritional status during pregnancy, their body fat reserves are sufficient to breastfeed for 4-6 months, but mothers with low nutritional status may not have enough body fat reserves to breastfeed their babies for 4-6 months (Wilda & Ani, 2018). In developing countries, about 10 million babies die, and about 60% of these deaths should be suppressed by breastfeeding, because breast milk (ASI) has been proven to improve the health status of babies so that 1.3 million babies can be saved. To reduce child morbidity and mortality, the United Nation Children Found (UNICEF) and the World Health Organization (WHO) recommend that children should be breastfed only breast milk for at least 6 months. Solid food should be given after the child is 6 months old, and breastfeeding should be continued until the age of 5 years.

Research in Ghana shows that 16% of newborn deaths can be prevented by breastfeeding from the first day of birth. This figure increases by 22% if breastfeeding is started within the first hour after the birth of the baby. However, in Indonesia, only about 8% of mothers give exclusive breastfeeding to their babies until they are 6 months old and 4% of babies are breastfed by their mothers within the first hour after birth. Whereas 21,000 deaths of newborns under 28 days old in Indonesia can be prevented through exclusive breastfeeding in the first hour before birth. In 2020 the Ministry of Health has set a target of exclusive breastfeeding coverage of 80%. In fact, only 27.5% failed mothers in Indonesia who gave exclusive breastfeeding by 75.5% while the expected target was 80%. Meanwhile, overall in Indonesia, the results of the analysis show that nationally, exclusive breastfeeding is 54.3% of the total number of infants aged 0-6 months, or in absolute terms of 1,348,532 infants or infants 0-6 months who are not exclusively breastfed as many as 1134,952 baby.

In 2020 in West Java Province the coverage of exclusive breastfeeding was 68.09%, an increase of 4.74 points compared to 2019 reaching 63.35%. Data in 2020 cannot be compared given the differences in operational definitions of exclusive breastfeeding coverage reports. In 2020 according to the Sumedang District Health Officebased on government no. 33 of 2012 is breast milk given to babies since birth for 6 months, without adding or replacing with other food or drinks (except drugs, vitamins and minerals). Process forthe success of exclusive breastfeeding for 6-month babies is carried out during the vulnerable age of 0 to 5 months, the coverage is 82.08%. Shows that the process in 2020 has improved compared to 2019 which is 78.66%, in other words the number of exclusively breastfed babies who fall before the age of 6 months in 2020 is less than the previous year, besides the performance target of 79% can be achieved.

In 2021 at the Cimalaka Health Center the coverage of breastfeeding exclusive only 80.18% of the target of 100.00%. The coverage is still far from the target. Meanwhile, in 2022, the coverage of exclusive breastfeeding is 68.33%. Shows that the process has decreased when compared to 2021 by 80.18%. By 2022 the number of babies. Those who did not get exclusive breastfeeding were 80 babies while the number of babies who got exclusive breastfeeding was 276 babies.

2.   METHOD

The type of research used in this study is descriptive with a quantitative approach. According to (Notoatmodjo, 2018) descriptive is a research conducted to describe or describe a phenomenon that occurs in society. This method is used to solve or answer problems that are currently happening. While quantitative research according to (Sugiyono, 2017) is a research method based on the philosophy of positivism, used to examine certain populations and samples, data collection using research instruments, data analysis is quantitative / statistical, with the aim of testing predetermined hypotheses. 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 approaching, observing or collecting data all at once (point time approach). In this cross-sectional study, it will describe the factors related to exclusive breastfeeding at the Cimalaka Health Center.

3.   RESULTS AND DISCUSSION

3.1. Results
a.   Univariate analysis
    1.   Education

Table 1. Distribution and Frequency Mother's Education Level

No	Category	Frequency	Percentage (%)
1	Low	33	52,3
2	High	29	46,8
Total		**62**	**100**

Table 1 shows that respondents who have education low as many as 33 (53, 2%), while some with higher education namely as many as 29 (46,8%).

2. Knowledge

Table 2. Distribution and Frequency Mother's Knowledge Level

No	Category	Frequency	Percentage (%)
1	Low	9	14,5
2	High	53	82,3
Total		**62**	**100**

Table 2 shows that respondents who have low level of knowledge is 14,5%, while others have high level of knowledge is 85,5%.

3. Mother's Attitude

Table 3. Distribution and Frequency Mother's Attitude Level

No	Category	Frequency	Percentage (%)
1	Negative	11	17,7
2	Positive	51	29,6
Total		**62**	**100**

Table 3 shows that the respondents have a negative attitude as many as 17,7%, while some have a positive attitude as many as 82,3%.

4. Occupation

Tabel 4. Distribution and Frequency Mother's Occupation Status

No	Category	Frequency	Percentage (%)
1	No	53	85,5
2	Yes	9	14,5
Total		**62**	**100**

Table 4 shows that the respondents whose work does not work are 53 (85,5%), while those who work are 9 (14,5%).

5. Family Income

Table 5. Distribution and Frequency Family Income

No	Category	Frequency	Percentage (%)
1	Low	48	77,4
2	High	18	22,6
Total		**62**	**100**

Table 5 shows that respondents who have income low family as many as 48 (77,4%), while those who have high income as many as 18 (22,6%).

6. Attitude of Health Officers

Table 6. Distribution and Frequency Health Officer's Attitude Level

No	Category	Frequency	Percentage (%)
1	Negative	3	4,8
2	Positive	59	95,2
	Total	**62**	**100**

Table 6 shows that the negative attitude of health workers that is as much as 3 (4,8%), while the attitude of health workers is positive as much as 59 (95,2 %).

7. Exclusive Breastfeeding

Tabel 7. Distribution and Frequency of Exclusive Breastfeeding in Infant

No	Category	Frequency	Percentage (%)
1	Not Exclusive	16	25,8
2	Exclusive	46	74,2
	Total	**62**	**100**

Table 7 above, it can be seen that 16 (25.8%) did not give exclusive breastfeeding, and 46 (74.2%) gave exclusive breastfeeding.

b. Bivariate analysis

1. Relationship between Education and Exclusive Breastfeeding

Table 8. Relationship between Education and Exclusive Breastfeeding

No	Education	Breast Milk				Total		P *value*
		Not Giving		Give				
		F	%	F	%	F	%	
1	Low	10	30,3	23	69,7	33	100	
2	High	16	20,7	23	79,3	29	100	0,338
	Total	**16**	**25,8**	**46**	**74,2**	**62**	**100**	

From the table above explains the relationship between education and exclusive breastfeeding, where the education variable with the non-exclusive low education category is 10 (30,3%) and the exclusive one is 23 (69,7%) with a total of 33 (100%), while the non-exclusive higher education category as many as 6 (20,7%) and the exclusive as many as 23 (79,3%) with a total of 29 (100 %).

The results of the chi square statistical test obtained p value = 0,3888 (> 0,05) so it can be stated that there is no significant relationship between mother's education and exclusive breastfeeding.

2. Knowledge Relationship with Exclusive Breastfeeding

Table 9. Relationship between Knowledge Relationship with Exclusive Breastfeeding

No	Knowledge	Breast Milk				Total		p-*value*
		Not Giving		Give				
		f	%	f	%	f	%	
1	Less	1	11,1	8	88,9	9	100	
2	Well	15	28,3	38	71,7	53	100	0,276
	Total	**16**	**25,8**	**46**	**74,2**	**62**	**100**	

The table above explains the relationship between knowledge and exclusive breastfeeding, where the knowledge variable with the category of poor knowledge that is not exclusive is 1 (11,1%) and exclusive is 8 (88,9%) with a total of 9 (100 %), while the category of good knowledge which

is not exclusive is 15 (28,3 %) and 38 (71,7%) exclusive with a total of 53 (100%). The results of the chi square statistical test obtained p value = 0,276 (> 0,05) so that it can be stated that there is no significant relationship between knowledge and exclusive breastfeeding.

3. Relationship between Mother's Attitude and Exclusive Breastfeeding

Table 10. Relationship between Mother's Attitude and Exclusive Breastfeeding

No	Mother's Attitude	Breast Milk				Total		P *value*
		Not Giving		Give				
		F	%	F	%	F	%	
1	Negative	7	63,6	4	36,4	11	100	0,002
2	Positive	9	17,6	42	82,4	51	100	
	Total	16	25,8	46	74,2	62	100	

The table above explains the relationship between mother's attitude and exclusive breastfeeding, where the variable of mother's attitude with negative non-exclusive categories is 7 (63,6%) and exclusive is 4 (36,4%) with a total of 11 (100 %), while the positive categories that are not exclusive are 9 (17,6 %) and the exclusive ones are 42 (82,4%) with a total of a total of 51 (100%).The results of the chi square statistical test obtained p value = 0,002 (<0,05) so that it can be stated that there is a significant relationship between mother's attitude and exclusive breastfeeding.

4. Employment Relationship With Exclusive Breastfeeding

Table 10. Relationship between Mother's Employment and Exclusive Breastfeeding

No	Employment	Breast Milk				Total		P *value*
		Not Giving		Give				
		F	%	F	%	F	%	
1	No	11	20,8	42	79,2	53	100	0,027
2	Yes	5	55,6	4	44,4	9	100	
	Total	16	25,8	46	74,2	62	100	

From the table above explains the relationship between work and exclusive breastfeeding, where the variable of work with non-exclusive categories is 11 (20,8%) and exclusive is 42 (79,2%) with a total of 53 (100%) while the working category is not 5 (55,6%) exclusive and 4 (44,4%) exclusive with a total of 9 (100%). The results of the chi square statistical test obtained p value = 0,027 (<0,05) so that it can be stated that there is a significant relationship between work and exclusive breastfeeding.

5. Relationship between family income and exclusive breastfeeding

Table 11. Relationship between Family Income and Exclusive Breastfeeding

No	Family Income	Breast Milk				Total		P *value*
		Not Giving		Give				
		F	%	F	%	F	%	
1	Low	11	22,9	37	77,1	48	100	0,336
2	High	5	35,7	9	64,3	14	100	
	Total	16	25,8	46	74,2	62	100	

The table above explains the relationship between family income and exclusive breastfeeding, where the variable family income in the low category that is not exclusive is 11 (22,9%) and exclusive is 37 (77,1%) with a total of 48 (100%), while the non-exclusive high category is 5 (35,7%) and the exclusive one as many as 9 (64,3%) with a total of 14 (100%). The

results of the chi square statistical test obtained p value = 0,336 (> 0,05) so that it can be stated that there is no significant relationship between family income and exclusive breastfeeding.

6.   Relationship between Attitudes of Health Workers and Exclusive Breastfeeding

Table 11. Relationship between Family Income and Exclusive Breastfeeding

No	Attitudes of Health Workers	Breast Milk				Total		P *value*
		Not Giving		Give				
		F	%	F	%	F	%	
1	Negative	0	0,0	3	100	3	100	
2	Positive	16	27,1	43	72,9	59	100	0,295
	Total	**16**	**25,8**	**46**	**74,2**	**62**	**100**	

The table above explains the relationship between the attitude of health workers and exclusive breastfeeding, where the attitude variable of health workers with negative categories is not exclusive 0 (0,0%) and exclusive is 3 (100%) with a total of 3 (100%). while the positive category which does not 16 (27,1%) exclusive and 4 3 (72,9%) exclusive with a total of 59 (100%). The results of the chi square statistical test obtained p value = 0,295 (> 0,05) so that it can be stated that there is no significant relationship between the attitude of health workers and exclusive breastfeeding.

3.2. Discussion

Based on the results of research on 62 respondents in the working area of the Cimalaka Health Center regarding exclusive breastfeeding, it was found that the low education was 33 (100%) with exclusive breastfeeding as much as 23 (69,7%) and high as many as 29 (100%) with exclusive breastfeeding. Exclusive breastfeeding 23 (79,3%). The results of the bivariate analysis showed that there was no significant relationship between education and exclusive breastfeeding in the working area of the Cimalaka Health Center with P value = 0,388. The results of this study are not in line with the results of the Sihombing faithful research in 2017 where there is a relationship between mother's education and exclusive breastfeeding. The p-value = 0,003 <0,05 means that there is a significant relationship between mother's education and exclusive breastfeeding in the Hinai Left Health Center Work Area.

According to Fikawati (2012), mother's level of education and knowledge is an important factor to support the success of exclusive breastfeeding in infants, because the higher a person's education level, the easier it is to receive information so that the more knowledge he has. Conversely, a lack of education will hinder the development of a person's attitude towards the values   introduced. The education of parents or family, especially the baby's mother, is one of the important factors inexclusive breastfeeding for babies. Low levels of education will be difficult to receive directions in exclusive breastfeeding. A good level of education will make it easier to absorb information, especially regarding the fulfillment of children's nutritional needs so that it will ensure the nutritional adequacy of children. Generally, mothers who have higher education can accept new things and can accept changes to maintain health, especially regarding exclusive breastfeeding. They will be driven to be curious, seek experience so that the information obtained will become knowledge and will be applied to students his life. Based on the above, the researcher concludes that someone with higher education will be more likely to be able to give exclusive breastfeeding, on the contrary someone with low education will be less likely to behave well and be able to breastfeed exclusively.

The first educational psychology theory describes the Observations of changes in behavior that are influenced by events around him. This behavioristic theory (behaviorism) holds that learning occurs because of operant conditioning, that is, if someone learns well, he will get a prize and it will improve the quality of his learning. In its development, several other experts emerged who supported this theory, such as Thorndike, Skinner, Clark Hull and Edwin Guthrie. The theory of behaviorism, which was originally one of the schools of psychology, later developed and became influential in the world of education and learning in demand.

Based on the results of research on 62 respondents in the work area of the Cimalaka Health Center regarding exclusive breastfeeding, it was found that the lack of knowledge was 9 (100%) with 8 (88.9%) exclusive breastfeeding and 53 (100%) good ones were exclusive breastfeeding 38 (71.7%). The results of the bivariate analysis showed that there was no significant relationship between knowledge and exclusive breastfeeding in the working area of the Cimalaka Health Center with P value = 0.276. The results of this

study are not in line with the results of research by Mariane Wowor, et al (2013) where after processing the data using the spearman's rho test, significant results were obtained, namely p = 0.000 <0.05. These results indicate that there is a relationship between mother's knowledge and exclusive breastfeeding.

According to Newcomb in Notoatmodjo (2010), aspects that influence health behavior include knowledge about health. Among the factors that influence knowledge: education, information/mass media, occupation, environment, experience, age, social, culture and economy. According to Notoadmodjo (2003) in Garbhani & Padmiari (2015), mothers who are sufficiently knowledgeable about exclusive breastfeeding will be motivated to give exclusive breastfeeding. Good knowledge that mothers must know is about the duration of administration, benefits, factors that affect volume, nutrients, colostrum, frequency, and signs of adequacy of breast milk. According to Lawrence Green's theory, the behavior of Exclusive breastfeeding is influenced by 3 factors, namely predisposing, supporting, and encouraging. Knowledge is one of the predisposing factors for exclusive breastfeeding. Examples of supporting factors include the availability of facilities, while the driving factors include the attitude of health workers (Notoatmodjo, 2007). Based on the above, the researcher can conclude that lack of knowledge will be more likely to give exclusive breastfeeding, and conversely good respondents will be less likely to give exclusive breastfeeding. provide exclusive breastfeeding.

Based on the results of research on 62 respondents in the work area of the Cimalaka Health Center regarding exclusive breastfeeding, it was found that the negative attitudes of mothers were 11 (100%) with exclusive breastfeeding as many as 4 (36.4%) and positive attitudes of mothers were 51 (100%) with exclusive breastfeeding 42 (82.4%). The results of the bivariate analysis showed that there was a significant relationship between mother's attitude and exclusive breastfeeding in the working area of the Cimalaka Health Center with P value = 0.002. The results of this study are in line with the research results of Widad Abdullah Sjawie, et al. (2019) where there is a relationship between attitude and exclusive breastfeeding, the p value = 0.000 <0.05 This means that there is a significant relationship between mother's attitude and exclusive breastfeeding in the Tuminting Health Center in Manado City.

According to Juliarti (2017) mothers who have a positive attitude are 8 times more give exclusive breastfeeding than mothers who have a negative attitude. Attitudes in breastfeeding are influenced by whether or not the mother gets advice and counseling about breastfeeding. According to Hartono (2016) attitude is a person's closed response, both external and internal so that its manifestations are not directly visible. A person's attitude will affect health, someone who is positive will have positive behavior, the meaning of a positive attitude here is the right attitude with applicable health values (Siregar, 2020). There is a positive attitude due to the support the mother gets and also the mother's experience regarding breastfeeding. Based on the above, the researcher can conclude that respondents who have a positive attitude will be more likely to give exclusive breastfeeding, and On the other hand, respondents who have a negative attitude are less likely to give exclusive breastfeeding.

Based on the results of research on 62 respondents in the work area of the Cimalaka Public Health Center regarding exclusive breastfeeding, it was found that there were 53 (100%) jobs that did not work with exclusive breastfeeding as many as 42 (79.2%) and 9 (100%) who worked. with exclusive breastfeeding 4 (44,4%). The results of the bivariate analysis showed that there was a significant relationship between work and exclusive breastfeeding in the work area of the Cimalaka Health Center with P value = 0.027. The results of this study are in line with the results of the Sihombing faithful study in 2017 where there is a relationship between mother's occupation with exclusive breastfeeding obtained p value = 0.005 <0.05, meaning that there is a significant relationship between mother's work and exclusive breastfeeding in the Hinai Kiri Health Center Work Area.

According to the Ministry of Health (2012), work is one of the obstacles for mothers to give exclusive breastfeeding to their babies. Meanwhile, according to Soetjiningsih (2012) employment status is suspected to be related to breastfeeding patterns. Work is always used as an excuse for not giving exclusive breastfeeding to babies because the mother leaves the house so that breastfeeding time is reduced. According to assumptions Researchers, the short period of leave for working mothers will affect exclusive breastfeeding to their babies. Working mothers will give formula milk to their babies, this is due to the lack of knowledge of mothers about breastfeeding for working mothers. With the right knowledge about breastfeeding, completeness of pumping breast milk and the support of the work environment, working mothers can give breast milk freelyexclusive to the baby. Based on the above, the researcher can conclude that respondents who do not work will be more likely to give exclusive breastfeeding, and conversely respondents who work will be less likely to give exclusive breastfeeding.

Based on the results of research on 62 respondents in the work area of the Cimalaka Health Center regarding exclusive breastfeeding, it was found that low family incomes were 48 (100%) with exclusive breastfeeding as many as 37 (77.1%) and high family incomes, namely 14 (100%).) with exclusive breastfeeding 9 (64.3%). The results of the bivariate analysis showed that there was no significant relationship between family income and exclusive breastfeeding in the working area of the Cimalaka Health

Center with P value = 0.336. The results of this study are not in line with the results of research by Basri Amarico, et al (2016) where there is a relationship between income and income Exclusive breastfeeding obtained p value = 0.001 < 0.05, which means that there is a significant relationship between maternal income and exclusive breastfeeding in Ilie Village, Ulee Kareng District, Banda Aceh City in 2015.

Income is one of the factors related to financial conditions that causes purchasing power for additional food to be greater. Income relates to the amount of income received, which, when compared with expenses, still allows mothers to provide additional food for babies aged less than 6 months. usually the better the family's economy, the purchasing power of additional food is also easy. On the other hand, the worse the family's economy, the purchasing power of additional food is more difficult. The income factor strongly supports exclusive breastfeeding (Afifah, 2013). Based on the above, researchers can concluded that if someone has a low income, they will be more likely to give exclusive breastfeeding, on the other hand, if someone has a high income, they will be less likely to give exclusive breastfeeding.

Based on the results of research on 62 respondents in the working area of the Cimalaka Health Center regarding exclusive breastfeeding, it was found that the negative attitudes of health workers were 3 (100%) with exclusive breastfeeding as many as 3 (100%) and positive attitudes of health workers were 59 (100%) with exclusive breastfeeding 43 (72.9%). The results of the bivariate analysis showed that there was no significant relationship between the attitude of the officers and exclusive breastfeeding in the working area of the Cimalaka Health Center with P value = 0.295. The results of this study are in line with the research of Mony, et al (2019). Based on the results of the Chi square correlation statistical test conducted between the attitude variable of health workers and the variable of exclusive breastfeeding, but these results do not meet the requirements of the Chi square test so the next step is to use the Kolmogorov-Smirnov statistical test with the results of the coefficient values of 1,000 (p-value> 0.05). In this case it means that the hypothesis is rejected, it can be concluded that there is no significant relationship between the support of health workers and exclusive breastfeeding.

In the PRECEDE theory, the attitude of health workers is included in reinforcing factors that encourage and strengthen behavior (Rahmiyati Ria, Widyasih Hesty, 2019). Public health is recognized as a responsible and accountable professional. Law Number 4 of 2019 concerning midwifery, in article 47 states that midwives can play a role as midwifery service providers, midwifery service managers, extension workers and counselors, educators, mentors, and clinical facilitators, mobilizing community participation and empowering women and or researchers in organizing midwifery practice. In giving In her care, the midwife always involves the mother and her family as a unit, in order to form a healthy and empowered family environment, supporting the next life. Support from professionals in the health sector is very What is needed are public health experts, and health promotion experts for mothers, especially primiparas. Education about the importance of breastfeeding should be given from the antenatal period, which is carried out by all health workers. Health workers provide information and counseling about breastfeeding and breastfeeding breastfeeding for both mother and husband. The unique contribution of the public health field is that of the role of a public health expert for public health degrees, especially for mothers and children. Based on the foregoing, the researcher can conclude that officers who behave Negative attitudes will be more likely to encourage respondents to give exclusive breastfeeding, and conversely officers who have a positive attitude will be less likely to encourage respondents to give exclusive breastfeeding.

4. CONCLUSION

From the results of research on Factors Associated with Exclusive Breastfeeding conducted on 62 respondents in the working area of the Cimalaka Health Center, it can be concluded that:

1. There is no significant relationship between education and exclusive breastfeeding at the Cimalaka Health Center, with a P value of 0.338 > 0.05.
2. There is no significant relationship between knowledge and exclusive breastfeeding at the Cimalaka Public Health Center, with a P value of 0.276 > 0.05.
3. There is a significant relationship between mother's attitude and exclusive breastfeeding at the Cimalaka Health Center, with a P value of 0.002 <0.05.
4. There is a significant relationship between work and exclusive breastfeeding at the Cimalaka Health Center, with a P value of 0.027 <0.05.
7. There is no significant relationship between family income and exclusive breastfeeding at the Cimalaka Health Center, with a P value of 0.336 > 0.05.
8. There is no significant relationship between the attitude of health workers with exclusive breastfeeding at the Cimalaka Health Center, with a P value of 0.295 > 0.05.

REFERENCES

Ananda, F., Girsang, E., & Siagian, M. (2019). Faktor-Faktor Yang Berhubungan Dengan Pencapaian Program Promotif Asi Eksklusif Di Unit Pelaksana Teknis Puskesmas Darussalam Medan Tahun 2019. Jurnal Kebidanan Kestra (Jkk), 2(1), 51-60.

Ardat Ahmad, M. P., & Jaya, I. (2021). Biostatistik: Statistik Dalam Penelitian Kesehatan. Prenada Media.

Ari Febriyanti NM, A. F. N., & Ayu Sugiartini NK, A. S. N. (2021). Determinan pemberian ASI eksklusif pada ibu menyusui di Puskesmas I Denpasar Barat. Jurnal Kebidanan, 10(1), 23-34.

Ari Istiany, R. (2014). Gizi Terapan. Bandung: PT Remaja Rosdakarya.

Date, W. M., Anis, W., & Puspitasari, D. (2021). Implementation of Ten Steps Towards Successful Breastfeeding at Tanah Kalikedinding Health CENTER Surabaya City, 2020. Indonesian Midwifery and Health Sciences Journal, 5(2), 209-223.

Devita, R. (2019). Hubungan Antara Pengetahuan dan Pekerjaan Ibu Dengan Pemberian Makanan Pendamping Asi (Mp-Asi) Dini pada Bayi di Praktik Mandiri Bidan Suryati Palembang Tahun 2019. In Prosiding Seminar Nasional (pp. 157-163).

Eksadela, M. (2021). Analisis Faktor Yang Berhubungan Dengan Pemberian Asi Eksklusif Di Puskesmas Hiang Kabupaten Kerinci Tahun 2021 (Doctoral dissertation, Ilmu Kesehatan Masyarakat).

Ernis, N. P. L. (2022). Faktor Yang Berhubungan Dengan Pemberian Asi Eksklusif Di Wilayah Kerja Puskesmas Lubuk Buaya Kota Padang (Doctoral dissertation, Universitas Andalas).

Friyayi, A. (2021). Hubungan Pola Pemberian Makan Dan Pendapatan Keluarga Dengan Kejadian Stunting Pada Balita: Literature Review. Borneo Student Research (BSR), 3(1), 391-404.

Gurnida, D. A., Nurihsan, A. J., & Effendi, J. S. (2022). Hubungan Antara Pengetahuan, Sikap, Dukungan Keluarga, Peran Petugas Kesehatan, Dan Hak Menyusui Terhadap Pola Pemberian Asi Eksklusif Pada Ibu Pekerja Di Sektor Industri Yang Memiliki Fasilitas Menyusui. Gizi Indonesia, 45(1), 59-66.

Herdian, R., & Ulfa, N. (2019). Hubungan Pekerjaan, Paritas Dan Dukungan Petugas Kesehatan Terhadap Pemberian Asi Esklusif. Jurnal'Aisyiyah Medika, 4.

Heryanto, E. (2017). Faktor-faktor yang berhubungan dengan pemberian makanan pendamping ASI dini. Jurnal Aisyah: Jurnal Ilmu Kesehatan, 2(2), 141-152.

Illahi, F. K., Romadhon, Y. A., Kurniati, Y. P., & Agustina, T. (2020). Korelasi Pendapatan Keluarga Dan Pendidikan Ibu Terhadap Pemberian Asi Eksklusif. Herb-Medicine Journal: Terbitan Berkala Ilmiah Herbal, Kedokteran dan Kesehatan, 3(3), 52-59.

Kusumawati, S. (2021). Hubungan Sikap dan Dukungan Tenaga Kesehatan Dengan Keberhasilan Pemberian Asi Eksklusif Di wilayah Puskesmas Berangas Kabupaten Barito Kuala. Jurnal Keperawatan Suaka Insan (JKSI), 6(2), 116-120.

Lastri, L. (2017). Konstruksi Tindakan Reflektif Ibu Menyusui (Studi Fenomenologi E-Ping Mama Indonesia Dalam Keberhasilan Realitas Ibu Berkerja Memberikan ASI Eksklusif) (Doctoral dissertation, Universitas Mecu Buana Jakarta).

Mamonto, T. (2015). Faktor-faktor yang berhubungan dengan pemberian ASI eksklusif pada bayi di wilayah kerja Puskesmas Kotobangon Kecamatan Kotamobagu Timur Kota Kotamobagu. Kesmas, 4(1).

Mirdahni, R., & Andriani, N. S. (2021). Kegagalan Pemberian Asi Eksklusif. Penerbit Lakeisha.

Nugroho, U. (2018). Metodologi penelitian kuantitatif ASI Eksklusifi. Penerbit CV. Sarnu Untung.

Nur Furi Wulandari. 2020. Happy Exlusive Breastfeeding. Laksana

Patimah, N. S., Fitriani, S., KM, S., KM, M., Hariyani Sulistiyoningsih, S., & KM, M. (2019). Hubungan Antara Sikap, Kepercayaan Dan Tradisi, Serta Peran Petugas Kesehatan Dengan Perilaku Pemberian Asi Eksklusif Pada Ibu Yang Memiliki Bayi Usia 7-12 Bulan Di Wilayah Kerja Upt Puskesmas Mangunreja Kabupaten Tasikmalaya Tahun 2019. Jurnal Kesehatan Bidkesmas Respati, 2(10), 45-56.

Rahmitasari, P., Ichsan, B., & Ermawati, S. (2012). Perbedaan Frekuensi Diare Antara Bayi Yang Diberi Asi Eksklusif Dengan Bayi Yang Diberi Susu Formula Pada Rentang Usia 2-4 Bulan Di Wilayah Kerja Puskesmas Klaten Tengah. In 26 Biomedika (Vol. 4, Issue 2).

Ramli, R. (2020). Hubungan pengetahuan dan status pekerjaan ibu dengan pemberian ASI eksklusif di Kelurahan Sidotopo. Jurnal Promkes: The Indonesian Journal of Health Promotion and Health Education, 8(1), 36-46.

Rennata, H.P. 2020. MotivASI ala Mak Marmet Indonesia. Jakarta Selatan. PT. Visimedia.

Rombot, G., Kandou, G. D., & Ratag, G. A. (2013). Faktor-faktor yang berhubungan dengan pemberian susu formula pada bayi usia 0-6 bulan di wilayah kerja puskesmas Molompar Tombatu Timur Minahasa Tenggara. Jurnal Kedokteran Komunitas dan Tropik, 1(4).

Sandra Fikawati, dkk. 2015. Gizi Ibu dan Bayi. Depok. PT. Rajagrafindo Persada

Sandu Siyoto & Ali Sodik. 2015. Dasar Metodologi Penelitian. Yogyakarta. Literasi Media Publishing.

Sihombing, S. (2018). Hubungan pekerjaan dan pendidikan ibu dengan pemberian ASI ekslusif di Wilayah Kerja Puskesmas Hinai Kiri tahun 2017. Jurnal Bidan, 5(1).

Siregar, A. (2004). Pemberian ASI Eksklusif dan Faktor-faktor yang mempengaruhinya. Medan: Fkm Usu.

Supiana, N., & Muliani, S. (2018). Hubungan Pengetahuan Dan Pekerjaan Ibu Menyusui Dengan Pemberian Asi Eksklusif Di Wilayah Kerja Puskesmas Selaparang Mataram Tahun 2017. Jurnal Ilmu Kesehatan dan Farmasi.

FACTORS RELATED TO THE INCIDENCE OF PRIMARY DYSMENORRHOEA IN CONGGEANG STATE HIGH SCHOOL STUDENTS IN 2022

Dini Afriani [*1], Taufik Suhendar[2], Wulan Sabariyah [3]

[1]Public Health Study Program, Faculty of Health Sciences, Sebelas April University
[2] Sumedang District General Hospital
[3]Students of Public Health Study Program, Faculty of Health Sciences, Sebelas April University
Email: diniafriani@unsap.ac.id

ABSTRACT

Primary dysmenorrhoea is menstrual pain that occurs without being accompanied by abnormalities in the pronounced genital apparatus. Factors associated with the incidence of primary dysmenorrhoea are menarche age, length of menstruation, and exercise activity. The purpose of this study is to analyze factors related to the incidence of primary dysmenorrhoea in Conggeang State High School students in 2022. This study used a quantitative method with case control in determining samples using the Probability Sampling technique with the Proportianate Stratified Random Sampling method. Data analysis used Chi-Square to prove whether or not there was a relationship between menarche age, menstrual length and exercise activity with the incidence of primary dysmenorrhea and odds ratio to determine the magnitude of the risk of primary dysmenorrhea. The total sample of the study was 35 respondents of the case group and 35 respondents of the control group. The results of the analysis showed that there was an association between menarche p-value age 0.004 OR 4,231 (95% CI 1,550-11,546), menstrual duration p-value 0,009 OR 3,674 (95% CI 1,369-9,858), sports activity p-value 0,002 OR 4.889 (95% CI 1,759-13,586) with the incidence of primary dysmenorrhea. The conclusion is that there is a relationship between menarche age, menstrual duration and sports activities with the incidence of primary dysmenorrhoea in Conggeang State High School students in 2022. The suggestions in this study are expected to increase students' understanding of reproductive health, especially in dealing with the problem of primary dysmenorrhea events.

Corresponding Author:

Dini Afriani
Public Health Study Program
Faculty of Health Science, Universitas Sebelas April
Jalan Cipadung No. 54
Email: diniafriani@unsap.ac.id

1. INTRODUCTION

Adolescence is a dynamic phase of development in a person's life. One of the signs of biological youthfulness is the beginning of young women having menstruation. Menstruation is a physiological thing that happens to every woman. But in reallity many women experience menstrual problems, including primary dysmenorrhoea. In Indonesia, 64,25% are adolescent girls who have menstrual problems. One of the problems of menstruation is primary dysmenorrhoea which usually occurs at the time of the early age of menstruation (menarche) in the absence of a specific cause of the disease. The incidence of primary dysmenorrhoea has an impact on daily activities, absenteeism rates, and concentration while studying. Primary dysmenorrhea is often overlooked and even considered normal, but if not addressed immediately it can become a serious problem and a fatal outcome (Yusuf, *et al* 2021).

WHO (World Health Organization) data obtained an incidence of 1,769,425 people (90%) women who experienced dysmenorrhoea. The prevalence rate of dysmenorrhoea in Indonesia is 107,673 people consisting of 59,671 people of primary dysmenorrhoea and 9,496 people of secondary dysmenorrhoea. The incidence of dysmenorrhoea ranges from 45-95% among women of productive age (Oktorika *et al*, 2020). In West Java, 72.89% experienced primary dysmenorrhoea and 27.11% had secondary dysmenorrhea (Andriyani, 2016). The percentage of primary dysmenorrhoea in West Java is influenced by several things, such as menarche age, length of menstruation, sports activities and family history. Accordding to the research journal Gadis, *et al* showed that at Tanjungsari State High School, almost 55% of female students have dysmenorrhoea, the incidence of dysmenorrhoea is quite high where they consider dysmenorrhoea to be a common thing experienced by every pereumpuan who has experienced menstruation. The impact of dysmenorrhoea itself if not addressed will be fatal (Gadis, et al 2022).

The results of a preliminary survey at Conggeang State High School conducted on May 5, 2022 on 10 students of Conggeang State High School found that 60% of students had primary dysmenorrhoea and 40% of students did not experience primary dysmenorrhea. 50% of female students experience early menarche age, and 50% of female students experience menarche. 70% of normal menstrual length and 30% of menstrual length is abnormal. 10% of female students who do routine sports activities and 90% do non-routine sports activities. And some respondents mentioned that they often experience unstable emotions, it is difficult to carry out daily activities, and some even cannot go to school.

2.   METHOD

The type of research used for this study is quantitative with a case control approach. A control case study is a design of an epidemiological study that studies the relationship between exposure (research factors) and disease by comparing case groups and control groups based on their exposure status. The purpose of this control case study is to determine factors related to incidence of primary dysmenorrhoea in high school students.

3.   RESULTS AND DISCUSSION
3.1.   Results
  a.   **Univariate analysis**

Table 1. Frequency distribution of primary dysmenorrhoea events in High School Students

| Characteristics of Respondents | Incidence of Primary Dysmenorrhea | | | | Total | |
| | Case | | Control | | | |
	f	%	f	%	f	%
Age						
16	15	42,9	10	28,6	25	35,7
17	20	57,1	21	60	41	58,6
18	0	0	4	11,4	4	5,7
Total	35	100,0	35	100,0	70	100,0
Class						
X	15	42,9	15	42,9	30	42,9
XI	20	57,1	20	57,1	40	57,1
Total	**35**	**100,0**	**35**	**100,0**	**70**	**100,0**

Based on table 1 showed that the most cases of primary dysmenorrhoea occurred in female students aged 17 years 20 0rang (57,1%) and the most who had primary dysmenorrhoea were class XI as many as 20 people (57,1%).

Table 2. Frequency distribution menarche age factors in Conggeang State High School students

Menarche age	Frequency (f)	Percentage (%)
EarlyMenarche (< 12 years old)	32	45,7
Normal (≥ 12 years old)	38	54,3
Total	**70**	**100,0**

Based on table 2 it can be seen that the most frequency is female students who experienced not early menarche as many as 38 respondents (54.3%).

Table 3. Frequency distribution menstrual duration factors in Conggeang State High School students

Duration of menstruation	Frequency (f)	Percentage (%)
Normal (3-7 days)	37	52,9
Abnormal (< 3 days, > 7 days)	33	47,1
Total	**70**	**100,0**

Based on table 3 it can be seen that the most frequency is female students who have a normal menstrual period as many as 37 respondents (52,9%).

Table 4. Frequency distribution of sports activities in Conggeang State High School students

Sports activities	Frequency (f)	Percentage (%)
Routine (at least 3 times / week, 30 minutes)	39	55,7
Not Routine (< 3 times / week, < 30 minutes)	31	44,3
Total	**70**	**100,0**

Based on table 4 it can be seen that the most frequency is female students who do routine sports activities as many as 39 respondents (55,7%).

b. **Bivariate analysis**

Table 5. Relationship of menarche age factor with the incidence of primary dysmenorrhea in Congeang State High School students in 2022

Age Menarche	Primary Dysmenorrhea				OR 95% CI	-P-value
	Case		Control			
	f	%	f	%		
Early Menarche (< 12 years old	22	62,9	10	28,6	4,231 (1,550-11,546)	0,004
Normal	13	37,1	25	71,4		
Total	**35**	**100**	**35**	**100**		

Based on table 5 it can be seen that in the case group of female students who experienced the age of early menarche were more (62,9%) compared to the control group (28.6%). The results of the Chi-square statistical test obtained a value of p = 0.004 (p < 0.05), thus it can be concluded that Ho was rejected and Ha was accepted, then there was a meaningful relationship between the age of menarche and the incidence of primary dysmenorrhoea in class X and XI students at Conggeang State High School. Hasil or calculations also showed that students who experienced early menarche age had 4,231 times experienced primary dysmenorrhoea compared to students who did not have early menarche (95% CI = 1,550-11,546).

Table 6. The relationship between menstrual length factors and the incidence of primary dysmenorrhoea in Congeang State High School students in 2022

Duration of Menstruation	Primary Dysmenorrhea				OR 95% CI	P-value
	Case		Control			
	f	%	f	%		
Normal (3-7 days)	14	40	23	65,7	3,674 (1,369-9,858)	0,009
Abnormal (< 3 days, > 7 days)	21	60	12	34,3		
Total	**35**	**100**	**35**	**100**		

Based on table 6 it can be seen that in the group of cases of female students who experienced abnormal menstrual periods more (60%) compared to the control group (34,3%). The results of the Chi-square statistical test obtained a value of p = 0.009 (p < 0,05), thus it can be concluded that Ho was rejected and Ha was accepted, then there was a meaningful relationship between the length of menstruation and the incidence of primary dysmenorrhoea in class X and XI students at Conggeang State High School. The OR calculation also showed that female students who experienced abnormal menstrual periods were at risk of 3,674 times experiencing primary dysmenorrhoea compared to female students who experienced normal menstrual periods (95% CI = 1,369-9,858).

Table 7. **The relationship between sports activity factors and the incidence of primary dysmenorrhoea in Conggeang State High School students in 2022**

Sports Activities	Primary Dysmenorrhea				OR 95% CI	*P-value*
	Yes		Not			
	n	%	n	%		
Routine (at least 3 times / week, 30 minutes)	13	37,1	26	74,3	4,889 (1,759-13,586)	0,002
Not Routine (< 3 times / week, < 30 minutes)	22	62,9	9	25,7		
Total	35	100,0	35	100,0		

Based on table 7 it can be seen that in the group of cases of female students who performed non-routine sports activities more (62,9%) compared to the control group (25,7%). The results of the Chi-square statistical test obtained a value of p = 0.002 (p < 0,05), thus it can be concluded that Ho was rejected and Ha was accepted, then there is a meaningful relationship between sports ol activities and the incidence of primary dysmenorrhoea in class X and XI students at Conggeang State High School. Theor calculation also showed that students who carried out non-routine sports activities were at risk of 4,889 times experiencing primary dysmenorrhoea compared to female students who did routine sports activities (95% CI = 1,759-13,586).

3.2 Discussion

In this section, the author explains the results of research based on the results of data processing and questionnaires from 70 respondents in a statistically univariate and bivariate statistics regarding the relationship between menarche age, menstrual duration and sports activity with the incidence of primary dysmenorrhea in Conggeang State High School students in 2022

From the table of the distribution of the frequency of primary dysmenorrhoea events in Conggeang State High School students based on age, it can be seen that in the group of primary dysmenorrhoea cases, there are more students aged 17 years (57.1%) then female students aged 16 years (42.9%) and aged 18 years (0%). Meanwhile, according to class, primary dysmenorrhoea cases in female students mostly occurred in class XI (57.1%) compared to class X (42.9%). Dysmenorrhea generally occurs about two to three years after menarche. If the ideal age of menarche is 12-14 years, then dysmenorrhea usually occurs a lot at the age of 15-17 years. Not only that, this age is a time when the development of reproductive organs and hormonal changes occur significantly. The effect of age on pain perception and pain tolerance is theoretically not widely known because it is based solely on reports of pain and pain relief. The older a person is, the more menstruating will often be and will cause the cervix to get wider (Abdul, 2016).

This is in line with research conducted by Sirait et al (2014) conducted at SMA Negeri 2 Medan found that 60.9% were aged 16-18 years. Similar to other studies, Sophia's (2013) research, in students of SMK Negeri 10 Medan, found that the most (83%) were aged 15-17 years. Dysmenorrhea generally occurs 2-3 years post-menarche. *Menarche* age is ideally in the range of 12-14 years. Therefore the incidence of dysmenorrhea generally occurs in adolescents aged 15-17 years.

According to the researcher's assumption, age can be a factor causing primary dysmenorrhoea because the older a person is, the more often he will have menstruation. So that the cervix will increase in width. So that the older a person's age the incidence of primary dysmenorrhoea will rarely occur.

The distributionof *menarche* age frequency in Conggeang State High School students based on univariate analysis is that 32 female students who experienced early *menarche* age (45.7%). Meanwhile, there were 38 female students who experienced an early *age* (54.3%). *Menarche* age is the first menstruation that usually occurs in women aged 12-13 years in the age range of 10-16 years (Sukarni, 2013). *Menarche* at an early age (<12 years) causes the reproductive organs not to function optimally and are not ready to undergo changes so that pain arises during menstruation (Kiky, 2013).

The results of this study are supported by research conducted by Eka and Lasma (2013), that out of 80 respondents, as many as 34 respondents (54%) who *menarche* at the age of 12-14 years, and as many as 4 respondents (33.3%) who *menarche* at the age of ≤ 12 years. This is in line with the results of research conducted by Sophia., Muda., and Jemadi in 2013 with the title of factors related to dysmenorhea in students of SMK Negeri 10 Medan *aged menarche* < 12 years, namely 83.70%. to researchers, 45.7% of female students who experience early *menarche* age at Conggeang State High School are caused by reproductive organs that are not functioning optimally and are not ready to experience changes, so that when women have menstruation at a young age, it will cause pain during menstruation.

The distribution of menstrual length freuence in Conggeang State High School students based on univariate analysis is that 37 female students who experience normal menstrual clerics (52.9%). Meanwhile, there were 33 female students who experienced abnormal periods (47.1%). The duration of mentruation is

between 3-7 days, there are also women who have menstruation 1-2 days, then bleeding little by little follows it. Some women have longer periods, which is 7-10 days. The amount of blood secreted during menstruation is about 20-40 ml (Sadiman, 2017). The results of this study are supported by a study conducted by Nurul and Siska in 2016 with the title Relationship of Cycle and Duration of Menstruation with the incidence of Dysmenorrhea in FKM UNISKA Banjarmasin Students, most of the students experienced mentruation pain (76%) compared to not experiencing pain (24 %), with a normal duration of mentruation of 65% and a normal cycle of 74%. There is a relationship of the length of menstruation and the mentruation cycle with the incidence of dysminorrhea (P. Value 0.000).

This research is also in line with the research of Shopia (2013), which states that there is a meaningful relationship between the length of menstruation and the incidence of dysminorrhea, the longer the mentruation, the more /often the uterus contracts, as a result, the more prostaglandin hormones are secreted. Due to excessive progstaglandin hormone, it causes pain in menstruation (Nurul and Siska, 2016). Researchersassumed researchers that a person's length of time during menstruation would have an impact on pain during menstruation. When a person experiences mentruation, the uterine muscles will experience muscle contractions, where when this muscle contraction occurs, the prostaglandin hormone will be active. Prostaglandin hormone is a pain *receptor hormone* produced by the body.

The distribution of menarche age frequency in Conggeang State High School students based on univariate analysis is 39 students whose routine sports activities are 39 people (55.7%). Meanwhile, there were 31 female students who carried out non-routine sports activities (44.3%). According to Tjokropawiro et al in Kamil, 2015 exercise is the movement of limbs that can improve the quality of life, physique, and psychology, because exercise causes energy expenditure so that the body remains healthy and fit throughout the day. Regular exercise such as walking, *jogging*, cycling, swimming, or aerobic gymnastics can improve general health and help maintain a regular menstrual cycle. Respondents were said to have the habit of exercising regularly if they did exercise at least 3 times a week with a duration of at least 30 minutes once doing, and not routinely if they did exercise less than 3 times a week or even not at all (CDC, 2012) Sports activities carried out can be used as relaxation to reduce pain that occurs in women who have dysmenorrhea. This is because when a person does sports, the body will produce endorphin hormones. It is this hormone that will function as a mediation of the joints in the hypothalamus gland (Sirait et al, 2014).

This study is in line with Sugiharti's research (2018) found that students who had good exercise habits mostly did not experience menstrual pain, namely 12 people (40%), while students who did not have good exercise habits mostly experienced primary menstrual pain, namely as many as 28 people (93.4%). Exercise can reduce menstrual pain when a person performs sports activities regularly endorphin hormones will increase, so it will have a good impact on the body, namely providing a sense of comfort, relaxation and can reduce the pain that is experienced.

Based on the results of the analysis obtained from this study, it shows that there is a meaningful relationship (p-$value$<0.05) statistically between the age of menarche and the incidence of primary dysmenorrhoea in female students. The proportion of early menarche age was more in the case group (62.9%) compared to the control group (28.6%). Early menarche is likely to have a 4,231-time risk of developing primary dysmenorrhoea compared to female students who do not *have early menarche*. In this study, the combination of the normal *menarche* age group (12-14 years) and tarda (>14 years) was carried out into the non-early *menarche* age group ($\geq$ 11 years).

The association of menarche age <12 years with dysmenorrhea in women who had their first menstruation is often made restless due to mentally poorly prepared and hormonal changes. One of them is influenced by age. Menarche can cause various problems, one of which is complaints of pain during menstruation or what is commonly called dysmenorrhea. Generally women feel primary dysmenorrhea. As many as 90% of women in the world experience dysmenorrhea, more than 50% of whom experience discomfort during menstruation and 10-20% experience severe discomfort (Wardani, 2021). Meanwhile, according to Widjanarko, 2014 stated that if menarche occurs at an earlier than normal age where the reproductive apparatus is not ready to undergo changes and there is still a narrowing in the cervix, pain will arise during menstruation. This study is in line with the research conducted by Wardani, 2021 with the results of 91,2% (62 respondents) who have a menarche age of < 12 years and suffer from primary dysmenorrhea with *p-value* = 0.000 or *p value* < α (0,05) which means there is a relationship between menarche age < 12 years with primary dysmenorrhea. The *odds ratio* value is 28,933 which means that female students who have a *menarche* age of < 12 years are at risk of 28,933 times for primary dysmenorrhea compared to students who have a *menarche* age of > 12 years (Wardani, 2021). This study shows that women with early *menarche* age (< 12 years) can cause primary dysmenorrhoea. This happens because the reproductive organs are not functioning optimally and are not ready to undergo changes so that pain arises during menstruation.

Based on the results of the analysis obtained from this study, it shows that there is a meaningful relationship (p-$value$<0.05) statistically between the length of menstruation and the incidence of primary dysmenorrhoea in female students. The proportion of abnormal menstrual duration was more in the case

group (60%) compared to the control group (34.3%). Abnormal menstrual duration is likely to have a risk of 3,674 times experiencing primary dysmenorrhoea compared to female students who have a normal menstrual period. Menstruation that is longer will result in longer contractions of the uterine muscles due to the increasing secretion of prostaglandins, resulting in primary dysmenorrhea. Risk factors for dysmenorrhea due to the length of menstruation can cause the work of the uterus to increase and contract for longer and longer. Psychological and physiological factors can affect the duration of menstruation, psychologically influenced by the emotional level of adolescent girls who are unstable when experiencing menstruation while physiologically, excessive uterine muscle contractions will increase hormone sensitivity so that the endometrium in the secretion phase produces prostaglandin hormones. These prostaglandins are formed due to the presence of unsaturated fatty acids and synthesized all cells in the body. Increased prostaglandin production results in menstrual pain that is affected by the duration of menstruation and also the frequent contraction of the uterus. The duration of menstruation is usually experienced by adolescents with stress, where the stress experienced by young women results in menstrual disorders such as irregular menstrual periods (Raemon et al, 2020).

The results of Sophia's research (2013) on young women at SMK Negeri 10 Medan, obtained *a p-value* of 0.046 (less than the value of α 5%). This means that there is a relationship between the duration of menstruation and the incidence of dysmenorrhea. This study is also in accordance with the research of Hormono, 2012 on the Relationship Between Exercise Habits, menarche, and Menstrual Duration with the incidence of Dysmenorhea in Adolescents at SMA Muhammadiyah 1 Purbalingga, research shows that there is a meaningful relationship between the length of menstruation and the incidence of dysmenorhea with a p value = 0.003. The relationship between the length of menstruation and the incidence of primary dysmenorrhoea is caused by stress experienced by young women which results in menstrual disorders, one of which is irregular menstrual duration disorders.

According to researchers, based on the theory that has been elaborated the length of abnormal menstruation can cause primary dysmenorrhoea because in respondents with a menstrual duration of more than 7 days will lose more blood than in respondents with a short menstrual length. The longer menstruation occurs , the more prostaglandin hormones are secreted, causing pain during menstruation.

Based on the results of the analysis obtained from this study, it shows that there is a meaningful relationship (p-value<0.05) statistically between sports activities and the incidence of primary dysmenorrhoea in female students. The proportion of non-routine exercise activity was more in the case group (62.9%) compared to the control group (25.7%). Non-routine exercise activities are likely to have a risk of 4,889 times experiencing primary dysmenorrhoea compared to female students who do regular exercise activities. The relationship between exercise habits and the incidence of primary menstrual pain can be caused because exercise is one of the relaxation techniques that can be used to prevent the onset of pain. This is because when doing sports the body will produce endorphin hormones. Endorphin hormones are produced by the brain and spinal nervous system (Sugiharti, 2018).

The incidence of dysmenorrhoea will increase in women who do less exercise. Kethics women experiencing primary dysmenorrhoea oxygen cannot be channeled into the blood vessels of the reproductive organs at which time vasocontriction occurs. If the woman regularly does exercise, then the woman can provide almost 2 times the oxygen so that oxygen is delivered to the vasocontriction blood vessels, it will cause a decrease in the incidence of dysmenorrhoea by regularly exercising (Tjokronegoro, 2014).

Women who do sports regularly for at least 30-60 minutes every 3-5 times per week can prevent the occurrence of dysmenorrhoea. Every woman can just take a leisurely walk, light jogging, swimming, gymnastics or cycling according to their respective conditions The relationship of exercise habits to the incidence of dysmenorrhea can be caused because exercise is one of the relaxation techniques that can be used to reduce pain (Manuaba, 2012).

Sports habits are physical sports activities carried out by respondents including gymnastics, running/jogging, cycling, swimming, healthy walking. Regular exercise is believed to be beneficial for reducing endometrial hyperplasia and lowering prostaglandin production. Practicing physical exercise causes receptors inside the hypothalamus and limbic system that serve to regulate emotions to capture the hormone β-endorphins that can be produced after a person performs physical activity. Increased β-endorphins have been shown to be closely related to decreased pain, improved memory, improved appetite, sexual abilities, blood pressure and breathing (Temesvari, 2019).

This study is in line with Sugiharti's research (2018) found that students who had good exercise habits mostly did not experience menstrual pain, namely 12 people (40%), while students who did not have good exercise habits mostly experienced primary menstrual pain, namely as many as 28 people (93.4%). When viewed from the results of the Chi Square analysis, it shows that the p value is 0.002 which means that there is a relationship between exercise habits and the incidence of primary menstrual pain in adolescents. Based on the results of this study and some of the theories that have been described, it can be concluded that sports activities that are not carried out regularly can cause the occurrence of primary dysmenorrhoea in young

women. Sports activities can reduce the symptoms of primary dysmenorrhoea, because when doing sports activities can provide oxygen almost 2 times per minute so that the oxygen is conveyed to the blood vessels of the reproductive organs that are vasoconstriction (narrowing of blood vessels). By doing sports activities can make a good relaxation therapy against the pain felt at the time of primary dysmenorrhoea. Good exercise can be done regularly 1 week 3-5 times for 30-60 minutes.

4.   Conclusion

From the results of research that has been carried out regarding factors related to the incidence of primary dysmenorrhoea in students of Conggeang State High School in 2022, the results were obtained:
a.   An overview of the incidence of primary dysmenorrhoea in Conggeang State High School students based on age, it can be seen that in the group of primary dysmenorrhea cases, it is more common in female students who are 17 years old (57,1%) then students aged 16 years (42,9%) and aged 18 years (0%). Meanwhile, according to class, primary dysmenorrhoea cases in female students mostly occurred in class XI (57,1%) compared to class X (42,9%).
b.   Menarche age frequency distribution there were 22 people (62,9%) who experienced early menarche age.
c.   The distribution of the frequency of menstrual length there were 21 people (60%) who had abnormal menstrual periods.
d.   The frequency distribution of sports activities there were 22 people (62,9) who carried out non-routine sports activities.
e.   There is a relationship between the age of menarche (0,004), duration of menstruation (0,031), and sports activity (0,002) with the incidence of primary dysmenorrhoea.

REFERENCES

Andriyani. (2016). Hubungan Antara Usia Menarche Dan Lama Menstruasi Dengan Kejadian Dismenore Primer Pada Remaja Putri. eprints.ums.ac.id. (cited 2022 Mei 18).

Asma'ulludin, A. K. (2016). Kejadian dismenore berdasarkan karakteristik orang dan waktu serta dampaknya pada remaja putri SMA dan Sederajat di Jakarta Barat tahun 2015 (Bachelor's thesis, FKIK UIN Jakarta).

CDC. Heavy Menstrual Bleeding | CDC [Internet]. 2017 [cited 2022 Jul 5].

Handayani, E. Y., & Rahayu, L. S. (2014). Faktor-faktor yang berhubungan dengan nyeri menstruasi (dismenorea) pada remaja putri di beberapa SMA di Kabupaten Rokan Hulu. Jurnal Martenity and Neonatal, 2(1), 161-171.

Kiky, 2013. Hubungan Status Gizi dan Usia Menarche dengan Dismenorhea Primer pada Remaja Puteri di SMA Nasional Makasar Tahun 2013.

Manuaba. 2012, Kapita Selekta Pelaksanaan Rutin Obsterti Ginekologi dan KB. Penerbit Buku Kedokteran EGC : Jakarta

Mau, R. A., Kurniawan, H., & Dewajanti, A. M. (2020). Hubungan Siklus dan Lama Menstruasi pada Mahasiswi Fakultas Kedokteran Ukrida dengan Nyeri Menstruasi. Jurnal Kedokteran Meditek, 26(3), 139-145.

Noverianti, G., Carolin, B. T., & Dinengsih, S. (2022). Pengaruh Promosi Kesehatan Terhadap Pengetahuan Remaja Putri Tentang Dismenore. Jurnal ilmiah Kesehatan, 14(1), 39-48.

Oktorika, P., Indrawati., & Sudiarti, P.E. (2020). Hubungan Index Masa Tubuh (IMT) dengan Skala Nyeri Dismenorea Pada Remaja Putri di SMA Negeri 2 Kampar. Jurnal Ners. 4(2): 122-129. (Diakses pada tanggal 26 Mei 2022).

Qoriaty, N. I., & Dhewi, S. (2016) Hubungan Siklus dan Lama Menstruasi Dengan Kejadian Dismenorea pada Mahasiswi FKM UNISKA Banjarmasin 2015.

Sadiman, S. (2017). Analisis Faktor yang Berhubungan dengan Kejadian Dismenorhea. Jurnal Kesehatan, 8(1), 41-49.

Saputra, Y. A., Kurnia, A. D., & Aini, N. (2021). Pengaruh Pendidikan Kesehatan terhadap Upaya Remaja untuk Menurunkan Nyeri Saat Menstruasi (Dismenore Primer). Jurnal Kesehatan Reproduksi, 7(3). (Diakses pada tanggal 22 Mei 2022).

Sirait dkk. 2014. Faktor-Faktor yang Berhubungan dengan Kejadian Dismenore pada Siswi SMA Negeri 2 Medan Tahun 2014. Medan: Universitas Sumatera Utara.

Sophia. 2013. Faktor-Faktor yang Berhubungan dengan Dismenore pada Siswi SMK Negeri 10 Medan Tahun 2013. Medan: Universitas Sematera Utara.

Sugiharti, R. K., & Sumarni, T. (2018). Hubungan Antara Kebiasaaan Olahraga Dengan Kejadian Nyeri Haid Primer Pada Remaja. Bidan Prada, 9(1).

Temesvari, N.A., Loli, A., & Witri, Z.Q. Efek Olahraga terhadap Kejadian Dismenor Primer pada Siswi Kelas X SMA Negeri 78 Jakarta Barat. JURNAL MKMI, Vol. 15 No. 3, September 2019

Tjokronegoro, Arjatmo, 2014. Olahraga dan kebugaran jasmani. Jakarta : balai penerbitan FKUI.

Wardani, P.K., Fitriani., & Saras, C.C. Hubungan Siklus Menstruasi dan Usia Menarche dengan Dismenor Primer pada Siswi Kelas X. Jurnal Ilmu Kesehatan Indonesia (JIKSI) E-ISSN: 2745-8555 Vol. 2, No. 1, Februari 2021

Widjanarko, B. Tinjauan Terapi pada Dismenore Primer. Majalah Kedokteran Damianus. Vol 5 (16) November 2006: 2014

FACTORS RELATED TO THE INCIDENCE OF LUNG TUBERCULOSIS

Imdra Gunawan*[1], Dadang Sulaeman[2] , Fitriani [3]

[1,2] Public Health Science Study Program, Faculty of Health Science, Sebelas April University
[3] Students of Public Health Science Study Program, Faculty of Health Science, Sebelas April University
Email : indragun@unsap.ac.id

ABSTRACT

There are 44 patients with pulmonary TB who recovered in 2021 at the Ganeas Health Center based on reporting using the cohort system so that the evaluation is carried out every quarter. For 2021 the recovery rate reached 60,3%, a decrease from the previous year, which was 64,8%. The type of research used is analytic research, with a case control study design, with a population of 117 people and the number of case samples required is 40 samples and the control sample required 40 samples. The sampling method is done by simple random sampling method. There was no relationship between the age of the patient and the cure for pulmonary tuberculosis (p-value 0,199). There is no relationship between the patient's education level and the cure for pulmonary tuberculosis (p-value 0,531). There is a relationship between the patient's knowledge and the cure for pulmonary tuberculosis (p-value 0,000). There is a relationship between the role of the supervisor taking medication with the cure for pulmonary TB (p-value 0,001), in patients with pulmonary TB in the working area of the Ganeas Health Center in 2022. It is expected that health workers will be active in efforts to improve the regularity of treatment for TB patients to increase the cure rate. And it is hoped that students of the Faculty of Health Sciences will play an active role in providing information about pulmonary tuberculosis.

Corresponding Author:

Indra Gunawan
Public Health Science Study Program,
Faculty of Health Science Sebelas April University,
Jl. Cipadung No.54, Kota Kaler, Sumedang Utara, Sumedang, Jawa Barat 45621, Indonesia.
Email: indragun@unsap.ac.id

1. INTRODUCTION

Pulmonary Tuberculosis (pulmonary TB) is an infectious disease that can be transmitted, caused by the bacterium Mycobacterium tuberculosis that attacks various organs of the body, especially the lungs (Kemenkes RI, 2014). Referring to the WHO Global TB Report 2020, 10 million people in the world suffer from Tuberculosis (Tb) and 1.2 million die every year. Indonesia is one of the countries with the highest TB burden in the world with an estimated number of people falling ill due to TB reaching 845,000 with a death rate of 98,000 or equivalent to 11 deaths/hour (WHO Global Report, 2020). In 2020 Tuberculosis cases in each province varied, in the first place the highest TB cases between 244 per 100,000 population in Papua province, in the sixth place with 159 TB cases per 100,000 population in West Java province and the lowest TB cases in Bali Province with 65 per 100,000 population. 100,000 population (Indonesian Health Profile, 2020).

In Sumedang Regency in 2019 there were 729 smear positive TB cases or 59% of the 13,470 suspected cases. The discovery of all cases of TB or Case Defection Rate (CDR) All Cases found and treated in 2019 was found to be 729 and the cure rate showed 62% or around 429 people recovered. This of course has a positive value for improving services and it will be even better if the cure rate is 100%, while in Sumedang Regency the pulmonary TB cure rate is still 62%, of course this is a problem (Profile of the Sumedang Health Office, 2019).

In the working area of the Ganeas Public Health Center there were 296 target people and the discovery of suspected tuberculosis disease, but only 118 people were examined for sputum during 2021. Based on quarterly report data for the Pulmonary Tuberculosis Program at the Ganeas Health Center, the discovery of new patients with AFB (+) in 2021 was 19 cases (68 ,4%) so that the number of patients with pulmonary TB became 73 cases. Pulmonary TB patients who recovered in 2021 were 44 people based on reporting using the cohort system so that the evaluation was carried out every quarter. For 2021 the cure rate reached 60,3%, a decrease from the previous year, which was 64,8% (Profile of UPTD Ganeas Health Center, 2022).

2.   METHOD

The type of research used in this research is analytical research and this research uses a quantitative approach. The design of this study used a case control study design. In this study the conceptual framework was developed, the independent variables of this study were the patient's age, the patient's education level, the patient's knowledge, the role of medication supervisor (PMO) and the dependent variable in this study was the recovery of pulmonary TB patients in the Ganeas Health Center Work Area. The case population in this study were all pulmonary TB patients who were still receiving treatment (73 people) and pulmonary TB patients who recovered at the Ganeas Health Center in 2021 (44 people). So the population in this study amounted to 117 people. The number of control samples obtained was 40 samples. The number of comparisons between the control and case groups is 1:1. So, the number of case samples required is 40 samples and the control samples required are 40 samples. So the total sample studied is 80 samples. The sampling method is done by simple random sampling method (simple random sampling). To obtain actual and objective data, researchers used data collection techniques using questionnaire research instruments.

3.   RESULTS AND DISCUSSION

3.1. Results
3.1.1 Uni-variate Analysis

Table 1. Description of the Age of Pulmonary Tuberculosis Patients in the Working Area of the Ganeas Health Center

Age (years)	Total			
	Case		Control	
	Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
12-25	4	5	1	1,3
26-45	29	36	32	39,9
46-65	7	9	7	8,8
>65	0	0	0	0
Total	40	50	40	50

From the table above, it is known that 29 patients (36%). And the number of recovered pulmonary TB patients aged 26-45 were 32 people (39,9%).

Table 2. Description of the Education Level of Pulmonary Tuberculosis Patients in the Working Area of the Ganeas Health Center

Level Education	Total			
	Case		Control	
	Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
Low	40	50	38	47,5
High	0	0	2	2,5
Total	40	50	40	50

From the table above, it is known that patients with pulmonary tuberculosis who did not recover had a low level of education as many as 40 people (100%). Meanwhile, patients with pulmonary tuberculosis who recovered had a low level of education as many as 38 people (47.5%).

Table 3. Description of Knowledge of Pulmonary Tuberculosis Patients in the Working Area of the Ganeas Health Center

Knowledge	Total			
	Case		Control	
	Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
Low	21	26,2	5	6,2
High	19	23,8	35	43,8
Total	40	50	40	50

From the table above, it is known that patients with pulmonary tuberculosis who did not recover had low knowledge of 21 people (26.2%). While patients with pulmonary TB who recovered had high knowledge as many as 35 people (43.8%).

Table 4. Role of PMOs in the Working Area of the Ganeas Health Center

Role of PMO	Total			
	Case		Control	
	Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
Yes	2	2,5	14	17,5
Not	38	47,5	26	32,5
Total	40	50	40	50

From the table above, it is known that 38 people (47.5%). Meanwhile, 26 patients (32.5%).

Table 5. Pulmonary TB Healing in the Working Area of the Ganeas Health Center

Lung Tb Healing	Frequency (f)	Percentage (%)
Recover	40	50
Not cured	40	50
Total	80	100

Based on table above, it is known that there are 40 patients with pulmonary TB who do not recover in the working area of the Ganeas Health Center (50%). And there were 40 patients with pulmonary TB who recovered at the Ganeas Health Center (50%).

3.1.2 Bivariate Analysis

Table 6. The relationship between the age of the patient and the healing of pulmonary tuberculosis in the working area of the Ganeas Health Center

Age	Pulmonary Tb Healing				Total		P-Value
	Not cured		recover				
	Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)	
12-25	4	5	1	1,3	5	6,3	
26-45	29	36	32	39,9	61	75,9	
46-65	7	9	7	8,8	14	17,8	0,199
>65	0	0	0	0	0	0	
Total	40	50	40	50	80	100	

The results of the analysis using the chi-square test obtained p value (0.199) > (0.05) so that Ha was rejected. This means that it can be seen that there is no relationship between age and cure for pulmonary tuberculosis in the working area of   the Ganeas Health Center.

Table 7. The Relationship between Patient Education Level and Pulmonary Tuberculosis Recovery in the Working Area of the Ganeas Health Center

Level of Education	Pulmonary Tb Healing				Total		P-Value	OR (CI 95%)
	Not cured		recover					
	Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)		
Low	40	50	38	47,5	78	97,5		3.500
High	0	0	2	2,5	2	2,5	0,531	(1.529-
Total	40	50	40	50	80	100		8.012)

The results of the analysis using the chi-square test obtained p value (0.531) > (0.05) so that Ha was rejected. This means that it can be seen that there is no relationship between the level of education and the cure for pulmonary tuberculosis in the working area of the Ganeas Health Center. Calculation of the Risk Estimate obtained OR = 3,500 (OR> 1) with an interval of 1,529-8,012, this means that respondents who have a high level of education have 3,500 times the chance to recover, compared to respondents who have a low level of education.

Table 8. The Relationship Knowledge of Patients with Pulmonary Tuberculosis Healing in the Working Area of the Ganeas Health Center

| Knowledge | Pulmonary Tb Healing | | | | Total | | P-Value | OR (CI 95%) |
| | Not cured | | recover | | | | | |
	Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)		
Low	21	26,2	5	6,2	26	32,4	**0,000**	**7.737** (2.515-24.805)
High	19	23,8	35	43,8	54	67,6		
Total	**40**	**50**	**40**	**50**	**80**	**100**		

The results of the chi-square analysis obtained p value (0.000) < (0.05) so that Ha is accepted. This means that it can be seen that there is a relationship between knowledge and cure for pulmonary TB in the working area of   the Ganeas Health Center. Calculation of the Estimated Risk obtained OR = 7,737 (OR> 1) with an interval of 2,515-24,805, this means that respondents who have knowledge with a high score have a chance of 7,737 times to recover, compared to respondents who have knowledge with a low score.

Table 9. The relationship between the role of PMO and the healing of pulmonary tuberculosis in the working area of the Ganeas Health Center

| Role of PMO | Pulmonary Tb Healing | | | | Total | | P-Value | OR (CI 95%) |
| | Not cured | | recover | | | | | |
	Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)		
Yes	2	2,5	14	17,5	16	20	**0,001**	**10.231** (2.143-48.848)
No	38	47,5	26	32,5	64	80		
Total	**40**	**50**	**40**	**50**	**80**	**100**		

The results of the chi-square analysis obtained p value (0.001) < (0.05) so that Ha is accepted. This means that it can be seen that there is a relationship between the role of PMO and the cure for pulmonary TB in the working area of the Ganeas Health Center. Estimated Risk Calculation obtained OR = 10,231 (OR> 1) with an interval of 2.143-48,848, this means that respondents who have PMO have 10.231 times the chance to recover compared to respondents who do not have PMO.

3.2. Discussion

Based on the results of the chi-square test obtained p value (0.199) > (0.05) so that Ha is rejected. This means that it can be seen that there is no relationship between age and cure for pulmonary tuberculosis in the working area of the Ganeas Health Center. From the characteristics of age, the largest number of patients with pulmonary TB who did not recover was the age classification of 26-45 years as many as 29 people (39%). In accordance with data according to data from the Indonesian Ministry of Health, the largest prevalence of TB sufferers is the population aged 15 years and over with a prevalence of 257 per 100,000 population (Kemenkes Indonesia, 2018).

This is in line with research conducted by Al Juwaini (2014) showing that age does not associated with the incidence of pulmonary TB with a p-value of 0.772. This states that the proportion of TB patients recovering does not differ in various age groups because all TB patients from various age groups will still seek treatment for their illness, but recover from the treatment they do. According to the researcher, there is no relationship between age and cure for pulmonary TB because the age gap studied is not so varied or significant so that the sample studied is only in the category of adolescents and adults.

Based on the results of the chi-square test obtained p value (0.531) > (0.05) so that Ha is rejected. This means that it can be seen that there is no relationship between the level of education and the cure for pulmonary tuberculosis in the working area of the Ganeas Health Center. Based on Skiner's theory in Notoadmojo (2015) that the healing of tuberculosis patients taking medication regularly is a real action in the

form of activities that can be influenced by factors from within the patient (internal factors) and from outside the patient (external factors). Internal factors are age, gender, education, occupation, income, knowledge, attitudes and beliefs.

This study is in line with research in 2013 in Instantbul, Turkey, and research in Sharkia, Egypt, conducted by (Babalik et al 2013) (Elkomy et al, 2013) which stated that there was no relationship between education level and TB treatment outcomes. The absence of a relationship in this study is indicated by the last education level of each respondent in general, there is no difference in obtaining treatment information. Because respondents with low levels of education can also get treatment information. According to the researcher, there is no relationship between the level of education and the cure for pulmonary TB in the working area of the Ganeas Health Center because the distribution of education levels in the village of Ganeas is not evenly distributed. In addition, although the education level of people with TB is low, it does not mean that knowledge about TB is low because they get information about TB from health workers, PMOs as well as from TV and internet media.

Based on the results of the chi-square test obtained p value (0.000) < (0.05) so that Ha is accepted. This means that it can be seen that there is a relationship between knowledge and cure for pulmonary tuberculosis in the working area of the Ganeas Health Center. Based on the research results, respondents who have knowledge with low values in the case group (not cured) are 21 respondents while in the control group (cured) respondents who have high value knowledge are 35 respondents.

This theory is also in line with research by Green in Notoadmojo (2015), that knowledge has a very close positive relationship with health behavior. According to Green, health behavior is basically a person's response (organism) to stimuli related to illness and disease, the health care system, food and the environment. In line with Al Juwaini's research (2014) from the results of the analysis of the relationship between knowledge and healing of TB patients with the chi-square test results obtained p value = 0.001 and prevalence ratio value is 1.721 (95% CI.1,200-2.469), with prevalence ratio value > 1 and the interval range does not include the number 1, meaning that the knowledge variable is a factor that influences the healing of TB patients, so it can be concluded that there is a difference in the proportion of TB patients recovering between patients with good knowledge and poor knowledge. According to researchers, knowledge is related to the cure for pulmonary TB because the better the respondent's knowledge, the better a respondent will know how to treat TB, transmit TB disease and prevent pulmonary TB disease from being infected to others.

Based on the results of the chi-square test obtained p value (0.001) < (0.05) so that Ha is accepted. This means that it can be seen that there is a relationship between the role of PMO and the cure for pulmonary tuberculosis in the working area of the Ganeas Health Center. Based on the results of the study, respondents who did not have PMO in the case group (not cured) were 38 respondents while in the control group (cured) who had PMO were 14 people. These results prove Langevelt's research in Notoadmojo (2015) that supervision is closely related to the patient's education pattern, namely every effort, influence, consideration and assistance given to sufferers, which is aimed at physical and spiritual maturity.

This is in line with research (Rina Puspita Sari and Abdul Azis, 2019) with the results of the chi square statistical test with a p-value of 0.022 so it can be concluded that there is a relationship between the role of PMO patients on the recovery of pulmonary TB patients in the working area of the Mauk Health Center, Tangerang Regency in 2019. According to researchers, the role of PMO is related to the healing of pulmonary TB in the work area of the Ganeas Health Center because the role of PMO is very helpful for TB patients in monitoring drug consumption patterns, monitoring the behavior of TB patients in maintaining health and fulfilling the drug needs of TB patients. In addition, the PMO also monitors the recovery of TB patients, reminds patients if the drugs will run out and wants to take TB patients to take TB drugs to the puskesmas.

4. CONCLUSION

After conducting research and discussing the factors related to the cure for pulmonary tuberculosis in the Ganeas Health Center Working Area in 2022, it can be concluded that:

1. A total of 29 people (36%) in the case group were aged 26-45 years, and 32 people (39.9%) in the control group aged 26-45 years.

2. A total of 40 people (100%) of the case group had a low level of education. Meanwhile, 38 people (47.5%) in the control group had a low level of education.

3. A total of 21 people (26.2%) of the case group had low knowledge. Meanwhile, 35 people (43.8%) in the control group had high knowledge.

4. A total of 38 people (47.5%) in the case group did not have PMO. Meanwhile, 26 people (32.5%) did not have PMO.

5. A total of 40 people (50%) group of cases in the working area of   the Ganeas Health Center. And as many as 40 people (50%) in the control group in the working area of   the Ganeas Health Center.

6. There is no relationship between the age of the patient and the cure for pulmonary tuberculosis in the Ganeas Health Center Work Area, with a p-value of 0.199.

7. There is no relationship between the patient's education level and the cure for pulmonary TB in the Ganeas Health Center Work Area, with a p-value of 0.531.

8. There is a relationship between patient knowledge and cure for pulmonary tuberculosis in the Ganeas Health Center Work Area, with a p-value of 0.000.

9. There is a relationship between the role of the supervisor taking medication with the cure for pulmonary tuberculosis in the Ganeas Health Center Work Area, with a p-value of 0.001.

5.   REFERENCES

Al Juwaini, (2014). *Pengaruh Faktor Internal Dan Eksternal Terhadap Kesembuhan Penderita Tuberkulosis Di Wilayah Kerja Puskesmas Pidie*. Universitas Sumatera Utara. Medan.

Ariani, S. (2019). *Hubungan Kepatuhan Minum Obat Dengan kualitas Hidup Pasien Tuberculosis Paru Di Wilayah Kerja Puskesmas Sumbersari kabupaten Jember.* Universitas Jember.

Arikunto. (2013). Prosedur Penelitian Suatu Pendekatan Praktek. Jakarta: Rineka Cipta

Babalik, A. *et al.* (2013) '*A Retrospective Case-Control Study, Factors Affecting Treatment Outcomes for Pulmonary Tuberculosis in Istanbul, Turkey*', pp. 204-210: 10.5152/balkanmedj.2013.005.

Departemen Kesehatan Republik Indinesia. (2002).

Elkomy, H. *et al.* (2013) '*Assessment of the efficacy of Directly observed Treatment with short course (DOTS) for pulmonary tuberculosis in Sharkia governorate*', Egyptian journal of Chest Diseases and Tuberculosis. The Egyptian Society of Chest Disease and Tuberculosis, 62(2), pp. 257-261. Doi;10.1016/j.ejcdt.2013.04.003.

Fachmi Idris, 2004, *Manajemen Public Private Mix Penanggulangan Tuberculosis Strategi DOTS Dokter Praktik Swast,* Jakarta: IDI.

Hanifah, A.D., & Nursiyam. (2021). *Faktor Yang Berhubungan Dengan Status Kesembuhan Pasien TB Paru Pada Usia Produktif (15-9 Tahun) Studi Kasus Di Puskesmas.* http:// journal.unnes.ac.id/sju/index.pkh/IJPHK. Diakses pada (05 April 2022).

Kementrian Kesehatan Republik Indonesia. (2011).

Kemkes.go.id. 25 Maret 2021. *Jadikan Penerus Bangsa Bebas TBC, Dimulai Dari Diri Sendiri Dan Keluarga.* Diakses pada 07 April 2022, dari https://www.kemkes.go.id.article/view/21032500001/jadikan-penerus-bangsa-bebas-tbc-dimulai-dari-diri-sendiri-dan-keluarga.html#text=

Keputusan Menteri Kesehatan Republik Indonesia Nomor HK. 01. 07/ MENKES/ 755/ 2019 Tentang Pedoman Nasional Pelayanan Kedokteran Tata Laksana Tuberkulosis.

Keputusan Menteri Kesehatan Republik Indonesia Nomor 364/ MENKES/ SK/ V/ 2009 Tentang Pedoman Penanggulangan Tuberkulosis (TB) Menteri Kesehatan Republik Indonesia.

Kinasih, P. (2013). *Faktor-Faktor Yang Berhubungan Dengan Kesembuhan Pasien Tuberculosis Paru Basil Tahan Asam (BTA) Positif Dewasa Di Kabupaten Pringsewu*. Skripsi. Universitas Lampung. Bandar Lampung.

Laporan Program P2Tb Puskesmas Ganeas 2021.

Muniroh, N., Aisah, S., & Mifbakhudin. (2013). *Faktor-Faktor Yang Berhubungan Dengan Kesembuhan Penyembuhan Tuberkulosis (TBC) Paru Di Wilayah Kerja Puskesmas Mangkang Semarang Barat.*

Murtantiningsih., & Wahyono. (2010). *Faktor-Faktor Yang Berhubungan Dengan Kesembuhan Pendidikan Tuberkulosis Paru,* 44-50. http://journal.unnes.ac.id/index.php/kesmas. Diakses pada (07 April 2022).

Nabila Nida Chusna,. & Lukman Fauzi. (2021). *Faktor-Faktor Yang Berhubungan Dengan Kesembuhan Tuberkulosis pada Penderita Tuberkulosis Di Kota Semarang.* Indonesian Journal of Health Community 2 (1) (2021).

Notoadmojo, S. (2010). *Metodologi Penelitian Kesehatan.* Jakarta: Rineka Cipta.

Notoadmojo, S. (2014). *Ilmu Perilaku Kesehatan*. Jakarta: Rineka Cipta.

Notoadmojo, S. (2015). *Pendidikan dan Perilaku Kesehatan*. Jakarta: Rineka Cipta.

Nugroho, ferry Andreas. *Hubungan Tingkat Pengetahuan dan Sikap dengan Perilaku Pencegahan dengan Penularan Tuberkulosis Paru pada Keluarga*. Vol 3. No.1 (2010). Jurnal Penelitian STIKes RS Babti Kediri.

Nurhayati. (2014). *Pengaruh Pengawas Menelan Obat Terhadap Kepatuhan Minum Obat Penderita TB Paru Di Puskesmas Glugur Darat Kota Medan.* Universitas Sumatera Utara. Medan.

Nurkholifah. 2009. *Analisis Faktor Yang Berhubungan Dengan Kesembuhan Penderita TB Paru Di BP4 Salatiga Tahun 2008*. Skripsi. Universitas Negeri Semarang. Semarang.

Profil Dinas Kesehatan Sumedang 2019

Profil Kesehatan Indonesia 2019

Profil UPTD Puskesmas Ganeas 2022

Puri. A. (2010). *Hubungan Kinerja Pengawas Minum Obat (PMO) Dengan Kesembuhan TB Paru Kasus Baru Strategi DOTS*. Universitas Sebelas Maret. Surakarta.

Pusat Data dan Informasi Kementrian Kesehatan Republik Indonesia, 2018

Putri Kamila, (2019*). Faktor Yang Mempengaruhi Kesembuhan Penderita Tb Paru Di Puskesmas Tegal Sari Medan Denai Tahun 2018.* Universitas Sumatera Utara*.* Medan.

Rina Puspita Sari., & Abdul Azis, (2019). *Faktor-Faktor yang Mempengaruhi kesembuhan Pasien Tuberkulosa Paru Di Puskesmas Mauk Kabupaten Tanggerang,* Jurnal Kesehatan, Vol 7 No. 2.

Roflin, E., Andriyani, I., & Pariyana (2021*). Populasi, Sampel, Variabel dalam Penelitian Kedokteran*. 2021. Jawa Tengah: PT. Nasya Expanding Management.

Sinaga Octavia, N. (2020). *Gambaran Karakteristik Pasien Tuberculosis Paru (TBC) Tahun 2020.* Sekolah Tinggi Ilmu Kesehatan Elisabeth. Medan.

Siti Putri Nurhidayah. (2019). *Gambaran Fakor-Faktor Yang Berpengaruh Terhadap Kesembuhan Pasien Tuberkulosis (TB) Paru Di UPTD Puskesmas Adiwerna Periode Januari 2015-Desember 2017.* Politeknik Harapan Bersama Kota Tegal. 2019.

Sugiyono. (2016). *Metode Penelitian Kuantitatif Kualitatif dan R&D*. 2016. Bandung: Alfabeta.

Sugiyono. (2019). *Metode Penelitian Kuantitatif Kualitatif dan R&D*. 2018. Bandung: Alfabeta.

Sumedangkab.go.id. 20 September 2020. 6*10 Warga Di Sumedang Terjangkit TBC*. Diakses pada 07 April 2022,   dari   https://sumedangkab.go.id/berita/detail/610-warga-di-sumedang-terjangkit-TBC=DINKES(TBC).

Supranto. (2016). *Statistik Teori dan Aplikasi*. 2016. Jakarta: Erlangga.

Yuda, A. (2018). *Hubungan Karakteristik, Pengetahuan, Sikap dan Tindakan Penderita TB Paru dengan Kepatuhan Minum Obat Di Puskesmas Tahah Kalikedinding*. Universitas Airlangga. Surabaya.

RELATIONSHIP BETWEEN LEVELS OF KNOWLEDGE AND ATTITUDE WITH DRUG COMPLIANCE AMONG PATIENT WITH HYPERTENSION

Dini Justian* [1], Tiara Dwi Rahma [2]
[1] Public Health Study Program, Faculty Of Health Sciences, Sebelas April University
[2] Students of Public Health Study Program, Faculty Of Health Sciences, Sebelas April University
Email : dinijustian@unsap.ac.id

Article Info	ABSTRACT
	Hypertension or high blood pressure itself can be described as the force of circulating blood against the walls of the body's arteries which are the main blood vessels. The amount of pressure that occurs depends on the resistance of the blood vessels and how intense the heart is to work. To determine the relationship between the level of knowledge and attitudes with medication adherence in patients with hypertension at the Paseh Health Center in 2022. This type of research used a quantitative study with a cross sectional design with a sample of 100 people using accidental sampling. This study shows that knowledge of hypertension sufferers is in the good category, namely 60.0%, the attitude of hypertension sufferers is in the good category, namely 49.0% and compliance with hypertension sufferers is in the obedient category, namely 50.0%. By using the Chi square statistical test where the degree of confidence used is 95% and = 0.05, the p value for knowledge is 0.000 and the P value for attitude is 0.008. So that the null hypothesis is rejected or in other words it is statistically proven. Conclusions and suggestions: the relationship between knowledge and attitudes with medication adherence. Suggestions in this study are expected health workers to continue to carry out outreach activities regarding adherence to taking medication in patients with hypertension.

Corresponding Author:

Dini Justian
Public Health Study Program,
Faculty of Health Science, Sebelas April University
Jalan Cipadung No 54 Sumedang
Email: dinijustian@unsap.ac.id

1. INTRODUCTION

Health is a very basic need for everyone. However, health is often the impact of various problems experienced by individuals and the surrounding environment. but in fact most of them have unhealthy lifestyles such as smoking habits, lack of exercise, lack of activity, obesity, stress and unhealthy eating patterns: consumption of foods high in salt, consumption of foods high in fat. From this unhealthy lifestyle, it will become a source of disease that is often underestimated by the millennial generation, one example is hypertension. Hypertension or high blood pressure is a disease characterized by an increase in blood pressure above normal, with a systolic value >140 mmHg and diastolic >90 mmHg (Ramaiah, 2018).

The percentage of people with hypertension is currently the highest in developing countries. Data from the Global Status Report on Noncommunicable Disease 2010 from WHO states that 40% of hypertension

sufferers are in developing countries, while in developed countries only 35% suffer from hypertension. WHO 2015 data shows that around 1.13 billion people in the world suffer from hypertension. The number of people with hypertension continues to increase every year, it is estimated that by 2025 there will be 1.5 billion people affected by hypertension. The World Health Organization (WHO) estimates that the number of people with hypertension will continue to increase along with the increasing population and cause global public health problems that contribute to the burden of heart disease, stroke, kidney failure, disability and premature death. Hypertension causes about 9.4 million deaths worldwide each year (WHO, 2018).

At Paseh Health Center the prevalence of hypertension sufferers in 2020 is 4453 30.2% in 2021 is 7047 40.7%. After conducting interviews with Hypertension field officers that there are hypertensive patients who have less knowledge about what Hypertension (High Blood Pressure) is, then what are the symptoms and causes. For those who have a low attitude, the support and motivation of the family is very important for their recovery. There are hypertension patients who do not comply with taking medication, they say they are lazy to take medication because the treatment time is so long.

2.   METHOD

This type of research is an analtytical description research with a cross sectional approach. This research design is used to examine an event at the same time or at one time. The dependent an independent variables in this research design were assessed simultaneously (Nursalam, 2017). This study involved 100 respondents. Data collected using questionnaire. Data analyzed by uni-variate and bi-variate analysis using chi-square statistical test.

3.   RESULT AND DISCUSSION

3.1. Result

Table 1. Respondent's Knowledge

Knowledge	Frequency (f)	Percentage (%)
Less	9	9
Enough	21	21
Good	60	60
Total	**100**	**100**

Based on table 1. about the level of knowledge of respondents at the Puskesmas in 2022, it shows that most of the patients have good knowledge, as many as 60 people (60%).

Table 2. Respondent's Motivation

Motivation	Frequency	Percentage (%)
Low	9	9
Currently	42	42
High	49	49
Total	**100**	**100**

Based on table 2. about the attitude of respondents at the Paseh Health Center in 2022, it shows that most of the people with hypertension have good attitudes, namely 49 people (49%).

Table 3. Hypertension of Respondent's Medication Compliance

Medication Adherence	Frequency (f)	Percentage (%)
Not obey	21	21
Less obedient	29	29
Obedient	50	50
Total	**100**	**100**

Based on table 3. regarding drug adherence in patients with hypertension at the Paseh Community Health Center in 2022, it shows that the majority of hypertension patients are drug compliant as many as 50 people (50%).

b. Bivariate Analysis
   1.   The relationship between knowledge and adherence to taking hypertension medication

Table 4. Relationship between knowledge and adherence to taking hypertension medication

Motivation	Medication Adherence						Total		P value
	Not obey		Less obedient		Obedient				
	f	%	f	%	f	%	f	%	
Not enough	5	8,3%	0	71,4%	0	0%	9	100%	
enough	7	22,6%	19	61,3%	17	16,1%	31	100%	**0,000**
Good	9	100%	10	16,7%	52	75,0%	60	100%	
Total	**21**	**21,0%**	**29**	**29,0%**	**50**	**50%**	**100**	**100%**	

Cross tabulation between the level of knowledge and adherence to medication in patients with hypertension at the Paseh Public Health Center in 2022 it can be concluded that from 60 people who have good knowledge, 45 people (75%) are obedient to taking medication, while 10 people (16.7%) are less compliant to take medication. medication, and 5 people (8.3%) did not comply.

By using the Chi square statistical test where the degree of confidence used is 95% and = 0.05, the p value is 0.000 where the p value is < 0.05. So that the null hypothesis is rejected or in other words statistically it means that there is a significant relationship between the level of knowledge and adherence to taking medication in patients with hypertension.

Table 5. Relationship between attitude and adherence to taking hypertension medication

Motivation	Medication Adherence						Total		P value
	Not obey		Less obedient		Obedient				
	f	%	f	%	f	%	f	%	
Low	2	22,2%	2	22,2%	5	55,6%	9	100%	
Currently	11	26,2%	11	26,2%	20	47,6%	42	100%	**0,008**
High	8	16,3%	16	32,7%	25	51,0%	49	100%	
Total	**21**	**21,0%**	**29**	**29,0%**	**50**	**50,0%**	**100**	**100**	

Cross tabulation between the attitude of adherence to taking medication for hypertension sufferers at the Paseh Health Center in 2022, it can be concluded that of the 49 people who have a good attitude of being obedient to taking hypertension medication, 25 people (51.0%), while 16 people (32.7%) are less compliant with taking medication. medication, and 8 people (16.3%) did not comply with taking hypertension medication.

By using the Chi square statistical test where the degree of confidence used is 95% and = 0.05, the p value is 0.008 where the p value is < 0.05. So that the null hypothesis is rejected or in other words statistically it means that there is a significant relationship between attitudes and adherence to taking hypertension medication.

3.2 Discussion

The results of this study indicate that most of the respondents at the Paseh Health Center have good knowledge, namely 45 respondents, it is known that 75.0% are obedient to taking medication. Knowledge of drugs which includes knowing the meaning of hypertension, classification of hypertension, signs and symptoms of hypertension, prevention of hypertension, how to treat hypertension.

Knowledge is the entire ability of individuals to think in a directed and effective manner, so that people who have high knowledge will easily absorb information, suggestions, and advice. The results of this study are also in line with the theory in Notoatmodjo (2010), which states that the tendency of someone who is highly knowledgeable will tend to have good behavior in terms of health in this case to comply with taking hypertension medication.

The results of this study are also in line with research conducted by Rahayu Khairiah (2018), from 64 respondents it is known that 82.8% of people with hypertension have good knowledge about hypertension. The results of this study are also supported by the research of Taufik Haldi (2021), out of 76 conscientious respondents, the highest level of knowledge is 45 respondents (59%).

Based on the researchers in this study, the knowledge of hypertension patients regarding medication adherence at the Paseh Health Center was good. Patients are able to answer and know what hypertension is,

signs and symptoms of hypertension, prevention of hypertension and treatment of hypertension. Good knowledge can affect compliance in taking medication. Generally someone who has good knowledge will tend to have a good mindset and upbringing so that the patient will be obedient in taking medication. This is also influenced by the education level of hypertensive patients, most of whom graduated from elementary school, so that it will affect the level of knowledge of a patient in terms of understanding and receiving information given regarding medication adherence. The results of this study indicate that 25 sufferers (51.0%) in the Paseh Health Center area have a good attitude towards medication adherence. This good attitude is due to good knowledge about medication adherence so that respondents are aware of the importance of being obedient to taking medication.

Attitude is a readiness to react to an object in a certain way, attitude is an evaluation response to the experience of cognition, reaction, affection, will and past behavior and humans are not born with certain views or feelings, but attitudes are formed throughout their development. The results of this study are in line with Azwar's theory (2011), which states that there is a tendency for someone who has a good attitude about medication adherence, the greater the awareness to comply with taking medication.

The results of this study are in line with research conducted by Isra Miharti (2020), which shows the results of the study with 36 respondents (67%) having a good attitude about medication adherence and 18 respondents 21.9%

who is lacking. The results of this study are also in line with the results of research conducted by Agustina Ratna et al (2021), which explains that 10 respondents (76.9%) have a good attitude and 3 respondents (23.1%) have a bad attitude.

Based on the researcher's assumption, it is very closely related to the use of hypertension medication, attitude is one of the factors in shaping behavior. The attitude of obedience is based on various factors. These factors can be influenced by internal and external factors, internal factors include personality, awareness, understanding, and self-control. Attitude is a behavior shown by someone to fulfill the orders of others. Attitude is behavior that is in accordance with orders to comply with regulations. Supportive attitudes towards the use of hypertension drugs as the level of patients carrying out treatment methods and behaviors suggested by doctors or other people.

The results showed that almost all of the patients in the Paseh Health Center area who had complied with taking hypertension medication, as many as 50 people (50.0%) were obedient to taking medication, measured according to filling out a questionnaire to determine the compliance of a patient with hypertension.

In general, compliance or obedience is defined as someone who gets treatment, carries out a diet, and carries out a lifestyle in accordance with the recommendations for providing health services (WHO, 2013). One of the requirements to improve the patient's quality of life and achieve therapeutic effectiveness is compliance, while one of the causes of treatment therapy failure is patient non-compliance (Gwaadary, 2013).

The results of this study are in accordance with research conducted by Candra Triwahyudi (2017), which states that of the 173 respondents, most of them are compliant with taking medication as many as 111 respondents (64.2%) and the rest are not compliant with taking medication as many as 62 respondents (35.8%). The results of this study are also in line with research conducted by Maryanti (2017) which obtained results from 27 respondents, 25 people (92.6%) were obedient in taking hypertension medication.

Based on the researcher's assumption in this study, out of 100 hypertensive patients aged 56-65 years at the Paseh Patuh Health Center took medication. This is because it is supported by good patient knowledge and attitudes regarding adherence to taking hypertension medication.

The results of this study indicate that most of the respondents at the Paseh Health Center have good knowledge, namely from 60 people who have good knowledge, 45 people (75%) are obedient to taking medication, while 10 people (16.7%) are less compliant with taking medication, and 5 people (8.3%) did not comply. By using the Chi square statistical test where the degree of confidence used is 95% and = 0.05, the p value is 0.000 where the p value is < 0.05. So that the null hypothesis is rejected or in other words statistically it means that there is a significant relationship between the level of knowledge and adherence to taking medication in patients with hypertension.

Knowledge is curiosity through sensory processes, especially in the eyes and ears of certain objects. Knowledge is an important domain in the formation of one's behavior (Donsu, 2017). The results of this study are in line with the theory, namely the respondent's knowledge of medication adherence.

The results of this study are in line with research by Kamal and Afriani (2014) which showed that there was a significant relationship between patient knowledge and adherence to taking hypertension medication (p value 0.000 <0.05). The results of this study are also in line with research conducted by Hardyani Presticasari (2017) which states that there is a relationship between knowledge about hypertension and adherence to taking antihypertensive drugs at the Gondokusuman 1 Public Health Center with a value (P value of 0.000).

Based on the assumption of the researcher, someone who has knowledge about hypertension, such as the consequences of the disease, if he does not comply with taking medication or does not control blood pressure regularly, it will lead to complications of the disease so they take the time to control blood pressure.

The results of this study indicate that from 49 people who have a good attitude, 25 people (51.0%) are obedient to taking hypertension medication, while 16 people (32.7%) are less compliant with taking medication, and 8 people (16.3%) are not. taking hypertension medication. By using the Chi square statistical test where the degree of confidence used is 95% and = 0.05, the p value is 0.008 where p value < 0.05. So that the null hypothesis is rejected or in other words statistically it means that there is a significant relationship between attitudes and adherence to taking hypertension medication. Based on Bloom's concept, attitude is the second most important factor after the environment that will affect a person's health status. Alport in Notoatmodjo (2010), explains that the attitude has three main components, one of which is the tendency to act, these three components together form a complete attitude (total attitude). In determining this attitude, knowledge, thinking, beliefs, and emotions play an important role. For example in this study, respondents who know adherence to taking hypertension medication will bring respondents to think and try to be obedient to taking medication. The results of this study are in line with the theory, namely the attitude of respondents about adherence to taking medication in patients with hypertension.

The results of the study are in line with research from the Polyclinic of the UKI Hospital with a total of 64 respondents, it is known that the majority of respondents are taking medication with a positive attitude as many as 48 people. The results of statistical tests showed that there was a significant (significant) relationship between respondents' attitudes and medication adherence in hypertension patients at the UKI General Hospital, East Jakarta, which was indicated by a probability value (p-value). The results of this study are also in line with research conducted by Fitrayeni (2021) which states that the results of the chi-square statistical test are known to have p value = 0.034 (<0.5) then H0 is rejected, which means that in this study it can be concluded that there is a relationship between attitudes towards compliance take medicine.

Based on the assumption of the researcher in this study that attitude is related to medication adherence in patients with hypertension at the Paseh Health Center, which means that the better the attitude of the patient, the tendency of the patient to comply with taking medication. Attitude is a readiness or willingness to act, and describes the likes or dislikes of an object. Attitudes will be followed by someone on the basis of liking or disliking something. If a sufferer supports this, then he will behave to carry out something he supports.

4. CONCLUSION

From the results of research conducted at the Paseh Health Center regarding the Relationship between Knowledge and Attitude Levels with Compliance with Taking Drugs in Hypertension Patients at Paseh Health Center in 2022, it can be concluded:

1. There is a relationship between knowledge and medication adherence in patients with hypertension with a P value of 0.000.

2. There is a relationship between attitude and adherence to medication in patients with hypertension with a P value of 0.008.

5.   REFERENCES

Sugiyono, (2019). Educational research methods: (qualitative, quantitative and R&D approaches). Bandung : Alphabeta

Arikunto, S (2013). The research procedure is a public approach. Jakarta : Rineka Cipta

Notoatmodjo, S (2010). Health Promotion and behavioral science. Jakarta : Rineka Cipta.

Wawan and Dewi M. (2019). Theory & Measurement of Knowledge, Attitudes And Human Behavior. Yogyakarta: Nuha Medika.

[Ministry of Health RI] Ministry of Health of the Republic of Indonesia. 2018. Basic Health Research; RISKESDAS. Jakarta: Research and Development of the Indonesian Ministry of Health.

[Ministry of Health] Ministry of Health. 2011. Rational Drug Use Module.

Jakarta: Ministry of Health.

Agoes, A et al, 2011. Management of Hypertension, Mirror of the World of Medicine, Volume 39 Number 4.

Ainurrafiq, Risnah, and Maria Ulfa Azhar. 2019. Non-Pharmacological Therapy in Blood Pressure Control in Hypertensive Patients. MPPKI. Volume 2 Number 3.

Anugrah, Y., Yardi Saibi, Ofa Suzanti Betha, Vidia Arlaini Anwar. 2020. Compliance with taking medication for hypertension patients at the South Tangerang Regional General Hospital (RSUD). SCIENTIA Journal of Pharmacy and Health. Volume 10 Number 2

RELATIONSHIP BETWEEN THE NUTRITIONAL STATUS OF PREGNANT WOMEN AND THE INCIDENCE OF ANEMIA

Evi Sonjati*[1,] Femy Azizah Rosidiah[2]
[1] Public Health Study Program , Faculty of Health Sciences, Sebelas April University
[2] Students of Public Health Study Program, Faculty of Health Sciences, Sebelas April University
Email : evisonjati@unsap.ac.id

Article Info	ABSTRACT
	Pregnant women are people who are in the process of being separated to continue offspring. In the body of a pregnant woman there is a fetus that is a body in the womb. monthly MCH book of the Cimalaka Sub-district Health Center, that in 2020 the coverage of anemia to pregnant women was recorded at 76,3%, while the coverage of anemia for pregnant women in 2021 increased to 85,6%. Knowing the relationship between the nutritional status of pregnant women and anemia in the Cimalaka Health Center area in 2022. The type of research to be used is a type of quantitative research with a cross-sectional design. The sampling technique in this study was by means of total sampling with a population of 58 respondents. Nutritional status is in the category of less than 55,2, while the status of anemia is 63,8%. There is a relationship between nutritional status and the incidence of anemia in pregnant women with a p-value of 0,049. From this study there is a significant relationship between the nutritional status of pregnant women and the incidence of anemia in the Cimalaka Health Center Working Area**.** Suggestions for this research public health centre need to hold activities about the risk of anemia in pregnant women, such as conducting examinations on pregnant women for each trimester, so that the incidence of anemia in pregnant women can be prevented.

Corresponding Author:

Evi Sonjati,
Public Health Study Program
Faculty of Health Sciences, Sebelas April University
Jalan Cipadung No 54
Email: evisonjati@unsap.ac.id

1. INTRODUCTION

Pregnant women are people who are in the process of healing to continue their offspring. Inside the body of a pregnant woman there is a fetus whose body is in the womb. Pregnancy is an important period of life. A pregnant woman must prepare herself as well as possible for the health of the mother, baby, and during the birth process. One of the factors that affect maternal health is the state of nutrition (Waryana, 2010). The body undergoes changes during pregnancy, the amount of blood in the body increases by about 20-30%, thus requiring an increased supply of iron to make hemoglobin. If the nutrients in the body are lacking, it will result in the body not having enough iron to make red blood cells and causing the mother to suffer from anemia. Anemia can cause disturbances in fetal development, fetal death in the womb, abortion, congenital defects, maternal and perinatal death (Waryana, 2017).

According to the World Health Organization, the prevalence of anemia in developing countries is 41.8% of women who suffer from iron deficiency anemia. The mean prevalence was higher in pregnant women 51% than in non-pregnant women 41%. In Indonesia, almost half of pregnant women experience anemia or lack of blood. According to the Indonesian Ministry of Health (2018) as many as 48.9% of pregnant women in Indonesia experience anemia. In West Java the average prevalence of anemia in pregnant

women is 53.8%. The Sumedang District Health Office in 2020 was 9.69%, in 2021 there was an increase of 11.2% from the total number of 35 Puskesmas in Sumedang Regency. At the Cimalaka Public Health Center, the prevalence of anemia in pregnant women was 15.70% in 2021 and there were 23 cases of pregnant women with anemia. A preliminary study conducted on May 10, 2022, obtained from monthly report data from the KIA Puskesmas Cimalaka District, that in 2020 the coverage of anemia for pregnant women was recorded at 76.3%, while the coverage of anemia for pregnant women in 2021 increased to 85.6. %. And based on the results of an interview with one of the midwives, it was true that at the Cimalaka Health Center there was an increase in the incidence of anemia in pregnant women.

2.   METHOD

The type of research that will be used is the type of quantitative research. Quantitative research is research by obtaining data in the form of numbers or qualitative data that is numbered. This study uses a cross sectional design (Sugyono, 2019). Cross sectional research only observed once and measurements were made on the subject variables at the time of the study (Notoatmodjo 2010).

3.   RESULTS AND DISCUSSION

3.1. Results
a.   Univariate Analysis

Table 1. Nutritional Status of Pregnant Woman

Nutrional Status	Frequency (f)	Percentage (%)
Good	26	44,8
Less	32	55,2
Total	**58**	**100**

It can be seen that the majority of pregnant women have poor nutritional status as many as 32 people (55.2%).

Table 2. Incidence of Anemia

Incidence of Anemia	Frequency (f)	Percentage (%)
Anemia	37	63,8
Not Anemia	21	36,2
Total	**58**	**100**

It can be seen that the majority of pregnant women are affected by anemia as many as 37 people (63.8%).

b.   Bivariate analysis

Table 3 Cross Tabulation of Nutritional Status

Nutritional status accoding to LILA	Anemia Status				Total		P *value*
	Anemia		Not Anemia				
	f	%	f	%	f	%	
Good	13	50,0	13	50,0	26	100	
Less	24	75,0	8	25	32	100	**0,049**
Total	**37**	**63,8**	**21**	**36,2**	**58**	**100**	

Based on Table 3 Cross Tabulation of Nutritional Status according to LILA for Pregnant Women in the Work Area of the Cimalaka Health Center in 2022, it can be concluded that from 32 pregnant women with poor nutritional status who are affected by anemia as many as 24 people (75.0%), while those who are not affected by anemia are 8 people. (25%).

By using the Chi square statistical test where the degree of confidence used is 95% and = 0.05, the p value is 0.049 where the p value is < 0.05. So the null hypothesis is rejected or in other words statistically it means that there is a relationship between nutritional status and the incidence of anemia in pregnant women.

3.2. Discussion
a. Univariate Analysis

The results of this study indicate that most pregnant women in the work area of the Cimalaka Health Center have poor nutritional status, namely 32 pregnant women (55.2%). Nutritional status according to BBIH is measured by adding the ideal body weight before pregnancy by the number of times between gestational age and minimum weight gain of 0.35 kilograms per week and good nutritional status according to LILA is measured by measuring the upper arm using the LILA tape with good nutritional status. expressed by LILA 23 cm and undernutrition status was expressed by LILA <23 cm (Maryam Siti, 2016). The results of this study are also in line with research conducted by Tri Susita (2016), which states that most of the nutritional status of pregnant women is lacking, namely 21 respondents (56.8%) and a small proportion of respondents have good nutritional status, namely 16 respondents (43.2). %). The results of this study are also supported by research by Lia Kusumawati (2009), most of the respondents have poor nutritional status as many as 27 people (70.3%) while the least respondents with good nutritional status are 11 people (29.7%).

Based on the assumption of the researcher in this study that the nutritional status of pregnant women at the Cimalaka Health Center is less. Pregnant women with less nutritional status, from the results of the study, it was found that many pregnant women had BBIH and less LILA. Mothers with LILA below 23.5 cm are at risk of CED because pregnant women do not understand the importance of nutrition during pregnancy. Maryam (2016) states that the factors that influence the nutritional status of pregnant women are the first habits and views of pregnant women on food intake. The two factors are high economic status, someone with high economic status is most likely to have the necessary nutrition will be fulfilled. And the third factor is food abstinence, cultural influences, cultural elements can create people's eating habits which sometimes conflict with nutrition science.

The results of this study indicate that the majority of pregnant women in the working area of the Cimalaka Health Center are affected by anemia, namely 37 pregnant women (63.8%). This can be seen from the hemoglobin levels that have been measured and seen from secondary data. Anemia is a medical condition where the number of red blood cells or hemoglobin is less than normal (Atikah, 2011). This study is also in line with the theory of Prawirohardjo (2002), which states that low iron content in food, bleeding and reabsorption disorders are the most common cases of anemia in pregnancy.

This study is in line with research conducted by Apriyanti (2009) in the Work Area of the Mataram Baru Health Center, East Lampung Regency, from 223 pregnant women who became respondents there were 171 pregnant women (76.6%) who experienced anemia. The results of this study are also in line with research conducted by Hartati (2008), which stated that of the 74 respondents who were affected by anemia, 24 pregnant women (58.33%). Based on the assumption of the researcher that of the 58 pregnant women in the Cimalaka Health Center Work Area, 37 pregnant women (63.8%) were affected by anemia. This is due to the poor nutritional status of pregnant women. Anemia in pregnant women is not only caused by lack of nutritional status, but can also be influenced by the age of pregnant women during pregnancy.

The relationship between nutritional status and the incidence of anemia in pregnant women in the Work Area of the Cimalaka Health Center. Based on the analysis of the chi-square statistical test with a 95% confidence level, it was found that the p value was 0.049 <0.05, it can be concluded that there is a relationship between nutritional status and the incidence of anemia. anemia in pregnant women.

Anemia is a condition in which there are reduced red blood cells (erythrocytes) in the blood circulation or the mass of hemoglobin so that it is unable to fulfill its function as an oxygen carrier throughout the tissues (Tarwoto, 2007). This study is in line with research conducted by Anis Ervina (2015), which states that the results of statistical tests using chi-square obtained a p value of 0.000 which means that there is a statistically significant relationship between nutritional status and anemia in pregnant women. This study is also in line with research conducted by Nurvianti Soleha (2018), which states that the statistical test results obtained a p value of 0.002, which means that there is a relationship between nutritional status and anemia in pregnant women.

Based on the researcher's assumptions regarding the relationship between nutritional status and the incidence of anemia in pregnant women, namely there is a significant relationship between nutritional status and pregnant women, this is because the majority of pregnant women have poor nutritional status caused by one of them, namely the habits and views of pregnant women on food intake, lifestyle and lack of examination during pregnancy, causing the risk of developing anemia. Mothers who have poor nutritional status will be more at risk of developing anemia compared to mothers who have good nutritional status.

4. CONCLUSION

From the results of research conducted in the Work Area of the Cimalaka Health Center regarding the Relationship between Nutritional Status and the Incidence of Anemia in the Work Area of the Cimalaka Health Center, it can be concluded that:

1. The nutritional status of pregnant women in the Work Area of the Cimalaka Health Center is in the less category as many as 35 people (60.3%).
2. Anemia in pregnant women in the Work Area of the Cimalaka Health Center of 58 pregnant women affected by anemia as many as 37 people (63.8%).
3. There is a significant relationship between the nutritional status of pregnant women and the incidence of anemia in the Work Area of the Cimalaka Health Center.

5. REFERENCES

Aisyah, R. D. And Fitriyani (2016). *Fakor Internal dan Eksterna Yang Berhubungan Dengan Kejadian Anemia Di Wilayah Kabupaten Pekalongan.*

Atikah, P. (2011) *Anemia dan Anemia Kehamilan.* Yogyakarta: Nuha Medika.

Fransiska, R. (2015) *Hubungan Status Gizi Ibu Hamil Dengan Kejadian Anemia Di Poli KIA Puskesmas Kebong Kabupaten Sintang Kalimantan Barat.* Airlangga

Merriana, A. And Bambang, W. (2017) *Pengantar Gizi Masyarakat.* Yogyakarta: Kencana Prenada.

Arfiani, L. N. (2015) Hubungan Dukungan Suami Dengan Kepatuhan Ibu Hamil Dalam Mengkonsumsi Tablet Besi Di Puskesmas Piungan Bantul, *Unisa Repositori.*

Wibisono, H. And Dewi, A. B. F. K. (2009*). Solusi Sehat Seputar Kehamilan.* Jakarta: Argomedi

Nurzia, N. And Seftia, R. (2016) Hubungan Status Ekonomi, Pendidikan, Dan Dukungan Keluarga Terhadap Pencegahan anemia Pada Ibu Hamil Di Wilayah Kerja Puskesmas Tanjung Pinang Kota Jambi Tahun 2016, 5(2), PP. 167-172.

Putri, A. A. (2017) Ilmu Gizi. Yogyakarta: Nuha Medika.

Waryana (2010) Gizi Reproduksi. Yogyakarta: Pustaka Rihama

Widuri H, Pamungkas DM. Komponen Gizi Dan Bahan Makanan Untuk Kesehatan. Yogyakarta Gosyen Publ. 2013

Aritonang EY, Sanusi SR. Hubungan Pengetahuan Gizi Dan Kurang energi Kronis (KEK) Dengan Anemia Pada Ibu Hamil Di Puskesmas Muara 1 Kota Lhokseumawe Tahun 2018.

Diana S. *Hubungan Antara Tingkat Pengetahuan dan Status Gizi Ibu Hamil Dengan Kejadian Anemia* di Puskesmas Gatak Kabupaten Sukoharjo. Skripsi. 2015. Program Studi Kesehatan Masyarakat, Fakultas Ilmu Kesehatan, Universitas Muhammadiyah Surakarta.

WHO. *The Global Prevalence of* Anemia in 2011. 2015. *Geneva: World Health Organization.*

Badan Penelitian dan Pengembangan Kesehatan. Laporan Nasional RISKESDA 2018. 2018. Jakarta: Kemenkes RI.

Kementrian Kesehatan republik Indonesia. Profil Kesehatan Indonesia Tahun 2017. 2018. Jakarta: Kemenkes RI.

Sulistyoningsih H. Gizi untuk kesehatan ibu dan anak. 2012. Yogyakarta: Penerbit Graha Ilmu.

RELATIONSHIP BETWEEN LEVEL OF KNOWLEDGE AND MOTIVATION WITH ANTI-TUBERCULOSIS DRUGS ADHERENCE IN TUBERCULOSIS PATIENTS

Gita Arisara*[1], Danindra Nanda Nur Az-Zahra[2]
[1]Public Health Study Program, Faculty Of Health Sciences, Sebelas April University
[2]Students of Public Health Study Program , Faculty Of Health Sciences, Sebelas April University
Email: gitaarisara@gmail.com

Article Info	ABSTRACT
	Tuberculosis Disease (TB) is still a problem that must be overcome by the community, programs and guidelines for countermeasures have also been carried out by the government to handle this case in accordance with national standards. Is to determine the relationship between knowledge and motivation with adherence to taking anti-tuberculosis drugs in tuberculosis (TB) patients at the Paseh Health Center in 2022.The type of research used is a type of quantitative research with a cross-sectional design. The sampling technique in this study was by accidental sampling with a population of 123 people. This study show that, the knowledge of tuberculosis sufferers is in the good category, namely 71 (57,7%), the motivation of tuberculosis sufferers is in the high category, namely 86 (69,9%), and drug gathering adherence of tuberculosis sufferers is in the obedient category, namely 69 (56,1%), using the Chi-square statistic test where the degree of confidence used is 95% and $\alpha = 0,5$ obtained a p value for knowledge of 0,000 and a p value for motivation 0,009. So that the null hypothesis was rejected or in other words statistically it turned out to be proven to be a relationship of knowledge and motivation with adherence to taking anti-tuberculosis drugs. This researcher there is a relationship of knowledge and motivation with adherence to taking tuberculosis medications. Suggestions in this study are expected by health workers to continue to carry out counseling activities regarding medication adherence in tuberculosis sufferers .

Corresponding Author:

Gita Arisara
Public Health Study Program
Faculty Of Health Sciences, Sebelas April University
Jalan Cipadung No.54
Email: gitaarisara@gmail.com

1. INTRODUCTION

Tuberculosis (TB) is still a problem that must be overcome by the community, prevention programs an dguidelines have also been carried out by the government to handle this case with national standards. This is because there is still a high rate of non-adherence to taking medication in TB patients. Pulmonary TB is in infectious disease that can attack someone with low immunity. This disease is caused by Mycobacterium Tuberculosis which is rod-shaped and is acid-resistant or Acid-Resistant Basil (BTA), and can be transmitted through the air when a person with pulmonary TB speaks or coughs up saliva. (Sunaryati, 2019).

Referring to the *World Health Organization* (WHO) Global TB Report 2020, 10 million people in the world suffer from tuberculosis (TB) and 1.2 million people die every year. Indonesia is one of the countries with the highest burden of TB (tuberculosis) in the world with an estimated number of people falling ill due to TB (tuberculosis) reaching 845,000 with a death rate of 98,000 or equivalent to 11 deaths/hour (WHO Global TB Report, 2020). Of these, only 67% were found and treated, so there were 283,000 TB (tuberculosis) patients who had not been treated and were at risk of increasing the number of cases and transmission of tuberculosis (TB).

Based on a preliminary study conducted at the Paseh Health Center, Paseh District, it was found in 2020 (53,42%) and in 2021 there were findings of positive AFB cases (acid-fast-bacteria) of 14 cases with a total of 62 (68,49%). After conducting interviews with the TB (tuberculosis) field that there are patients with TB (tuberculosis) who have poor knowledge of what TB disease (tuberculosis) is, then what are the symptoms an causes. Who have low motivation, there fore family support and motivation are very important for their recovery. There are tuberculosis (TB) patients who do not comply with taking medication, they say they are lazy to take medication because the treatment time is so long.

2.   METHOD

This type of research is an analtytical description research with a cross sectional approach. This research design is used to examine an event at the same time or at one time. The dependent an independent variables in this research design were assessed simultaneously (Nursalam, 2017).

3.   RESULTS AND DISCUSSION

3.1. Results
a.   **Univariate Analysis**

Table 1 Distribution Frequency of Respondent's Knowledge

Knowledge	Frequency (f)	Percentage (%)
Less	9	7,3
Enough	43	35,0
Good	71	57,7
Total	**123**	**100**

The knowledge of respondents at the Paseh Health Center in 2022 showed that most tuberculosis (TB) patients had good knowledge, namely 71 people (57,7%).

Table 2 Distribution Frequency of Respondent's Knowledge

Motivation	Frequency (f)	Percentage (%)
Low	7	5,7
Currently	30	24,4
High	86	69,9
Total	**123**	**100**

The motivation of respondents at the Paseh Health Center in 2022 that most tuberculosis (TB) patients have high motivation as many as 86 people (69,9%).

Table 3 Distribution Frequency of TB Respondent's Medication Adherence

Medication Adherence	Frequency (f)	Percentage (%)
Not obey	17	13,8
Less obedient	37	30,1
Obedient	69	56,1
Total	**123**	**100**

Adherence to taking anti-tuberculosis (TB) drugs at the Paseh Health center in 2022 showed that the majority of tuberculosis (TB) patients were compliant, as many as 69 people (56,1%).

b.   **Bivariate Analysis**
1.   Relationship between knowledge and adherence to taking anti-tuberculosis drugs

Table 4 Relationship between knowledge and adherence to taking anti-tuberculosis drugs

Knowledge	Medication Adherence						Total		P value
	Not obey		Less obedient		Obedient				
	f	%	f	%	f	%	f	%	
Not enough	4	44,4%	0	0%	5	55,6%	9	100%	
Enough	6	14,0%	31	72,1%	6	14,0%	43	100%	**0,000**
Good	7	9,9%	6	8,5%	58	81,7%	71	100%	
Total	**17**	**13,8%**	**37**	**30,1%**	**69**	**56,1%**	**123**	**100%**	

Cross tabulation between the patient's knowledge level and adherence to taking anti-tuberculosis (TB) drugs at the Paseh Health Center in 2022 it can be concluded that out of 71 people have good knowledge, 58 people (81.7%) are obedient to taking anti-tuberculosis (TB) drugs, 6 people (8.1%) did not comply with taking tuberculosis drugs, and 7 people (9.9%) did not comply with taking anti-tuberculosis drugs.

By using the Chi square statistical test where the degree of confidence used is 95% and = 0.05, the p value is 0.000 where the p value is < 0.05. So the null hypothesis is rejected or in other words statistically it means that there is a significant relationship between the patient's level of knowledge and adherence to taking anti-tuberculosis (TB) drugs.

2. The relationship between motivation and adherence to taking anti-tuberculosis drugs

Table 5 Relationship between motivation and adherence to taking anti-tuberculosis drugs

Motivation	Medication Adherence						Total		P value
	Not obey		Less obedient		Obedient				
	f	%	f	%	f	%	f	%	
Low	2	28,6%	5	71,4%	0	0%	7	100%	
Currently	7	23,3%	6	20,0%	17	56,7%	30	100%	**0,009**
High	8	9,3%	26	30,2%	52	60,5%	86	100%	
Total	**17**	**13,8%**	**37**	**30,1%**	**69**	**56,1%**	**123**	**100%**	

Cross tabulation between patient motivation and adherence to taking anti-tuberculosis (TB) drugs at the Paseh Health Center in 2022 can be concluded that of 86 people who have high motivation, 52 people (60,5%) adhere to anti-tuberculosis drugs, 26 people (30,2%) were less compliant in taking anti-tuberculosis drugs, and 8 people (9,3%) did not comply with taking anti-tuberculosis drugs. P-value <0,05. So that the null hypothesis is rejected or in other words statistically it means that there is a significant relationship between motivation and adherence to taking anti-tuberculosis drugs.

3.2. Discussion

The results of this study indicate that most of the respondents at the Paseh Health Center in 2022 had good knowledge, namely 71 people (57.7%) regarding adherence to taking anti-tuberculosis drugs. Knowledge is the entire ability of individuals to think in a directed and effective manner, so that people who have high knowledge will easily absorb information, suggestions, and advice. The results of this study are also in line with the theory in Notoatmodjo (2010). The theory that supports is the theory of Nursalam, (2013) which says that education is able to support health, improve the quality of life and influence a person's attitude and behavior. The results of this study are also in line with research conducted by Alima Frida et al (2021), from 16 respondents more than most (53.3%) had good knowledge about adherence to taking anti-tuberculosis (TB) drugs. The results of this study are also supported by the research of Anna Silvia Prihantana (2016), from 40 respondents more than 92.42 had good knowledge about adherence to taking anti-tuberculosis (TB) drugs.

Based on the assumption of the researcher in this study that the patient's knowledge of adherence to taking anti-tuberculosis (TB) drugs at the Paseh Health Center was good. The patient is able to answer and know what tuberculosis is, know the signs and symptoms, know what the transmission is like and the tuberculosis treatment schedule. Good knowledge can affect adherence to taking anti-tuberculosis drugs. Generally, someone who has good knowledge will tend to have a good mindset and upbringing so that a patient will obediently take anti-tuberculosis (TB) drugs. This is also influenced by the work of patients at the Paseh Health Center, most of which work so that it will affect the level of knowledge of a patient in terms of understanding and receiving information given regarding adherence to taking anti-tuberculosis (TB) drugs.

The results of this study showed that 86 people (69.9%) at the Paseh Health Center had high motivation towards adherence to taking anti-tuberculosis drugs. This high motivation is due to good knowledge about adherence to taking anti-tuberculosis drugs so that respondents are aware of the importance of adherence to taking anti-tuberculosis drugs.

According to Setiawati (2012), motivation is a series of efforts to provide certain conditions so that individuals are willing to take action in achieving goals. This research is also in line with research conducted

by Indiyah (2018) which shows the results of research with 18 respondents with high motivation (58.1%), respondents with low motivation 8 people (25.8%), and respondents having low motivation. moderate motivation is 5 people (16,1%). The results of this study are also in line with the results of research conducted by K Everentia Ngasu (2019), which explains that 23 respondents (67.6) have high motivation and 11 respondents (32.4) have moderate motivation.

Based on the researcher's assumption in this study that the motivation of the patient towards adherence to taking anti-tuberculosis (TB) drugs. The motivation of a good patient can also be influenced by good knowledge because most patients at the Paseh Health Center have good knowledge. The better the motivation of a patient, then he will act and respond to something he wants so that a patient is obedient in taking anti-tuberculosis drugs. The results showed that almost all patients at the Paseh Public Health Center were obedient to taking anti-tuberculosis drugs, as many as 69 people (56.1%) were obedient to taking anti-tuberculosis drugs according to a predetermined schedule and scheduled by the tuberculosis (TB) officer. According to WHO (2013) states that medication adherence is the patient's conformity with the recommendations of service providers related to the dosage, regularity of taking medication and the recommended duration of treatment.

The results of this study are in accordance with research conducted by Endang Yuswatiningsih (2018), stating that the results of the study with a total of 31 respondents were found to be obedient to taking anti-tuberculosis drugs as many as 27 people (87.1%). And supported by research by Aris Widiyanto (2016), stated the results of the study with a total of 25 respondents (65.8%) being obedient to taking anti-tuberculosis drugs.

Based on the assumption of the researcher in this study that of the 123 respondents who adhered to taking medication, 69 people (56.1%) at the Paseh Health Center. It is possible that the respondent already understands and understands about tuberculosis so that the respondent takes medicine according to the type, dose, method of taking medicine, time to take medicine and the number of days of taking medicine as recommended by the doctor. Tuberculosis treatment adherence is very important, because if the treatment is not carried out regularly and not in accordance with the specified time, it will cause tuberculosis germs to develop immunity to anti-tuberculosis drugs. Generally, patients take medication between 6 months to ensure recovery, but in some cases it can take longer.

Cross tabulation between the patient's knowledge level and adherence to taking anti-tuberculosis (TB) drugs at the Paseh Health Center in 2022 it can be concluded that out of 71 people have good knowledge, 58 people (81.7%) are obedient to taking anti-tuberculosis (TB) drugs, 31 people (72.1%) did not comply with taking anti-tuberculosis (TB) drugs, and 4 people (44.4%) did not comply with taking anti-tuberculosis (TB) drugs. By using the Chi square statistical test where the degree of confidence used is 95% and = 0.05, the p value is 0.000 where the p value is < 0.05. So the null hypothesis is rejected or in other words statistically it means that there is a significant relationship between the patient's level of knowledge and adherence to taking anti-tuberculosis (TB) drugs. Knowledge is curiosity through sensory processes, especially in the eyes and ears of certain objects. Knowledge is an important domain in the formation of one's behavior (Donsu, 2017).

This is in accordance with the results of research by Fitria and Mutia (2016), that there is a relationship between knowledge and adherence to taking anti-tuberculosis drugs. This is also supported by the results of research by Purwanto (2010), which states that there is a significant relationship between knowledge and adherence to taking anti-tuberculosis drugs in tuberculosis (TB) patients.

Based on the assumption of the researcher in this study that there is a relationship between the patient's knowledge and adherence to taking anti-tuberculosis drugs, which means that the better the patient's level of knowledge about adherence to taking anti-tuberculosis drugs, there is a tendency for patients to adhere to taking anti-tuberculosis drugs. Patient knowledge is one of the factors that affect patient compliance, because patient non-compliance will increase the risk of developing health problems or worsening the illness. Especially in pulmonary tuberculosis, patient compliance in treatment is a determining factor for the success of healing the disease. This is because pulmonary tuberculosis takes a long time to heal.

Cross tabulation between patient motivation and adherence to taking anti-tuberculosis (TB) drugs at the Paseh Health Center in 2022 it can be concluded that of 86 people who have high motivation, 52 people (60.5%) adhere to anti-tuberculosis drugs, 6 people (20.0%)) were less compliant with taking anti-tuberculosis drugs, and 2 people (28.6%) were not compliant with taking anti-tuberculosis drugs. By using

the Chi square statistical test where the degree of confidence used is 95% and = 0.05, the p value is 0.009 where the p value is < 0.05. So that the null hypothesis is rejected or in other words statistically it means that there is a significant relationship between motivation and adherence to taking anti-tuberculosis drugs.

Motivation is a human psychological characteristic that contributes to a person's level of commitment. This includes the factors that cause, channel, and maintain human behavior towards a certain determination (Stonner & Freeman, 1995) in (Suarli & Bahtiar, 2013).

This is also supported by the results of research conducted by Nurwadji and Fajri (2013), that the motivation of tuberculosis patients in achieving healing has a relationship with adherence to taking anti-tuberculosis drugs. The results of this study are also in line with research conducted by Prasetya (2012), which states that there is a significant relationship between motivation and adherence to treatment and also taking anti-tuberculosis drugs. Based on the assumption of the researcher in this study that motivation is related to adherence to taking anti-tuberculosis drugs at the Paseh Health Center, which means that the better the motivation of the patient, the tendency of the patient to comply with taking anti-tuberculosis drugs. Respondents with a high school education background are able to receive information well.

4.   CONCLUSION

From the results of research conducted at the Paseh Health Center regarding the Relationship between Knowledge and Motivation with Compiance with taking Anti Tuberculosis (TB) Drugs at the Paseh Health Center in 2022, conclusions can be drawn :

1. Patient's knowledge about adherence to taking anti-tuberculosis drugs is the good category as many as 71 people (57,7%).
2. Patient's motivation towards adherence to taking anti-tuberculosis drugs is in the high category as many as 86 peope (69,9%).
3.   There is a significant relationship between knowledge and adherence to taking anti-tuberculosis drugs at the Paseh Health Center, with a p value of 0,000.
4. There is a significant relationship between motivation and adherence to taking anti-tuberculosis drugs at the Paseh Health Center, with a p value of 0,009.

5.   REFERENCES

Arikunto, S (2013). *Prosedur penelitian suatu pendekatan publik*. Jakarta : Rineka Cipta

Sugiyono, (2019). *Metode penelitian Pendidikan : (Pendidikan Kualitatif, kuantitatif dan R&D).* Bandung : Alfabeta

Strategi Nasional Penanggulangan Tuberkulosis di Indonesia (2020). https:tbindonesia.or.id.NS…PDF

W Anthony. (2020). Hubungan PMO (Pengawas Menelan Obat) Dengan Kepatuhan Minum Obat Pada Pasien Tuberkulosis. http://repository.stikes-bhm.ac.id....PDF

I Indiyah. (2018). Hubungan Motivasi Dengan Kepatuhan Minum Obat Pada Pasien Tuberkulosis. http://repo.stikesicme.jbg.ac.id…PDF

Trir Widianingrum. (2018). Hubungan Pengetahuan dan Motivasi Pasien Tuberkulosis. http://repository.unair.ac.id…PDF

Yumni Farhah. (2016). Gambaran Motivasi Klien TB paru Dalam Minum Obat Anti Tuberkulosis Di Poliklinik Paru Rumah Sakit Dustira Kota Cimahi. http://repository.upi.edu

Dinas Kesehatan Ungkap Warga Terkait Tuberkulois. https://dinkes.sumedangkab.go.id.

Angga Musyaffa. (2020). Latar Belakang Tentang Tuberkulosis Paru (TB). https://repository.umtas.ac.id.

Kementrian Kesehatan Jawa Barat (2012). *Profil Kesehatan Provinsi Jawa Barat.* https://pusdatin.kemenkes.go.id….PDF

L Muna (2014). Motivasi Dan Dukungan Sosial Keluarga Mempengaruhi Kepatuhan Berobat Pada Pasien Tuberkulosis. https://journal2.unusa.ac.id. PDF

AS Prihantana (2016). Hubungan Pengetahuan Dengan Tingkat Kepatuhan Pengobatan Pada Pasien Tuberkulosis. https://journal.unimma.ac.id...PDF

H Syaifiyatul (2020). Kepatuhan Minum Obat Anti Tuberkulosis Pada Pasien Tuberkulosis. https://www.jornal.uim.ac.id...PDF

F Febriyanti (2021). Tingkat Pengetahuan Pasien Tuberkulosis Tentang Penyakit dan Pengobatan Tuberkulosis. http://etheses.uin-malang.ac.id...PDF

WHO. (2021) https://www.who-WHO/World Health Organization

GP utami (2013). Hubungan Pengetahuan Tentang Tuberkulosis Dengan Motivasi Pasien Dalam Menjalani TerapiPengobatan. http://repository.unjaya.ac.id...PDF

RELATIONSHIP BETWEEN KNOWLEDGE AND BELIEF WITH ACCEPTOR PARTICIPATION IN THE SELECTION OF SHORT-TERM CONTRACEPTION METHODS

Hana Fitria Andayani*[1], Gestina Puji Lestari Supriadi[2]
[1] Public Health Study Program, Faculty of Health Sciences, Sebelas April University
[2] Student of Public Health Study Program, Faculty of Health Sciences, Sebelas April University
Email : hanafitriandayani@unsap.ac.id

Article Info	ABSTRACT
	Family planning (KB) is an effort to regulate the birth of children, the ideal distance and age to give birth, regulate pregnancy, through promotion, protection and assistance in accordance with reproductive rights to create a quality family. There are two methods of family planning, namely long-term contraceptive methods and long-term contraceptive methods. short. analytic survey using quantitative research methods with a descriptive cross sectional research design. The cross sectional research is intended that the data collection and analysis between the independent variables or independent variables, namely knowledge and beliefs, with the dependent variable or the dependent variable, namely the participation of acceptors in the selection of long-term contraceptive methods in Ranjeng Village, Cisitu District, Sumedang Regency. Bi-variate analysis used the Chi-Square Test to determine the relationship between the variables studied. This study shows that there is a significant relationship between knowledge and short-term contraception with a p-value of 0,009 and no significant relationship between trust and short-term contraception with a p-value of 0,092. From the results of the study, it can be concluded that the knowledge variable has a relationship while the trust variable has no relationship with the selection of short- term contraceptive methods. It is hoped that female students can become input and evaluation materials related to the relationship of knowledge and trust with theselection of short-term contraceptives.

Corresponding Author:

Hana Fitria Andayani
Public Health Study Program
Faculty of Health Sciences, Sebelas April University
Jalan Cipadung No 54 Kotakaler
Email : hanafitriandayani@unsap.ac.id

1. INTRODUCTION

According to Law Number 52 of 2009 concerning Population Development and Family Development. Familyplanning (KB) is an effort to regulate the birth of a child, the distance and ideal age of childbirth, regulate pregnancy, through promotion, protection and assistance in accordance with reproductive rights to realize a quality family. The national family planning movement has so far succeeded in encouraging an increase in community participation in building small families that are increasingly independent. This success must be considered and even continue to be improved because these achievements have not been evenly distributed, while this birth control activity is still lacking in the use of long-term contraceptive methods (MKJP) (BKKBN,2012).

MKJP is a contraceptive that is known to be effective because it can provide protection from the risk of pregnancy for a period of 10 years depending on the type. Contraceptives included in the MKJP are types of implants, intra-uterine device, male operation methods, and female surgery methods (BKKBN, 2011). Based on the 2012 SDKI, the proportion of MKJP usage in Indonesia from 1994 to 2012 continued

to decline. Data on the use of contraceptives in Indonesia, injections 66,49%. Pill 15.55%. implant 8,85%. UD/AKDR/spiral 1,41% and 1,19% female sterilization/tubectomy/MOW as much as 0,52%. (0,44%), others (0,26%), male sterilization/vasectomy/MOP (0,15%), and intravag/female condom/diagram (0,05%). The details, 229,640 pills, 35,144 condoms, 167,999 injections, 11,555 intrauterine devices (IUD) or intrauterine devices in utero (AKDR), 21,454 implants aka birth control, 31 male surgical methods (MOP) aka vasectomy, and 481 female surgical methods such as tubectomy. The achievement of family planning (KB) participants according to the Population in December 2019, in Sumedang Regency 108,834 participants of inject able birth control, pills around 26,629, Implant 12,087, IUD 16.24, MOW 7,360, and MOP 25. For data on active family planning participants in the working area of the cisitu sub-district health center 2021 Cisitu Village 04.40%, Situ Village blooms 0,24%, Pajagaan Village 22,55%, Cigintung Village 8,20%, Sunda Village blooms 01,11%, Lingga Jaya Village 01.38%, Ranjeng Village 2,30%, Cilopang Village 02.54%, Cinangsi Village 15,38%. for data on contraception participants in ranjeng village KB Injectable 343, KB Pill 124, Implant 77, IUD 77, MOW 45, MOP 0, Condom 17.

2.   METHOD

This research is an analytical survey research using quantitative research methods with a cross-sectional descriptive research design. Cross-sectional research is intended that data collection and analysis between independent variables, namely knowledge and beliefs, and bound variables or dependent variables, namely the participation in the selection of long-term contraceptive methods. In Ranjeng Village, Cisitu District, Sumedang Regency at the same time, descriptive research is a study conducted to describe or describe a phenomenon that occurs in the community.

3.   RESULTS AND DISCUSSION

3.1. Results

a. Univariate Analysis

1.   Knowledge

Table 1 Distribution Frequency of Knowledge Level

Category	Frequency (f)	Percentage (%)
True	3	4,2%
Wrong	68	95,8%
Total	71	100%

Based on table 1. it can be seen that the percentage of respondents mostly with the wrong category was 68 (95,8%) respondents.

2.   Belief

Table 2 Distribution Frequency of Belief

Category	Frequency (f)	Percentage (%)
Believe	1	1,4
Nervous	47	66,2
Not sure	23	32,4
Total	71	100%

Based on table 2, it can be seen that the percentage of respondents is mostly with the undecided category, which is 47 (66,2%) respondents.

3.   Short-term Contraceptive

Table 3 Distribution Frequency of Short-term Contraceptives

Category	Frequency (f)	Percentage (%)
Injection	7	9,9%
Pills	41	57,7%
Condom	23	32,4%
Total	71	100%

Based on table 3, it can be seen that the percentage of respondents mostly with the birthcontrol pill category is 41 (57,7%) respondents.

b.   Bi-variate Analysis

1.   The relationship between knowledge and the selection of short-term contraceptives inRanjeng Village in 2022

Table 3. Cross-tabulation of knowledge and use of short-term contraceptives in Ranjeng Village

Variables	Category	Bound Variables			Total	P- Value
		Short-term contraceptives				
		Inject able	Pills	Condom		
		f	f	f		
Knowledge	True	0	0	4	3	0,008
	Wrong	3	32	11	68	
	Total	3	32	13	71	

The table above explains the cross-relationship between knowledge and the use of short-term contraceptives in Ranjeng Village in 2022, where 3 people answered correctly, 68 people answered incorrectly, with a total of 71 respondents. From statistical calculations, it was found that a p value of 0,008 with a value of $\alpha = 0,05$ means that p value has a relationship between knowledge and the use of short-term contraceptives in Ranjeng Village in 2022.

2.   The relationship between beliefs and the selection of short-term contraceptives in Ranjeng Village in 2022

Table 4. Cross-tabulation of belief use of short-term contraceptives in Ranjeng Village

Variables	Category	Bound Variables			Total	P-Value
		Short-term contraceptives				
		Inject-able	Pills	Condom		
		f	f	f		
Knowledge	Believe	1	0	0	1	0,076

	Nervous	3	24	14	41	
	Not sure	3	15	6	24	
	Total	3	32	13	71	

The table above explains the relationship between beliefs and the use of short-term contraceptives in Ranjeng Village in 2022, where 1 person is sure, 41 people are hesitant and 24 people are not sure with a total of 71 respondents. From statistical calculations, it was found that p-value of 0,076 with a value of α = 0,05 means that p value has no relationship between belief and the selection of short-term contraceptives in Ranjeng Village in 2022

3.2. Discussion

In this section, the author presents the results of research based on the results of data processing and questionnaires from 71 respondents in a statistically uni-variate and bi-variate statistic regarding the relationship of knowledge and confidence in the selection of short-term contraceptives in Ranjeng Village in 2022. It can be seen that the percentage of respondents is mostly in the wrong category as many as 68 (95,8%) of respondents. Knowledge is fact, truth or information obtained through experience or learning called posteriori, or through introspection called priori. Knowledge is seen when a person uses his mind to recognize certain objects or events that have never been seen or felt before. The results showed that out of 71, where 3 people answered correctly, 68 people answered incorrectly, with a total of 71 respondents. The results of the chi square statistical test show that a p value of 0,008 with a value of α = 0,05 means that the p value has a relationship between knowledge and the use of short-term contraceptives in Ranjeng Village in 2022. Based on table 2 it can be seen that the percentage of respondents is mostly in the doubtful category, namely as many as 47 respondents, 23 un-sure, and 1 sure.

Confidence is an attitude shown by humans when they feel they know enough and conclude that they have reached the truth. Because belief is an attitude, then one's belief is not always true or belief alone is not a guarantee of truth. The Family Planning Program is an integrated (integral) part of the national development program and aims to create economic, spiritual and sociocultural welfare for the Indonesian population so that a good balance can be achieved with national production capabilities. Because family planning is a government program designed to balance needs and population, this family planning program is expected to accept the Small, Happy and Prosperous Family Norms (NKKBS) which are oriented toward balanced growth. Planning for the number of families with restrictions that can be done is by using contraceptive methods, both MKJP and Non MKJP. From the statistical test results, it was obtained that the value of p = 0.006 (p <0.05) so it can be concluded that there is a relationship between knowledge and the selection of short-term contraception in Ranjeng Village in 2022.

Knowledge can also be defined as combining data and information. Data are raw facts, while information is data that is viewed from a certain point of view. According to Turban there is a relationship between data, information and knowledge (Efraim Turban, Aronson, & Liang, 2004). Data is a collection of facts, measurements, and statistics. Information is data that is organized and processed accurately. Knowledge is information that is contextually relevant and workable. This is in line with the opinion of Dewi and Notobroto (2014) who stated that acceptor knowledge about contraception is very closely related to the choice of contraceptives, because having good knowledge of certain contraceptive methods will change the perspective of acceptors in determining the most appropriate and effective contraception to use. Thus making acceptors feel more comfortable with certain contraception. A similar study was conducted by Nurlisis and Winda (2016) at the Rumbai Community Health Center. It can be concluded that there is a significant relationship between the knowledge and support of the respondent's husband and the use of short-term contraceptive methods with a p value of 0,006. Thus the researcher assumes that knowledge is related to the selection of short-term contraceptive methods (non-MKJP). Knowledge is a key that must be possessed by an acceptor in determining the choice of contraception, knowledge can also remove the mother's anxiety about the stigma of side effects caused by contraceptive methods, both MKJP and Non MKJP.

From the results of the statistical test, it was obtained that the value of p = 0,076 (p> 0,05) it can be concluded that there is no significant relationship between belief and the choice of short-term contraception in Ranjeng Village in 2022. Confidence and belief (English: belief) is an attitude shown by humans when they feel they know enough and conclude that they have reached the truth. Because belief is an attitude, one's belief is not always true or belief alone is not a guarantee of truth. Example: At one time, humans once believed that the Earth was the center of the solar system, later they realized that this belief was wrong. Corresponds to It is similar with the research of Basra and friends (2016) on "Factors related to the selection of short-term

contraceptive methods". namely beliefs and cultural values (p=0,653), age values (p=0,471) and educational values (p=0,656).

4.   CONCLUSION

1.   An overview of knowledge with actor participation in choosing short-term contraceptive methods in Ranjeng Village in 2022. It appears that the percentage of respondents is mostly in the wrong category as many as 68 (95,8%) of respondents.
2.   An illustration of the confidence with actor participation in choosing short-term contraceptive methods in Ranjeng Village in 2022. It can be seen that the percentage of respondents is mostly in the doubtful category, namely 47 (66,2%) respondents.
3.   Description of the selection of short-term contraceptive methods (Non MKJP). It can be seen that the percentage of respondents is mostly in the category of birth control pills, namely 41 (57,7%) respondents.
4.   Cross-relationship between knowledge and the use of short-term contraception in Ranjeng Village in 2022, where 3 people answered correctly, 68 people answered wrong, with a total of 71 respondents.
5.   From statistical calculations, it was found that a p value of 0,008 with a value of α = 0,05 means that thep value has a relationship between knowledge and the use of short-term contraceptives in Ranjeng Villagein 2022.

5.   REFERENCES

Alifah, I. D. (2015) Metode Kontrasepsi Jangka Panjang di Wilayah Kerja Puskesmas KecamatanKalideres Tahun 2015, Skripsi FKM UIN SyarifHidayatullah.

Anggraini, M. Y. (2012) 'Pelayanan Keluarga Berencana', in. Yogyakarta:ROHIMA PRESS, p.334.

Badan Pengembangan dan Pembinaan Bahasa, K. P. dan K. R. I. (2020)

Kamus Besar Bahasa Indonesia (KBBI). Availableat:https://kbbi.kemdikbud.go.id/Cari/Index.

Badan Pusat statistik Provinsi Jawa Barat (2017). Available at : https://jabar.bps.go.id/statictable/2019/05/31/602/jumlah-pasangan-usia-   subur-dan-peserta-kb-aktif-menurut-kabupaten-kota-di-provinsi-jawa-barat- 2017.htmL.

BKKBN (2017) Metode Kontrasepsi Jangka Panjang. Available at: https://keluargaindonesia.id/infografik/metode-kontrasepsi-jangkapanjang- mkjp-lebih-aman-dan_pasti.

Ridyah, S. I. (2020) Faktor-faktor Yang Mempengaruhi Tingkat Pengetahuan,2020. Available at:http://siln-

Septalia, R. and Puspitasari, N. (2016) 'Faktor yang Memengaruhi Pemilihan Metode

Kontrasepsi', Jurnal Biometrika dan Kependudukan, 5(2), p. 91. doi: 10.20473/jbk.v5i2.2016.91-98.

Setiasih, S., Widjanarko, B. and Istiarti, T. (2016) 'Analisis Faktor-faktor yang Mempengaruhi Pemilihan Metode Kontrasepsi Jangka Panjang (MKIP) pada Wanita Pasangan Usia Subur (PUS) di Kabupaten Kendal Tahun 2013', JurnalPromosi Kesehatan Indonesia, 11(2), p. 32. doi: 10.14710/jpki.11.2.32-46.

Soekidjo Notoatmodjo (2007) Promosi Kesehatan dan Ilmu Perilaku.:Jakarta: Rineka Cipta.

Soekidjo Notoatmodjo (2012) Metode Penelitian Kesehatan. Jakarta: Rineka Cipta. Yeyen, Salham, M. and Ansar, M. (2019) 'Persepsi Akseptor Dalam Memilih Metode

Kontrasepsi Jangka Panjang (Mkjp) Di Desa Tampaure Kecamatan Bambaira Kabupaten Pasangkayu', pp. 572–577.

FACTORS RELATED TO THE INCIDENCE OF STUNTING IN TODDLERS

Witri Dewi Mentari [*1], Siti Popon Nurhalimah [2]
[1]Public Health Study Program, Faculty of Health Sciences, Sebelas April University
[2] Student of Public Health Study Program, Faculty of Health Sciences, Sebelas April University
Email : witridewimentari@unsap.ac.id

Article Info	ABSTRACT
	Stunting is a linear growth failure in children due to poor nutrition for a long time. The purpose of this study was to determine the factors of maternal knowledge, nutritional status and family history of stunting related to the incidence of stunting in toddlers in the working area of the Conggeang Health Center, Conggeang District, Sumedang Regency. This research was conducted in the working area of the Conggeang Health Center using a quantitative method with a case control approach in determining the sample using a simple random sampling technique. Data analysis using Chi-Square to prove whether there is a relationship between knowledge, nutritional status and a history of stunting in the family with the incidence of stunting and Odds Ratio to determine the size of the risk of stunting. The number of research samples was 50 respondents in the case group and 50 respondents in the control group. The results of the analysis showed that there was a relationship between knowledge p-value 0,003 OR 1,833 (95% CI 1,221-2,752), nutritional status 0,000, family history of stunting 0,01 OR 2,471 (95% CI 1,906-3,202) and the incidence of stunting. The conclusion is that there is a relationship between knowledge, nutritional status and family history of stunting in the incidence of stunting in toddlers in the working area of the Conggeang Health Center, Conggeang District, Sumedang Regency in 2022. Suggestions in this study are expected to be used as a source of information about the factors that cause stunting in mothers of toddlers, and always pay attention to a balanced diet and regularly take children to the integrated services post.

Corresponding Author:

Witri Dewi Mentari
Public Health Study Program
Faculty of Health Science, Sebelas April University
Jalan Cipadung No. 54 Kota Kaler
Email: witridewimentari@unsap.ac.id

1. INTRODUCTION

Stunting is a state of height index according to age below minus two standard deviations based on WHO standards. According to the World Health Organization (WHO), Stunting is a developmental disorder in children caused by poor nutrition, recurrent infections, and inadequate psycho-social simulation. If a child has a height of more than -2 standard deviations of the median child growth that has been set by WHO, it is said to be stunted. In Indonesia based on research conducted by Indriani, Dewi, Murti & Qadrijati (2018), that factors related to stunting include maternal height, maternal height, toddler height at birth, the number of family members and the influence of integrated services post.

The high prevalence of stunting is caused by various risk factors including a habitual history of pregnant women, birth weight, infectious diseases, parental education, exclusive breastfeeding and early complementary food. In addition, abstinence from eating certain foods is also included in it. This can be an

obstacle in improving food (parenting) and nutrition for family members with nutritious food (Ministry of Health RI, 2018). Data on the prevalence of stunting toddlers collected by the World Health Organization (WHO), Indonesia is included in the third country with the highest prevalence in the Southeast Asian region. The average prevalence of stunting toddlers in Indonesia in 2005-2017 was 36.4%. According to the latest publication from WHO in 2018, globally in 2016 as many as 22.9% or around 154.8 million children under five in the world suffered from stunting.

In West Java Province in 2018, toddlers who experienced an increase in the stunting rate were very short by 11.70% and the short ones by 19.40% and data in 2017 toddlers who experienced very short stunting by 8.40% and short ones by 20.80% (West, 2018).

In Sumedang Region, it was recorded that in 2021 the stunting rate increased by 3.28% from 2019, which was around 8.7%, there were 9,044 or 12.5% of children spread across 26 sub-districts throughout the district and Sumedang experienced stunting. (Sumedang, 2020). Based on data from the Conggeang Health Center, the results of the Toddler Weighing Month (BPB) in toddlers 0-59 months in February 2022 the number of toddlers according to nutritional status according to BB / U starts from very less body weight there is 1.4%, body weight is less there is 5.4%, the risk of weight is more 8.1%. According to the nutritional status of the first very short TB amounted to 2.4%, short 3.2%. And according to the nutritional status of TB / BB, malnutrition amounts to 2.7%. The number of toddlers aged 0-59 months in the Conggeang Health Center Work area is 1775 toddlers and of them 98 toddlers who are stunted. This is the result of interviews of puskesmas nutrition officers, on average stunting occurs due to factors of knowledge, nutritional status and history of stunting (Puskesmas Conggeang, 2022).

2. METHOD

This research uses a quantitative approach with the research design design used is case control. The design of case control research is that the study begins with the identification of patients with certain effects or diseases (referred to as cases) and groups without effects (called controls), then retrospectively traced risk factors that can explain why cases are affected, while control is not.

3. RESULTS AND DISCUSSION
3.1. Results
 a. **Uni-variate analysis**

Table 1
Frequency Distribution of Respondents Based on Stunting Knowledge in Toddlers in the Conggeang Health Center Area in 2022

Category	Frequency (f)	Percentage (%)
Good	45	45%
Enough	55	55%
Less	0	0
Total	**100**	**100%**

Table 1 shows that out of a total of 100 respondents as many as 55 people (55%) have a sufficient level of knowledge.

Table 2
Frequency Distribution of Respondents Based on Nutritional Status in Toddlers in the Conggeang Health Center Area in 2022

Category	Frequency(f)	Percentage (%)
More Nutrition	31	31%
Good Nutrition	24	24%
Malnutrition	37	37%

Poor Nutrition	8	8%
Total	**100**	**100%**

Table 2 shows that out of a total of 100 toddlers studied, 37 people (37%) had malnutrition categories.

Table 3
Frequency Distribution of Respondents Based on Family History of Stunting in Toddlers in the Conggeang Health Center Area in 2022

Category	Frequency	Percentage (%)
Yes	16	16%
Not	84	84%
Total	**100**	**100%**

Table 3 shows that out of a total of 100 toddlers as many as 84 toddlers (84%) categories have no history of stunting in the family.

Table 4
Frequency Distribution of Respondents Based on Stunting Incidence in Toddlers in the Conggeang Health Center Work Area in 2022

Category	Frequency	Percentage (%)
Stunting	50	50%
Usual	50	50%
Total	**100**	**100%**

Table 4 shows that out of a total of 100 toddlers as many as 50 toddlers (50%) are stunted and as many as 50 toddlers (50%) are not stunted.

b. **Bivariate analysis**

Table 5
Cross Tabulation
The Relationship between Knowledge and stunting events in toddlers in the working area of the Conggeang Health Center, Conggeang District, Sumedang Regency

Knowledge	Stunting Events				Sum		PR CI 95%	P-Value
	Stunting		No Stunting					
	f	%	f	%	f	%		
Good	15	30	30	60	45	45	1.833 (1.221-2.752)	0,003
Enough	35	70	20	40	55	55		
Less	0	0	0	0	0	0		
Total	**50**	**100**	**50**	**100**	**100**	**100**		

Based on table 5 about the relationship of knowledge with the incidence of stunting in toddlers in the keja area of the Conggeang Health Center, Conggeang District, Sumedang Regency, out of a total of 45 respondents who have good knowledge, 15 people (30%) of them have stunting events, while 30 people (60%) are not stunted. Meanwhile, of the total 55 respondents who have sufficient knowledge, 35 people (70%) of them have stunting events, while 20 people (40%) are not stunted.

Table 6
Cross Tabulation
Relationship of Nutritional Status with Stunting Incidence in Toddlers in the Working Area of the Conggeang Health Center, Conggeang District, Sumedang Regency

Nutritional Status	Stunting Events				Sum		PR CI 95%	P-Value
	Stunting		No Stunting					
	f	%	f	%	f	%		
More Nutrition	0	0	12	24	12	12		
Good Nutrition	0	0	38	76	38	38		
Malnutrition	10	20	0	0	10	10		0,000
Poor Nutrition	40	80	0	0	40	40		
Total	**50**	**100**	**50**	**100**	**100**	**100**		

Based on table 6 on the relationship between nutritional status and the incidence of stunting in toddlers in the keja area of the Conggeang Health Center, Conggeang District, Sumedang Regency, out of a total of 50 toddlers who are not stunted, there are more than 12 nutritional categories (24%) and 38 good nutrition categories (76%). Meanwhile, of the total 50 stunted toddlers, 10 people (20%) and 40 people (80%) are malnourished.

Table 7
Cross Tabulation
The Relationship Between The History Of Stunting In The Family With The Judiciary Stunting in Toddlers in the Work Area of the Conggeang Health Center, Conggeang District, Sumedang Regency

Family History of Stunting	Stunting Events				Sum		PR CI 95%	P-Value
	Stunting		No Stunting					
	f	%	f	%	f	%		
Yes	16	32	0	0	16	16	2.471 (1.906-3.202)	0,01
Not	34	68	50	100	84	84		
Total	**50**	**100**	**50**	**100**	**100**	**100**		

Based on table 7 on the relationship between the history of stunting in the family with the incidence of stunting in toddlers in the keja area of the Conggeang Health Center, Conggeang District, Sumedang Regency, out of a total of 16 toddlers who have a history of stunting in the family, 16 people (32%) of them have stunting events, while 0 people (0%) are not stunted. Meanwhile, of the total 84 toddlers who have no history of stunting in the family, 34 people (68%) of them have stunting events, while 50 people (100%) are not stunted.

3.2. Discussion

Based on research, it can be known that those who have sufficient knowledge are as many as 55 people (55%). Based on the theory knowledge is the result of knowing and this happens after a person has made a sense of a certain object. The sensing that has gone through the post-human senses , that is, the senses of sight, hearing, smell, taste and groping. Most of human knowledge is obtained through the eyes and ears (Notoatmodjo, 2012). This is in line with the title of the study The relationship between family characteristics and stunting in new children of Semarang bedrock conducted by Ayuningtiasdi (2018) SDN Gedanganak 01, SDN Gedanganak 02, SDN Gedanganak 03 Kecamatan ungaran Timur and SDN Candirejo 01, and SDN Candirejo 02 Kecamatan Ungaran Barat, Semarang Regency to mothers of grade 1 students showed that from 63 samples obtained as many as 28 mothers (44.4%) had sufficient knowledge levels, 26 mothers (41.3%) had a good level of knowledge, and of which 9 mothers (14.3%) had a lack of knowledge.

Researchers assume that mothers' knowledge about stunting in the work area of the Conggeang Health Center is more likely to be influenced by several factors, namely age and education. This proves that the majority of respondents who have stunting toddlers or normal toddlers simply understand the information from stunting counseling carried out by the Health department, even some respondents there are those who follow and understand the counseling but it is not applied in daily life.

Based on research, it is known that the nutritional status of the nutritional category is good as many as 58 people (58%). According to the theory of Arisman (2010) said that nutritional status is the state of the body which is a result of food consumption and the use of nutrients with 3 classifications, namely nutritional status is good less, bad.

This research is the same as the previous research conducted by Oktavianis in 2016 at the Lubuk Kilangan Health Center, the results were obtained by toddlers who experienced malnutrition status as many as 45 toddlers (51.1%) and those who had good nutritional status as many as 43 toddlers (48.9%) in the work area of the Lubuk Kilangan Health Center, Padang City.

According to the assumptions of researchers, nutritional status is the state of the body which is a result of the consumption of food and nutrients consumed by a person, good nutritional status occurs due to the fulfillment of the child's nutritional needs indicated by the child's weight and height corresponding to age with rapid growth. Meeting the needs of adequate energy intake is very important for the fulfillment of nutrition in children.

c. An Overview of The History of Stunting in the Family in Toddlers in the Work Area of the Conggeang Health Center, Conggeang District, Sumedang Regency

Based on research, it is known that there are 84 people who do not have a history of stunting in the family (84%). Based on the theory of maternal height is a genetic factor of the mother related to the physical growth of the child. The mother's posture also reflects the mother's height and the initial environment which will contribute to the child's height as an independent factor. However, there are still many environmental factors that affect children's height (Oktarina & Sudiarti, 2014).

In line with previous research conducted in urban areas, it proves that parental height is a factor that has an influence on the occurrence of stunting (Nasikhah & Margawati, 2012).

So researchers assume that toddlers who have a history of stunting in the family are influenced by the height of parents who pass on to their children. However, what I have researched is that as many as 16 toddlers (16%) have a history of stunting in the family which affects the incidence of stunting. Because of gene factors, mother's height, father's height, and environmental factors. However, there are still many environmental factors that affect a child's height.

Based on research, it is known that the incidence of stunting in toddlers in the stunting category is 50 people (50%), and the non-stunting category is 50 people (50%). Stunting describes a chronic state of malnutrition during the period of growth and development since childhood. This situation was presented with a z-score value of height by age (TB/U) less than -2 standard deviation (Riskesdas) based on growth standards according to WHO (Headey et al, 2018).

This research is in line with Dwijayanti's research (2020) where Stunting is the result of malnutrition which has a long-term impact on growth and subsequent development, such as mental decline, susceptibility to non-communicable diseases, and the risk of giving birth to babies with low birth weight.

Researchers assume that the incidence of stunting in the work area of the Conggeang Health Center occurs because most of the knowledge of mothers in this region is sufficient, the average nutritional status is good nutrition, and the average family history of stunting has no history of stunting in the family.

The results of statistical tests using the chi-square method with a significant level of 5% (0.05) found that the P-Value value of 0.003 < 0.05 so that H_o was rejected, it was proven that there was a significant relationship between maternal knowledge and the incidence of stunting in toddlers in the work area of the Conggeang Health Center, Conggeang District, Sumedang Regency.

According to Notoatmodjo (2018) knowledge is the result of knowing and occurs after people have sensed certain objects. Sensing occurs through the five human senses, namely smell, sight, hearing and groping. Knowledge itself is usually obtained from other information such as radio, TV, internet, newspapers, magazines, counseling etc. The level of education affects a person in receiving information.

This is in line with the research of Marta Mai Resti (2019) said that there is no relationship between maternal knowledge and the incidence of stunting in toddlers, it can be seen from the statistical test results obtained value p = 0.775 (p>0.05) means that there is no meaningful relationship between maternal knowledge and the incidence of stunting in toddlers.

Researchers assume that the higher the mother's knowledge about stunting, the higher it can also prevent stunting in toddlers. Parents' knowledge of nutrition helps to improve nutritional status in children to achieve growth maturity. Therefore, not all children can grow and develop according to their age, there are children who experience obstacles and abnormalities.

The results of statistical tests using the chi-square method with a significant level of 5% (0.05) found that the P-Value value of $0.01 < 0.05$ so that H_o was rejected, it was proven that there was a significant relationship between nutritional status and stunting in toddlers in the work area of the Conggeang Health Center, Conggeang District, Sumedang Regency.

Based on the fact that undernourished toddlers in the golden age are irreversible (cannot recover) and malnutrition in toddlers can affect the child's brain development. Therefore, toddlers with poor nutritional status have weak immune system so that they are susceptible to disease (Sholikah, Rustiana & Yuniastuti, 2017).

The results of this study are in line with Setiawan et al., (2018) who stated that there is a relationship between nutritional status and the incidence of stunting. The incidence of stunting is 13.37 times greater in toddlers who have poor nutritional status compared to toddlers who have good nutritional status.

Researchers assume that there is a relationship between nutritional status and stunting events in the work area of the Conggeang Health Center in 2022. For this reason, it is expected for mothers of toddlers to pay attention to consumption patterns, especially during pregnancy and breastfeeding and give the baby only breast milk for 6 months to prevent malnutrition so that the risk of stunting can be avoided.

The results of statistical tests using the chi-square method with a significant level of 5% (0.05) found that the P-Value value of $0.01 < 0.05$ so that H_o was rejected, it was proven that there was a significant relationship between the history of stunting in the family and the incidence of stunting in toddlers in the work area of the Conggeang Health Center, Conggeang District, Sumedang Regency.

According to Wiyogowati (2012) genetic factors are one or both parents who are short due to pathological conditions (such as growth hormone deficiency) have genes in chromosomes that carry short traits so as to increase the chances of children inheriting these genes and growing into stunting.

This is in line with Kisye's research (2017), with the title of the relationship of genetic factors with stunting in North Tombatu District, Southeast Minahasa Regency, stating that the results of data processing using chi-square obtained a p value = 0.000 (α = <0.05).

Researchers assume that the average parent whose height is short will have an impact on the growth of a short toddler's height as well and have a greater chance of stunting. The mother's height will affect the height of a child. If the mother has a height that is not ideal, then the child will potentially have a height that is not ideal. Height is a genetic expression or inherited factor in children, and is related to the occurrence of stunting.

4. CONCLUSION

Based on the results of research that has been carried out regarding factors related to the incidence of stunting in toddlers in the work area of the Conggeang Health Center, Conggeang District, Sumedang Regency in 2022, the results were obtained:

1. Out of a total of 100 toddler mothers, 55 mothers of toddlers (55%) of them have sufficient knowledge.
2. Of the total 100 toddlers, 40 toddlers (58%) of them have poor nutritional status.
3. Out of a total of 100 toddlers, 84 toddlers (40%) of them have no history of stunting in the family.
4. Of the total 100 toddlers, 50 toddlers (50%) of them are stunted and 50 toddlers (50%) of them are not stunted.
5. There is a relationship between maternal knowledge and the incidence of stunting P-Value 0,003.
6. There is a relationship between nutritional status and the incidence of stunting P-Value 0,000.
7. There is a relationship between the history of stunting in the family and the incidence of stunting P-Value 0,01.

REFERENCES

Ayuningtias M. *Relationship of family characteristics with the incidence of stunting in new children of bedtime.* Semarang : Stikes Ngudi Waluyo: 2016.

West, Java Health Office. (2018). *West Java Health Profile in 2017*. West Java Health Office.

Ministry of Health of the Republic of Indonesia. 2018. *Riskesdas Report 2018*. Jakarta: Ministry of Health of the Republic of Indonesia.

Ministry of Health. 2018. *The Situation of Short Toddlers (Stunting) in Indonesia*. Jakarta: Ministry of Health of the Republic of Indonesia. (Accessed 20 May 2022).

Kisye. *The Relationship Between Maternal Education and Stunting In Sarolangun Regency in 2015*. 2017.

Marta Mai Resti MM. *FACTORS RELATED TO THE INCIDENCE OF STUNTING IN TODDLERS 24-59 MONTHS IN JORONG TALAOK, HILIRANGUMANTI DISTRICT, SOLOK REGENCY IN 2019* (Doctoral dissertation, Stikes Perintis Padang.

Nasikhah, R., & Margawati, A. (2012). *Risk Factors for Stunting Events in Toddlers Aged 24-36 Months in East Semarang District*.

Notoatmodjo, S. 2018. *Health Behavioral Sciences*. Rineka Cipta: Jakarta

Oktarina, Z & Sudiarti, T. (2014). *Risk Factors for Stunting in Toddlers (24-59 Months) In Sumatra*. *Journal of Nutrition And Food*, 8(3),177.

Setiawan, Eko, Rizanda Machmud and Masrul Masrul. 2018. *Factors Related to the Incidence of Stunting in Children Aged 24-59 Months in the work area of the Andalas Health Center, East Padang District, Padang City in 2018*. Andalas Health Journal 7(2):275.

THE RELATIONSHIP OF KNOWLEDGE, ATTITUDE, AND FAMILY SUPPORT TO COMPLIANCE WITH ROUTINE CONTROL OF DIABETES MELLITUS PATIENTS

Hilman Taufik Wijayasoemantri[1], Febi Angelina[2], Ely Walimah[3], Dini Justian*[4]
[1,3,4] Public Health Study Program, Faculty of Health Sciences, Sebelas April University
[2] Students of Public Health Study Program, Faculty of Health Sciences, Sebelas April University
Email : dinijustian@unsap.ac.id

Article Info	ABSTRACT
	Diabetes is a disease caused by the body's inability to produce the hormone insulin, which is characterized by blood sugar levels. Diabetes mellitus can cause death. The results of data analysis showed that there was a significant relationship between routine control compliance, attitudes, and routine control adherence and family support to routine control compliance. This study aims to determine the relationship of knowledge between attitudes and family support with adherence to routine control of people with diabetes mellitus. The method used was cross sectional, the population of this study was 575 people with diabetes mellitus with a sample of 86, the sampling technique used was simple random sampling. With data analysis using chi-square. There is a relationship between knowledge ($p = 0,000$), attitudes ($p = 0,000$) and family support ($p = 0,000$) towards routine control compliance in the Paseh Health Center work area in 2022. For the Paseh Health Center it is expected to increase knowledge, family support and patient attitudes. diabetes mellitus to be more obedient to carry out routine control by providing education such as counseling for people with diabetes mellitus and families of people with diabetes mellitus about the importance of routine control.

Corresponding Author:

Febi Angelina,
Public Health Science Study Program,
Faculty of Health Science Sebelas April University
Jl. Cipadung No.54, Kota Kaler, Sumedang Utara, Sumedang
Email: dinijustian@unsap.ac.id

1. INTRODUCTION

Diabetes Mellitus (DM) is a chronic disease caused by the body's inability to produce the hormone insulin or due to ineffective use of insulin production. This is characterized by high levels of sugar in the blood (Kemenkes, 2021). Complications of diabetes are also divided into acute complications and long-term complications. There are three acute complications of diabetes that are important and are associated with short- term disturbances in the balance of blood glucose levels. The three complications are: hypoglycemia, diabetic ketoacidosis and the 12 HHNK syndrome (also called hyperosmolar nonketotic hyperglycemic city or HONK [non-ketotic hyperosmolar]). While the long-term complications of diabetes can attack all organ systems in the body. Categories of chronic complications of diabetes that are commonly used are: macrovascular disease, microvascular disease and neuropathy (Brunner & Suddarth, 2015).DM treatment management must be carried out for life so that patients often experience boredom and non-compliance in the management of DM treatment often occurs. People with diabetes will have a high level of quality of life if they can manage their diabetes well (IDF, 2017).

2.   METHOD

This study uses a quantitative research method using a cross sectional research design which was conducted in July 2022 in the working area of the Paseh Public Health Center. The independent variables in this study were knowledge, attitudes and family support. The dependent variable in this study was the adherence to routine control of diabetes mellitus patients in the Paseh Public Health Center working area as many as 575 people. In this study, sampling using the Slovin formula, taking into account time and effort with an error tolerance levelof 10%, the number of samples obtained from the total population was 86 people. The sampling technique used was simple random sampling that met the inclusion criteria. The instrument in this research is in the form of a questionnaire. Test the validity and reliability in this study using a standardized questionnaire. Data were collectedthrough interviews using a questionnaire. Furthermore, the collected data was analyzed by editing, coding, cleaning and tabulation in processing the data. Overall data were analyzed using SPSS program including univariate analysis and bivariate analysis. The statistical analysis used the chi-square test.

3.   RESULTS AND DISCUSSION

3.1.   Result

1)   **Uni-variate** Analysis

The frequency distribution based on knowledge can be seen in the table below:

Table 1 Table of Knowledge Frequency Distribution of Diabetes Mellitus Patients

Knowledge	Frequency (f)	Percentage (%)
Good- Knowledge	14	16,3
Enough- Knowledge	48	55,8
Lack- of Knowledge	24	27,9
Total	86	100 %

Knowledge of people with diabetes mellitus in Paseh sub-district in 2022 showed that most of themhad sufficient knowledge as many as 48 respondents (55.8%). The frequency distribution based on the attitude of people with diabetes mellitus can be seen in the tablebelow:

Table 2 Table of Frequency Distribution of Attitudes of People with Diabetes Mellitus

Parenting Patterns	Frequency (f)	Percentage (%)
Good-attitude	13	16,3
Enough- attitude	45	52,3
Lack-of attitude	28	27,9
Total	86	100%

The attitude of people with diabetes mellitus in Paseh sub-district in 2022 showed that most of the respondents' attitudes were sufficient, namely 45 respondents (52.3%). The frequency distribution of respondents based on family support can be seen in the table below:

Table 3 Table of Frequency Distribution of Family Support with Diabetes Mellitus

Parenting Patterns	Frequency(f)	Percentage (%)
Good-family support	24	27,9
Enough- family support	41	47,7
Lack-of family support	21	24,4
Total	86	100%

Regarding the family support of respondents in Paseh sub-district in 2022, it shows that most of their family support is sufficient, namely 41 respondents (47,7%). The frequency distribution of respondents based on compliance with routine control of peoplewith diabetes mellitus can be seen in the table below:

Table 4 Table of Frequency Distribution of Compliance with Routine Control of Diabetes

Routine Control Compliance	Frequency	Percent (%)
Obey	52	60,5
Not obey	34	39,5
Total	86	100%

Compliance with routine control of respondents in Paseh sub-district in 2022 showed that most ofthem complied, as many as 52 respondents (60,5%).

The relationship between knowledge and adherence to routine control of people with diabetes mellitus The results of knowledge analysis with routine control compliance can be seen in the table below:

Table 5 Relationship Of Knowledge With Routine Control Compliance

| Parenting Patterns | Routine Control Compliance | | | | | | P Value* |
| | Not obey | | obey | | Total | | |
	f	%	f	%	f	%	
Not enought	20	83,3%	4	16,7%	24	100%	0,000
Enough	6	12,5%	42	87,5%	48	100%	
good	8	57,1%	6	42,9%	14	100%	
Total	34		52		86		

Based on the table above, the majority of diabetes mellitus patients who adhere to routine controlshave sufficient knowledge of 42 people (87.5%). The results of the Chi-Square statistical test where thedegree of confidence used was 95% and $\alpha = 0,05$ obtained a p value of 0,000 where the p value <0,05, so the null hypothesis was rejected or in other words statistically it means that there is a significant relationship between the level of knowledge of sufferers diabetes mellitus with adherence to routine control of diabetes mellitus patients.

The results of the attitude analysis with routine control compliance can be seen in the table below:

Table 6 Relationship between Attitude and Compliance with Routine Controls

| Attitude | Routine Control Compliance | | | | | | P-value |
| | Not obey | | Obey | | Total | | |
	f	%	f	%	f	%	
Not enought	20	71,4%	8	28,6%	28	100%	0.000
Enough	10	22,2%	35	77,8%	45	100%	
good	4	30,8%	9	69,2%	13	100%	
Total	34		52		86		

Based on the table above, most people with diabetes mellitus who adhere to routine controls have a sufficient attitude of 35 people (77.8%). The results of the Chi-Square statistical test where the degree of confidence used was 95% and $\alpha = 0,05$ obtained a p value of 0,000 where the p value <0,05, so the null hypothesis was rejected or in other words statistically it means that there is a significant relationship between attitudes of people with diabetes mellitus with adherence to routine control of diabetes mellitus patient.

The results of family support analysis with routine control compliance can be seen in the table below:

Table 7 Relationship Of Family Support With Routine Control Compliance

| Family Support | Routine Control Compliance | | | | | | P-value |
| | Not obey | | Obey | | Total | | |
	f	%	f	%	f	%	
Not enought	f	%	f	%	21	100%	0.000
Enough	18	85,7%	3	14,3%	41	100%	
good	6	14,6%	35	85,4%	24	100%	
Total	10	41,7%	14	58,3%	86		

Based on the table above, the majority of diabetes mellitus patients who adhere to routine controls have sufficient family support, as many as 35 people (85.4%). The results of the Chi-Square statistical test where the degree of confidence used was 95% and $\alpha = 0.05$ obtained a p value of 0.000 where the p value <0.05, so the null hypothesis was rejected or in other words statistically it means that there is a significant relationship between attitudes of people with diabetes mellitus with adherence to routine control of diabetes mellitus patients.

3.2. Discussion

Based on the results of the study, it was found that the majority of diabetes mellitus patients who adhered to controls were patients with sufficient knowledge (87,5%). The Chi-Square statistical test showed a p value of 0,000 where the p value <0,05, meaning that there was a significant relationship between the level of knowledge of people with diabetes mellitus and compliance with routine control of diabetes mellitus patients in the working area of the Paseh Health Center. According to Indirawaty (2021) that the better the knowledge of people with diabetes mellitus, the more obedient these sufferers are in controlling their blood sugar levels. This can be because the knowledge possessed by people with diabetes mellitus will affect the motivation and care of patients with diabetes mellitus so that they control their blood sugar levels more routinely. under control to prevent complications. A person's knowledge is influenced by education (Notoatmodjo, 2003), the higher a person's education, the wider the knowledge possessed. With education people will easily receive new information, analyze and adopt knowledge to take advantage of the knowledge gained. The results of this study are in line with the theory (Smeltzer, et al. 2008) which states that education in DM patients is necessary because the management of DM requires special behavior for life. Patients not only learn self-care skills to avoid sudden fluctuations in blood glucose levels, but also have to adopt preventive lifestyle behaviors to avoid long-term diabetic complications. Patients must understand nutrition, benefits and side effects of therapy, exercise, disease progression, prevention strategies, blood sugar control techniques and adjustments to therapy. This is in accordance with previous research by Anis Febriyani (2018), that there is a relationship between knowledge and the level of adherence to blood sugar control in people with Diabetes Mellitus with a ρ value of 0,001 <0,05. According to the researcher's assumption, knowledge is closely related to adherence to routine control of diabetes mellitus patients. People with diabetes mellitus who have poor knowledge tend to be disobedient in carrying out routine controls. If people with diabetes have good knowledge, they will know what are the risks that have a good impact on them, but good knowledge must also be accompanied by good attitudes to produce good behavior.

Based on the results of the study, 35 people (77,8%) had sufficient attitudes towards diabetes mellitus who adhered to routine controls. The Chi-Square statistical test showed a p-value of 0,000 where the p-value <0,05, meaning that there was a significant relationship between the attitude of people with diabetes mellitus and adherence to routine control of diabetes mellitus sufferers in the working area of the Paseh Health Center. According to Zaenab's research (2021) that diabetes mellitus sufferers who have a positive attitude towards adherence to diabetes mellitus control are influenced by the knowledge and experience possessed by sufferers, so that with personal experience sufferers leave a good impression as well so that it becomes the basis for forming sufferers' attitudes.

The results of this study are in line with research conducted by Nainggolan (2019) which obtained statistical test results using the chi-square test showing that the p-value was 0,037 <0,05, so that there was a relationship between attitude and adherence to taking oral hypoglycemic drugs in diabetes mellitus patients. The results of other studies also show that the person chi-square test (Asymp Sig 2-sided) obtained a value of ρ=0,012 where $\rho<\alpha(\alpha=0,05)$ so it can be concluded that there is a relationship between attitude and adherence to treatment of diabetes mellitus patient.

According to the assumptions of researchers, attitude is closely related to adherence to diabetes mellitus control. Attitude is one of the factors forming behavior. Compliance attitude is based on various factors. These factors can be influenced by internal and external factors, internal factors include personality, awareness, understanding, and self-control. Obedience is a behavior shown by someone to fulfill another person's orders. Compliance is behavior in accordance with orders to comply with regulations. Compliance as the level of patient carrying out the treatment and behavior suggested by a doctor or other person. Compliance is the extent to which the patient's behavior is in accordance with the provisions given by health professionals. In this study, the non-compliance referred to is not carrying out routine control of diabetes mellitus examination. Some of the factors that influence non-compliance with DM sufferers in the Paseh Health Center work area are influenced by the attitude of the patient itself because attitude is the main thing for someone to be able to carry out behavior. Therefore the patient's attitude is important in routine control compliance because attitude comes from self-awareness and understanding that cannot be changed by others. Based on the table above, the majority of diabetes mellitus patients who adhere to routine controls have a sufficient attitude of 35 people (85.4%). The Chi-Square test showed a p-value of 0.000 where the p-value <0.05, meaning that there is a significant relationship between the attitude of people with diabetes mellitus and compliance with routine control of diabetes mellitus patients in the working area of the Paseh Health Center.

The results of the study also found that there were 41.7% of diabetes mellitus sufferers with good family support but did not adhere to blood sugar control controls. This is because there are other factors that affect adherence of diabetes mellitus patients in controlling blood sugar such as the patient's own knowledge which influences awareness to check blood sugar. This is in accordance with previous research by Husna (2014)

that there is a relationship between knowledge and adherence to drug therapy (p value 0,015), medical nutrition therapy (p value 0,028), and physical activity (p value 0,023). Knowledge of the disease and the principles of drug therapy are the most important factors contributing to adherence to diabetes treatment.

The results of this study are in line with previous research by Alfiah and Isfandiari (2014). The results showed that the proportion of diabetes mellitus sufferers who received family support was 55,9%, while the proportion of diabetes mellitus sufferers who controlled blood sugar levels well was 17% of respondents. and there is a relationship between family support and control of blood sugar levels with symptoms of microvascular complications.

Researchers assume that adherence to diabetes mellitus in the Paseh Health Center work area is influenced by family support because the family plays an important role in determining compliance with diabetes mellitus control. Family is the main institution that will shape values, beliefs, and foster self-image and confidence in diabetes patients. Therefore, the patient's family must support the treatment of people with diabetes mellitus in order to form optimal family support. In the end, with optimal family support, it is expected that sufferers will also increase control compliance

4.   CONCLUSION

From the results of research on the relationship between knowledge, attitudes and family support with adherence to routine control of diabetes mellitus sufferers in the work area of the Paseh Public Health Center which was carried out on 86 respondents (Diabetes mellitus sufferers), it can be concluded that:
1. The description of knowledge with sufficient category is 48 people (55,8%), with less category 24 people (27,9%) and in good category 14 people (16,3%).
2. Attitude description with sufficient category 45 people (52,3%), with less category 28 people (32,6%) and with good category 13 people (15,1%).
3. The description of family support with sufficient category is 41 people (47,7%), with less category 21 people (24,4%) and with good category 24 people (27,9%).
4. Overview of compliance with routine controls with 52 people (60,5%) in the obedient category and 34 (39,5%).
5. There is a significant relationship between knowledge and compliance with routine control in the Paseh Puskesmas working area, with a P value of 0,000 <0,05.
6. There is a significant relationship between attitude and compliance with routine control in the Paseh Puskesmas working area, with a P value of 0.000 <0,05.
7. There is a significant relationship between family support and compliance with routine controls in the Paseh Puskesmas working area, with a P value of 0,000 <0,05.

REFERENCES
Andini, N. P. P. P. (2021). Gambaran Sikap Pencegahan Covid-19 Masyarakat Di Desa Belumbang Kecamatan Kerambitan Kabupaten Tabanan Tahun 2021 (Doctoral dissertation, Poltekkes Kemenkes Denpasar).

Arini Putri, M. U. M. P. U. N. I. (2018). Hubungan Pengetahuan Dengan Perilaku Perempuan Obesitastentang Pencegahan Risiko Penyakit Akibat Obesitas DiDesa Slahung Wilayah Kerja Puskesmas Slahung Ponorogo (Doctoral dissertation, Universitas Muhammadiyah Ponorogo).

Ayu Intan Permani, N. L. (2018). Perbedaan Pengetahuan Ibu Hamil Trimester III Sebelum dan Sesudah Diberikan Penyuluhan Tentang Air Susu Ibu Eksklusif Di Puskesmas I Denpasar Barat (Doctoral dissertation, Jurusan Kebidanan 2018).

Cahyanti, L. (2020). Hubungan Dukungan Keluarga Dengan Tingkat Kecemasan Pasien Pre Operasi General Anestesi Di Rs Pku Muhammadiyah Gamping (Doctoral dissertation, Keperawatan Poltekkes KemenkesYogyakarta).

Dewi, R., & Susilawaty, S. A. (2019). Efektivitas Senam Aerobik Terhadap Kontrol Kadar Glukosa Darah PadaPasien DM Tipe 2. Jurnal Ilmiah Keperawatan Imelda, 5(2), 635-639.

Erda, R., Harefa, C. M., Yulia, R., & Yunaspi, D. (2020). Hubungan Dukungan Keluarga Dan Stres Dengan Kualitas Hidup Lansia Diabetes Mellitus Tipe II. Jurnal Keperawatan, 12(4), 1001-1010.

Fahriza, M. R. Faktor Mempengaruhi yang Penyebab Kejadian Diabetes Mellitus (DM).

Hayomi, P., Noor, T., & Rina, O. (2019). Tinjauan Pengetahuan Dan Perilaku Penjamah Makanan Tentang Keamanan Pangan Di Rsud Prof. Dr. Margono Soekardjo Purwokerto (Doctoral dissertation, PoltekkesKemenkes Yogyakarta).

Jalaluddin.(2013).Filsafat Ilmu Pengetahuan.Jakarta. PT Rajagrafindo Persada.

Judha, M. (2007). Pengetahuan, Pendidikan Dan Status Ekonomi Berhubungan Dengan Ketaatan Kontrol Gula Darah Pada Penderita DM Di Rsup Dr Soeradji Tirtonegoro Klaten. Medika Respati: Jurnal Ilmiah Kesehatan.

Kemenkes RI.(2020). Infodatin Pusat Data Dan Informasi Kementerian Kesehatan RI.

Mayani, A. A. (2021). Gambaran Tingkat Pengetahuan Dan Sikap Tentang Pemeliharaan Kesehatan Gigi Dan Mulut Pada Ibu Hamil Di Kecamatan Denpasar Barat Kota Denpasar Tahun 2021 (Doctoral dissertation,Poltekkes Kemenkes Denpasar).

Meidikayanti, W., & Wahyuni, C. U. (2017). Hubungan dukungan keluarga dengan kualitas hidup Diabetes melitus tipe 2 di puskesmas pademawu. Jurnal Berkala Epidemiologi, 5(2), 240-252.

Nasution, F., Andilala, A., & Siregar, A. A. (2021). Faktor Risiko Kejadian Diabetes Mellitus. Jurnal Ilmu Kesehatan, 9(2), 94-102.

P2PTM Kemenkes RI.(2019).Tanda Dan Gejala Diabetes .

Paramita, D. P., & Lestari, A. W. (2019). Pengaruh Riwayat Keluarga Terhadap Kadar Glukosa Darah Pada Dewasa Muda Keturunan Pertama Dari Penderita Diabetes Mellitus Tipe 2 di Denpasar Selatan. E-Jurnal Med Udayana, 8(1).

Penurunan Kadar Glukosa Darah. Infokes: Jurnal Ilmiah Rekam Medis dan Informatika Kesehatan, 9(1), 57-64.Rahmasari, I., & Wahyuni, E. S. (2019). Efektivitas Memordoca Carantia (Pare) Terhadap.

Saibi, Y., Romadhon, R., & Nasir, N. M. (2020). Kepatuhan Terhadap Pengobatan Pasien Diabetes Melitus Tipe 2 di Puskesmas Jakarta Timur. Jurnal Farmasi Galenika (Galenika Journal of Pharmacy)(e-Journal),6(1), 94-103.

Sari, Y. K. (2017). Pengalaman Pencegahan Dan Penanganan Hipoglikemia Pada Pasien Diabetes Melitus Di Kelurahan Sendang Mulyo Kota Semarang (Doctoral dissertation, Universitas Muhammadiyah Semarang).

Sulistiyani, E. (2018). Hubungan Dukungan Keluarga Dengan Tingkat Kecemasan Anak Usia Sekolah Yang Menglami Tindakan Invasif Di Ruang Anak RSUD dr. R. Soedjono Selong Lombok Timur. PrimA: Jurnal Ilmiah Ilmu Kesehatan, 4(2).

Syahid, Z. M. (2021). Faktor yang Berhubungan dengan Kepatuhan Pengobatan Diabetes Mel

wahyu Lestarina, N. N. (2018). Theory of planned behavior sebagai upaya peningkatan kepatuhan pada kliendiabetes melitus. Media Kesehatan Masyarakat Indonesia, 14(2), 201-207.

FACTORS ASSOCIATED WITH THE INCIDENCE OF DIARRHEA AT CONGGEANG KULON VILLAGE

Sherly Marcelina[1], Nurmala*[2]
[1] Public Health Study Program, Faculty of Health Science, Sebelas April University
[2] Students of Public Health Study Program, Faculty of Health Science, Sebelas April University
Email: nurmalaaaa22@gmail.com

Article Info	ABSTRACT
	Diarrhea is a disease that is still a public health problem in developing countries in the world including Indonesia, diarrheal disease can be influenced by three factors, namely knowledge, attitude and behavior factors that can influence the occurrence of diarrheal disease. Preliminary studies obtained from the Conggeang Health Center showed that the number of residents in Conggeang Kulon village was 3,271 with 26 rt and 7 RW, diarrhea sufferers in Conggeang sub-district in 2021 were 201 (34,6%), diarrhea sufferers in Conggeang Kulon village were 38 (1 ,15%). This is to determine knowledge, attitudes, and behavior on the occurrence of diarrhea Type of research: Is a quantitative with a cross-sectional correlative descriptive approach. Data was collected by questionnaire and then analyzed using Chi-Square. Using total sampling, namely all people in the village of Conggeang Kulon who experienced diarrhea as many as 38 people. The independent variables of this study are knowledge, attitudes, behavior and the dependent variable of this study is the incidence of diarrhea disease. To the puskesmas to provide information in an effort to increase counseling on various matters related to health problems in services, especially in preventing diarrhea. There is a significant relationship between the level of knowledge and the incidence of diarrhea in the village of Conggeang Kulon, (p-value 0,034 <0,05), attitudes and the incidence of diarrhea in the village of Conggeang Kulon in 2022, (p-value 0,002 <0,05), there is a significant relationship between behavior and the incidence of diarrhea in the village of Conggeang Kulon in 2022, (p-value 0,025 <0,05).

Corresponding Author:

Nurmala,
Public Health Science Study Program,
Faculty of Health Science Sebelas April University,
Jl. Cipadung No.54, Kota Kaler, Sumedang Utara, Sumedang, Jawa Barat 45621, Indonesia.
Email: nurmalaaaa22@gmail.com

1. INTRODUCTION

The results of the 2020 Basic Health Research (Riskesdas) state that the prevalence rate in Indonesia for diarrhea at all ages based on a diagnosis by health workers is 6.8% without symptoms and 8.0% with symptoms. In Basic Health Research (Riskedas) for 2020, cases of diarrhea that occurred in West Java province in 2020 reached 858,546 people or 83.52%, with the most cases namely in Bogor district reaching 130,488. Sumedang Regency is one of the regencies in West Java with a relatively large number of diarrhea cases compared to other cases in 2019. Based on data on disease types in Sumedang Regency, diarrhea is the disease with the highest number of cases, namely of 22,436 people out of a total population of 1,152,000 in Sumedang district. The results of a preliminary study obtained from the Conggeang Health Center showed that the number of diarrhea sufferers of all ages in the Conggeang sub-district in 2021 was 201 (34.6%), with a population of 29,824. Whereas diarrhea sufferers in Conggeang Kulon village, according to the Conggeang Community Health Center kesling officers, were 38 people (1.15%) of the 3,271 residents, the average problem was due to environmental hygiene factors. Based on the description above, the incidence of diarrhea can be categorized as high. Researchers became interested in doing deeper digging about it. This research is

entitled "Factors Associated with the Incidence of Diarrhea in Residents in Conggeang Kulon Village in 2022".

2. METHOD

The Methods of this research is using quantitative study with cross-sectional design.. Sampling in this study was determined by means of total sampling. Total Sampling is a sampling technique where the number of samples is the same as the population (Sugiyono, 2011). The reason for taking total sampling is because the total population is less than 100 so that the entire population is used as a research sample (Sugiyono, 2011). Total sampling that is all people who experience diarrhea is 38 people (1,15%).

3. RESULTS AND DISCUSSION

3.1. Results

3.1.1 Univariate Analysis

Table 1 Knowledge Frequency Distribution with Diarrhea Incidence

Knowledge	Frequency (f)	Percentage (%)
Not Enough	14	36.8
Enough	17	44.7
Good	7	18.4
Total	38	100

Based on table 1 above it can be seen that the distribution of knowledge frequency. Researchers can conclude that the description of sufficient knowledge is 17 people (44.7%), which means that most of the knowledge about diarrhea is sufficient.

Table2. Frequency Distribution of Attitudes with Diarrhea Incidence

Attitudes	Frequency (f)	Percentage (%)
Not Enough	5	13.2
Enough	22	57.9
Good	11	28.9
Total	38	100

Based on table 2 above, it can be seen that the distribution of attitude frequencies. Researchers can conclude that the description of sufficient attitudes is 22 people (57.9%), which means that most of the knowledge about diarrhea is sufficient.

Table 3 Frequency Distribution of Behavior with Diarrhea

Behavior	Frequency (f)	Percentage (%)
Not Enough	6	15.8
Enough	22	57.9
Good	10	26.3
Total	38	100

Based on table 3 above, it can be seen that the distribution of behavior frequencies. Researchers can conclude that the description of sufficient behavior is 22 people (57.9%), which means that most of the behavior towards diarrhea is sufficient.

3.1.2 Bivariate Analysis

Table 4. The Relationship between Knowledge Level and the Incidence of Diarrhea in Conggeang Kulon Village in 2022

Knowledge	Persistent Diarrhea	Chronic Diarrhea	Total	p-value
	f	f	f	
Low	2	12	14	0.034
Inter-mediate	2	15	17	

Good	4	3	7	
Total	**8**	**30**	**38**	

Based on table 4.5 above, it can be seen that as many as 8 respondents did not experience persistent diarrhea and 30 respondents experienced chronic diarrhea. Based on the results of the statistical test, the relationship between the level of knowledge and the incidence of diarrhea was obtained by a P value = 0.034 <alpha value of 0.05, it means that there is a relationship between the level of knowledge and the incidence of diarrhea in Conggeang Kulon Village in 2022.

Table 5 The Relationship between Attitudes and the Incidence of Diarrhea in Conggeang Kulon Village in 2022

Attitudes	Persistent Diarrhea	Chronic Diarrhea	Total	p-value
	f	f	f	
Low	4	1	5	
Inter-mediate	2	20	22	0.002
Good	2	9	11	
Total	**8**	**30**	**38**	

Based on table 5 above, it can be seen that as many as 8 respondents did not experience persistent diarrhea and 30 respondents experienced chronic diarrhea. Based on the results of the statistical test, the relationship between attitude and the incidence of diarrhea was obtained with a P value = 0.002 <alpha value of 0.05, it means that there is a relationship between attitude and the incidence of diarrhea in Conggeang Kulon Village in 2022.

Table 6 Relationship between Behavior and Diarrhea in Conggeang Kulon Village in 2022

Behavior	Persistent Diarrhea	Chronic Diarrhea	Total	p-Value
	f	f	f	
Low	0	6	6	
Inter-mediate	8	14	22	0.025
Good	0	10	10	
Total	**8**	**30**	**38**	

Based on table 6 above, it can be seen that as many as 8 respondents did not experience persistent diarrhea and 30 respondents experienced chronic diarrhea. Based on the results of statistical tests, the relationship between the level of knowledge and the incidence of diarrhea was obtained by a P value = 0.025 <alpha value of 0.05, it means that there is a relationship between behavior and the incidence of diarrhea in Conggeang Kulon Village in 2022.

3.2. Discussion

Based on the data shown in table 1, the majority of respondents have a sufficient level of knowledge about the incidence of diarrhea, namely as many as 17 people (44.7%). According to the hypothesis, it shows that the level of knowledge affects the incidence of diarrhea. This research is in line with research (Komara et al., 2020) entitled The relationship between the level of mother's knowledge about diarrhea prevention and the incidence of diarrhea in toddlers in Pemecutan Kelod Village, Denpasar, Bali, which stated that most respondents (63.3%) had good knowledge (p value = 0.025) because most of the respondents have good knowledge about diarrhea prevention.

According to family support researchers, almost all families support the importance of recovering diarrhea patients and it will be easier to motivate, provide encouragement or information to family members who suffer from diarrhea for their recovery. It would be nice for families to understand more about how to prevent diarrhea and how to treat diarrhea. Based on the data shown in table 4.2, the majority of respondents have an adequate attitude about preventing diarrhea, namely as many as 22 people (57.9%). According to the hypothesis, it shows that attitudes influence the incidence of diarrhea.

This research is in line with Nabila's research (2018) with the title Description of Diarrhea Prevention Attitudes in Cilendek Timur Village, Bogor. According to researchers, it is important for the community to

be able to improve a clean and healthy lifestyle and maintain good environmental sanitation so as to avoid environment-based diseases such as diarrhea and always get used to washing hands with soap before eating, after defecating and before carrying out activities related to food.

Based on the data shown in table 4.3, the majority of respondents have sufficient behavior regarding the incidence of diarrhea, namely as many as 22 people (57.9%). According to the hypothesis, it shows that behavior influences the incidence of diarrhea. This research is in line with research (Dicca Tarigan et al., 2020) with the title Description of Community Behavior towards the occurrence of Diarrhea stating that behavioral factors are the first level that often occur as the cause, with the results obtained the level of public knowledge is in the good category with p value = 0.000, because health services more often conduct counseling. According to Notoatmodjo (2010), behavior is the action or activity of the human being itself which has a very wide range, including: walking, talking, crying, laughing, working, studying, writing, reading, and so on. From this description it can be concluded that what is meant by human behavior is all activities or human activities, both those that are directly observed, and those that cannot be observed by outsiders. Behavior is an activity or activity of the organism (living thing) concerned. So, human behavior is essentially the action or activity of the human itself which has a very broad expanse (Notoatmodjo, 2012). Behavior is a person's response or reaction to external stimuli or stimuli (Notoatmodjo, 2012). This theory is called the S-OR (stimulus-organism-response) theory (Skiner in nooatmodjo, 2012).

According to the researchers, it is hoped that it will further improve clean and healthy living behavior, especially preventing diarrhea such as washing hands before eating, when coughing or sneezing, after using the toilet, keeping the environment clean and participating as cadres so that they will get a lot of information about diarrhea health.

4.   CONCLUSION

1. The number of sufferers of chronic diarrhea and persistent diarrhea in Conggeang Kulon Village is 38 people (1.15%).
2. The number of respondents who have a sufficient level of knowledge in Conggeang Kulon Village is 17 people (44.7%).
3. The number of respondents who had a sufficient attitude in Conggeang Kulon Village was 22 people (57.9%).
4. The number of respondents who have adequate behavior in Conggeang Kulon Village is 22 people (57.9%).
5. There is a significant relationship between the level of knowledge and the incidence of diarrhea in the village of Conggeang Kulon in 2022, (p-value 0.034 <0.05).
6. There is a significant relationship between attitude and the incidence of diarrhea in the village of Conggeang Kulon in 2022, (p-value 0.002 <0.05).
7. There is a significant relationship between behavior and the incidence of diarrhea in the village of Conggeang Kulon in 2022, (p-value 0.025 <0.05).

REFERENCES

Andreas, A.N. et.al (2018). Perilaku Ibu Dalam Mengasuh Balita Dengan Kejadian Diare. *Jurnal Keperawatan. Vol. IX No.2, Oktober 2018.*

Ariani, A.P. 2016. Diare Pencegahan dan Pengobatannya. *Nuha Medika*: Jakarta Barr, W., & Smith, A. (2014). Acute diarrhea in adults. *American familyphysician*, 89(3), 180-189.

Depkes Bantul. Profil Kesehatan 2018 Kabupaten Bantul. *Pemerintah KabupatenBantul Dinas Kesehatan. 2018.*

Depkes RI. 2007. Keputusan Mentri Kesehatan RI No: 900/MENKES/VII/2007. Konsep Asuhan Kebidanan. Jakarta

Depkes RI. 2008. Perilaku Hidup Bersih Dan Sehat. Jakarta: *Depkes RI*

Depkes RI. 2011. Target Tujuan Pembangunan MDGs. *Direktorat Jendral Kesehatan Ibu dan Anak.* Jakarta.

Depkes RI. 2013. Riset Kesehatan Dasar. Jakarta: *Badan Penelitian dan pengembangan Kesehatan Kementrian Kesehatan RI.*

Depkes RI. 2020. Keputusan Menteri Kesehatan Republik Indonesia Nomor: Hk.01.07/Menkes/104/2020 *Tentang Sebagai Penyakit Yang Dapat Menimbulkan Wabah dan Upaya Penanggulangannya*. Jakarta 2020

Dharma, R. (2017). Pengaruh Kualitas Pelayanan, Kepercayaan, Dan Kepuasan Terhadap Loyalitas Pelanggan pada PT. Padang tour wisata pulau padang. Ekobistek *Fakultas Ekonomi, 6(2), 349-359.*

Dinkes Jawa Barat. (2020). Profil Kesehatan Jawa Barat Tahun 2020. *DinasKesehatan Provinsi Jawa Barat, 103–111.*

Dicca Tarigan, D. B. br T., Chardito, C. R. S., Dhea, D. S. B., Angelina, A., & Masdalena, M. (2020). Gambaran Perilaku Masyarakat terhadap terjadinya Diare pada Balita di Wilayah Lingkungan I,II,III,IV, Daerah Aliran Sungai , Kelurahan Aur, Kecamatan Medan Maimun, Medan. *Medical and Health Science Journal*, *4*(1), 39–46. https://doi.org/10.33086/mhsj.v4i1.1451

Kliegman, R. M., & Associate Editor, M. K. (2006). Neonatal necrotizing enterocolitis. *Pediatric gastrointestinal and liver disease*

Komara, I., Jayadi, I., Jayanti, N., Triyasa, P., & ... (2020). Hubungan tingkat pengetahuan ibu tentang pencegahan diare dengan kejadian diare pada balita di Desa Pemecutan Kelod, Denpasar, Bali. *Isainsmedis.Id*, *11*(3), 2.https://doi.org/10.15562/ism.v11i3.672.

Lawrence Green, (1980). Health Education Planning, A Diagnostic Approch.

.Megasri, Hidayat, T., Chairuddin, G., & Santoso, I. (2018). Perilaku Kesehatan Masyarakat Terhadap Kejadian Diare Berdasarkan Aspek SanitasiLingkungan di Kabupaten Barito Kuala. *EnviroScienteae*, *11*, 33–40.

Notoatmodjo, Soekidjo. (2010). Metodologi penelitian Kesehatan Notoatmodjo,Soekidjo.2007. Promosi Kesehatan dan Ilmu Perilaku. Jakarta. PT.Rineka Cipta.

Rahmadian, S., Ketaren, O. and Sirait, A. 2017, 'Faktor-faktor yang berhubungan dengan kejadian diare di Puskesmas Perwatan Ngkeran Kabupaten Aceh Tenggara pada tahun 2017', *Jurnal Ilmiah Simantek, vol. 1, no. 4, pp. 13–26.*

Salsabil N, (2018) Gambaran Pengetahuan dan Sikap Tentang Pencegahan Diare pada Anak Usia Sekolah di SDN Cilendek Timur 1 Kota Bogor Tahun 2018. https://kink.onesearch.id/Record/IOS6083.1862/Details

Saputri, N. (2019). Hubungan Faktor Lingkungan Dengan Kejadian Diare Pada Balita di Puskesmas Bernung. *Ilmu keperawatan dan kebidanan, 10 (1). pp.101-110.*

Simatupang M., 2004. Analisis FaktorFaktor Yang Berhubungan Dengan Kejadian Diare Pada Balita Di Kota Sibolga Tahun 2003.

Sugiyono, S. (2017). Metode penelitian kuantitatif dan kualitatif dan R&D Sugiyono.(2011). Metode Penelitian Pendidikan. Alfabeta, Bandung

Troeger, C., Blacker, B. F., Khalil, I. A., Rao, P. C., Cao, S., Zimsen, S. R., Albertson, S. B.,Stanaway, J. D., Deshpande, A., Abebe, Z., Alvis-Guzman, N., Amare, A. T., Asgedom, S. W., Anteneh, Z. A., Antonio, C. A. T.,Aremu, O., Asfaw, E. T., Atey, T. M., Atique, S., … Reiner, R. C. (2018). Estimates of the global, regional, and national morbidity, mortality, and aetiologies of diarrhoea in 195 countries: a systematic analysis for the Global Burden of Disease Study 2016. *The Lancet Infectious Diseases, 18(11), 1211–1228. https://doi.org/10.1016/S1473- 3099(18)30362-1)*

MANAGEMENT ANALYSIS OF COVID-19 CASE MANAGEMENT ATSUMEDANG DISTRICT HEALTH OFFICE YEAR 2022

Dadang Sulaeman*[1], Yumita Angdarenma Fitrie[2]
[1]Public Health Science Study Program Faculty of Health Science, Sebelas April University
[2]Student of Public Health Science Study Program Faculty of Health Science, Sebelas April University
email : yumitafitrie@gmail.com

ABSTRACT

Corona virus Disease 2019 (COVID-19) is an infectious disease caused by Severe Acute Respiratory Syndrome Corona virus 2 (SARS CoV-2). The general objective in this study was to analyze the management of Covid-19 case management at the Sumedang District Health Office in 2022. This study used a qualitative descriptive method. Data collection techniques used in this research is to use observation techniques in the form of interviews (interviews), literature study, and documentation. With the in-depth interview method using the Purposive Sampling technique using several officers who were used as resource persons including the Head of Disease Prevention and Control, Head of Communicable Disease Prevention and Control Section, Head of Surveillance and Immunization Section, Head of People's Welfare Section. Based on the research that has been done, the researcher can conclude that this research uses management theory according to George R. Terry Planning, Organizing, Actuating, Controlling (POAC). The conclusion of this study is POAC Management regarding the handling of Covid-19 cases at the District Health Office. In planning Sumedang, the latest data was taken from cases that emerged so that the planning was more optimal by involving all fields involved in carrying out their respective job when carrying out related supervisory tasks. And also assisted by the PeduliLindung application which helps in detecting people who have not been vaccinated by scanning the QR code which is one of the requirements to enter public facilities and other public locations

Corresponding Author:

Yumita Angdarenma Fitrie,
Public Health Science Study Program,
Faculty of Health Science, Sebelas April University,
Jl. Cipadung No.54, Kotakaler, Sumedang Utara, Sumedang, Jawa Barat 45621, Indonesia.
Email: Yumitafitrie@gmail.com

1. INTRODUCTION

Coronavirus Disease 2019 (COVID-19) is an infectious disease caused by the Severe Acute Respiratory Syndrome Coronavirus 2 (SARS CoV-2). SARS-CoV-2 is a new type of coronavirus that has neverbeen seen before previously identified in humans. There are at least two types of coronavirus known to cause diesease that can cause severe symptoms such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome syndrome (SARS). Since the outbreak of the COVID-19 outbreak worldwide, all government sectors and the international world seem to be improving and preparing for the worst that will come due to the rapid spread of the virus. This is of course also a major concern of the Indonesian government, but nothing significant where the application of the law must be enforced to take preventive action.

As we all know, in early 2020, COVID-19 has become a global health problem. The case began on December 31 2019 with information from the World Health Organization (WHO) that there was a cluster of pneumonia of unknown etiology in Wuhan, Hubei Province, China. The number of cases continued to grow until there were reports of deaths and imports from outside China. On 30 January 2020, WHO declared

COVID-19 a Public Health Emergency of International Concern (PHEIC). And on March 2, 2020, Indonesia reported two confirmed cases of COVID-19. A woman who had direct contact with the 24th confirmed case in Malaysia. In 2020, in Indonesia on December 31 there were 743,198 confirmed positive cases of Covid-19 and 22,138 who were declared dead. (KOMINFO, 2020). In West Java on August 28 2020 there were 10,528 confirmed cases with 265 deaths and 6,064 recovered. Meanwhile in Sumedang on April 9 2020 there were 11,193 confirmed cases with 10,754 cases declared cured and 366 cases dead. (sumedangkab.go.id, 2020).

In 2021, in Indonesia on November 24 2021 there were 4,254,443 cases that had been positively contaminated with Covid-19 and there were 143,766 cases of death (CFR: 3.4%) related to Covid-19 that had been reported and 4,102,700 patients had recovered from disease (WHO and PHEOC Ministry of Health). In West Java on March 24 2021 there were 243,749 confirmed cases with 214,276 cases that had been declared cured and 3,013 deaths. Whereas in Sumedang Regency on December 14 2021 there were 8,955 confirmed cases with 8,629 cases that had been declared cured and 317 cases of death. (sumedangkab.go.id, 2021).

In 2022, on April 3 2022 there were 6,019,981 confirmed cases of Covid-19 in Indonesia, 155,288 deaths, and 5,768,703 patients who had been declared cured of the disease. (PHEOC Ministry of Health RI). In West Java, on April 10, 2022, there were 1,102,548 confirmed cases and 1,069,813 cases declared cured. (PIKOBAR, 2022). Meanwhile in Sumedang Regency on May 2 2022 there were 11,228 confirmed cases with 367 deaths and 10,858 recovered cases. (sumedangkab.go.id, 2022).

Every year there is an increase in the number of people confirmed with Covid-19. Sumedang Regency is also one of the districts where 11,228 people have been confirmed with 367 deaths and 10,858 cases recovered in 2022 with the role of the government also trying to reduce the number of Covid-19 cases. Even though we are entering a change from a pandemic to an endemic one, we still have to limit health protocols because cases in Sumedang and even in Indonesia have not reached 0 cases every month, there are still positive confirmed cases, although not as many as in 2020-2021. With an increase in February on the 23rd with positive confirmed cases of 280 cases and decreased in May on the 23rd with cases there are 6 positive confirmed cases.

2.   METHOD

The type of research used in this research is descriptive qualitative. Descriptive, namely a formulation of the problem that guides research to explore or photograph the social situation that will be studied thoroughly, broadly and in depth. Qualitative research aims to accurately describe the characteristics of individuals, circumstances, symptoms or certain groups to determine the existence of a symptom with other symptoms in society. The method used in this study aims to obtain data based on existing conditions, the results of direct interviews with informants and from existing documents.

3.   RESULTS AND DISCUSSION

The results of the research above can be assumed that regarding management planning for the prevention of covid-19 at the health office made data a plan by the health office is the latest data from emerging cases so that planning is more optimal, the plan contains aspects needed in the handling and prevention of Covid-19, such as: human resources, logistics, and budget needed.

Organizing management in the prevention of covid-19 at the Health Office, all fields are involved and work together with their respective duties and functions adjusted to their respective fields regarding the prevention of covid-19, for example, such as the P2P field which is focused on health services. Such as vaccination The Health Office created a MOBILE DINKES team to help vaccinate in Mobile field and mass targets. Can reach 3000 targets vaccinated at one time.

Regarding implementation management in the prevention of covid-19. The implementation itself is derived directly from the center or from the Ministry of Health for each regulation and is carried out by the Health Office to each health center and Public. In the Health Office itself, every field, program, section collaborates to produce optimal activities.

Supervision management in the implementation of Covid-19 prevention in The Health Office in managing the supervisory mandate is in two hands directly by a mandate group or task force that goes directly to the community by involving regional work units (SKPD). And the existence of the PeduliLindungi application makes supervision easier because the application is for people who have not yet vaccinated will be seen in the application, and scanning the QR code in the PeduliLindungi application is one of the requirements for entering public facilities and other public places.

4. CONCLUSION

Based on the results of research on the analysis of countermeasures management Covid-19 cases in Sumedang Regency in 2022 can be concluded as following:

1. Characteristics of people who comply or do not comply with the protocol health, namely obedience has not yet become a habit, but it is old or young it makes no difference.
2. Those who handle the handling of Covid-19 cases at the Health Office Sumedang Regency is in the Prevention and Control Division Disease (P2P) especially in the Surveillance and Immunization Section.
3. POAC Management regarding the handling of Covid-19 cases at the Office District Health Sumedang is planning to take the latest data of cases that arise so that planning is more optimal with involve all fields involved in carrying out their duties and responsibilities while carrying out related supervisory duties. And helped also with the PeduliLindungi application helps in detecting people who have not been vaccinated by scanning the QR code provided make it one of the requirements to enter public facilities and locations other publics.
4. In the process of handling the Covid-19 case in Kab. Sumedang is available several programs including the MOBILE DINKES program which assisting programs in the field in a mobile manner and mass targets. With this program, every program in the Health Office collaborates to produce optimal activity. Like using an app Care Protect to also produce more optimal results. There is some are also applications made by the government in progress management of Covid-19 cases in the district. Sumedang among them there the Maijah application, the Amari application, the Markonah application and Wa Kepo. The application is an application that accesses various information about progress of covid-19 cases and vaccinations. Besides the application there is also other programs such as the sympathy center house and the Covid-19 volunteers comes from students.

REFERENCES

Agustino, Leo. 2020. Analisis Kebijakan Penanganan Wabah Covid-19: Pengalaman Indonesia. Jurnal BorneoAdministrator. Banten.

Andra. (2022, Juni 3). Berita perkembangan seputar virus Corona Provinsi Jawa Barat per hari hingga tanggal 3 Juni 2022.

Andra. (2020, Agustus 28). Ini terkait kasus virus Corona (COVID-19) di seluruh Provinsi Jawa Barat per kota / kabupaten sampai tanggal 28 Agustus 2020.

Anies. 2020. Covid-19: Seluk Beluk Corona Virus Yang Wajib Dibaca. Yogyakarta: Arruzz Media Hadeli

Ade. (2022, Mei 20). Bupati Apresiasi Seminar 'Kesiapan Masyarakat Dalam Upaya KMK_No._HK.01.07-MENKES-413-2020_ttg_Pedoman_Pencegahan_dan_Pengendalian_COVID-19

Marttha, E, & Kresno, S. (2016). Metodologi Penelitian Kualitatif Untuk Bidang Kesehatan. Jakarta. PT Rajagrafindo Persada.

Nasution, N. H, dkk. 2021. Gambaran Pengetahuan Masyarakat Tentang Pencegahan Covid-19 di Kecamatan Padangsidimpuan Batunadua, Kota Padangsidimpuan. Jurnal Kesehatan Ilmiah Indonesia. Padang.

Nugraha, D. P, & Alhakim, M. F, dkk. 2020. Buku Modul: Pencegahan COVID-19. Riau.

Ramadhan, Laila, dkk. 2022. Manajemen Pencegahan dan Pengendalian Pandemi Covid-19 Di Universitas Negeri Malang. Sport Science and Health. Malang.

Salsabila, Tita. (2020, Juli 21). [UPDATE] Kasus Corona Jawa Barat 21 Juli 2020, Tercatat Sudah 5.548 Orang Positif. Simbolon, Huyogo. (2020, April 1). Data Terkini Corona Covid-19 di Jabar 1 April 2020: 198 Positif, 21 Meninggal Dunia. Swaesti, Eista. 2020. Covid-19: Buku Pedoman Pencegahan dan Penanggulangan Corona Virus. Yogyakarta: Javalitera

Tandra, Hans. 2020. Virus Corona Baru COVID-19 Kenali, Cegah, Lindungi Diri Se diri & Orang Lain. Yogyakarta: Rapha Publishing Wibowo, M. T. H. & Afriyani, Ami. 2021. Strategi Kebijakan, Tata Kelola, Pemerintah Dalam Penanganan Covid-19 Di Kabupaten Sumedang. Jurnal Ilmu Administrasi. Bandung.

Wahidah, Idah, dkk. 2020. Pandemi Covid-19: Analisis Perencanaan Pemerintah dan Masyarakat dalam Berbagai Upaya Pencegahan. Jurnal Manajemen dan Organisasi (JMO). Bandung.

Wahyini, Noor. 2014. IN-DEPTH INTERVIEW (WAWANCARA MENDALAM). BINUS EDUCATION.

Ramadhan, Adi, dkk. 2022. Manajemen Pencegahan dan Pengendalian Pandemi Covid-19 di Universitas Negeri Mala. Sport Science and Heal. Malang.

Reza, Muhammad. (6 Agustus 2022). Positivity Rate Covid-19 di Indonesia sampai 6 Agustus 2022.

Furqan, Muhammad Haikalul. Peranan dinas keshatan dalam penanganan pandemi covid-19 di kota bandaaceh, provinsi aceh. Aceh.