



MINISTRY OF HEALTH REPUBLIC OF INDONESIA
HEALTH POLYTECHNIC OF JAKARTA III



PROCEEDING

2nd INTERNATIONAL CONFERENCE ON HEALTH RESEARCH AND SCIENCE



“Health Science and Practice For
Vulnerable People : Elderly,
Women And Children”

*Santika Premiere Slipi Hotel
Jakarta , September 18-19, 2019*

ISBN : 978-602-53540-3-8 (PDF)



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PROCEEDING

2nd International Conference on Health Research and Science
Health Science and Practice for Vulnerable People:
Elderly, Women and Children

Santika Premiere Slipi Hotel /
Wednesday-Thursday, September 18-19, 2019



Published By:
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Health Polytechnic of Jakarta III

Office :

Jl. Arteri Jorr Jatiwarna Kec. Pondok Melati Kota Bekasi
Jawa Barat Indonesia
Telp. 021 84978693
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KNOWLEDGEMENT

Thank God we pray to God Almighty for abundant blessings and mercy, on the 2nd International Conference on Health Research and Science Health Science and Practice for Vulnerable People: Elderly, Women and Children.

This proceeding contains the results of health researches which are carried out most by the lectures. Those have been reviewed by the experts, met the scientific requirements were defined, published through oral and poster presentations at the International Conference in which held by Jakarta 3 Health Polytechnic.

This proceeding was the journal of scientific conference. In a scientific climate, persons were not only creating a research but also had to make the publication of their works in the form of scientific media including in a form of proceeding. Writing a research report in the proceeding in a form of responsibility and accountability to work of researcher. This proceeding was expected to be a reference for the development of health sciences.

This proceeding could be issued because the entire processes of the international conference, oral and poster presentations had been conducted well due the good cooperation of the conference committee and support from various parties. On this occasion, we deliver our thanks and appreciations to the Director of Jakarta 3 Health Polytechnic, all Vice Director (1,2 and 3) as well as their staffs, all health professional organizations: Patelki (Medical Laboratory Technology Expert Association), IFI (Indonesian Physiotherapist Association), IBI (Indonesian Midwives Association), andPPNI (Indonesian National Nurses Association). All universities which are involved: Osaka University Japan, Burapha University Thailand, Centro Escolar University Pilippines, MRK Diagnostics, all participans particularly participats of oral and poster presentations, and also the whole committee members.

We still expect the critics and suggestions form all readers for the developing and quality of the scientific conference proceeding in the future.

The International Conference Committee 2019

WELCOME SPEECH DIRECTOR

Her excellency, Minister of Health Republic of Indonesia: Prof. Dr. dr. Nila F. Moeloek, Sp.M(K)

Guest of Honor, Head of Board for Development and Empowerment Human Resources of Health

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Guest of Honor, Head of AIPVIKI, AIKIND, AIPTLM, AIPTIFI

Distinguished speakers,

Colleagues,

Ladies and Gentlemen,

It is indeed a great pleasure to welcome you this morning to our Second International Conference. As the Director and representing all academic community of Jakarta III Health Polytechnic, it gives me great pleasure to extend to you all a very warm welcome and I am honored to greet you here today to deliberate the development studies and to take part responsibilities gaining the improvement of health care access for vulnerable people.

Related with the theme of seminar, dedicated services for specific conditions have been evaluated in several settings, while they appear to be popular with patients, require more evaluation as to their system-level effects.

Prioritization systems involve the use of strategies such as scoring to formalize the priority to be given to patients based on the urgency or importance of their health problems have been studied, and seem to show that access (measured by who most needs help) can be improved by such systems, but there may be corresponding reductions in access for people deemed to have lesser need.

The purposes of this conference are:

1. To increase understanding of the health care access and key strategy to gain it.
2. To explore the opportunity program to enhance the quality of health professional.
3. To share the research result related the health science and practice for vulnerable people issues.
4. To facilitate faculty member to build partnership on gaining quality research

Her Excellency Madame Minister, our guests of honor, in this conference we deliver our new innovation in conference by using Webbinar to reach the participants from Eastern part of Indonesia and abroad who cannot join directly in this room. We also kindly inform you that the participant of the 2nd International Conference are:

- 1) Foreign participant: 4 persons (Australia, Singapore, Japan), in which using Webinar: 2 persons.
- 2) Indonesian participant: 414 persons.
 - Oral presentant: 8 persons
 - Poster presentant: 21 persons
 - Webinar presentant: 4 persons (Kupang, Sorong, Padang, and Medan)Total participant: 418 persons

I would like to take this opportunity to express my sincere thanks to all Committee Members and our honorable speakers and reviewers particularly our Minister of Health, Director General of Community Health and Head of Board for Development and Empowerment Human Resources of Health. I truly appreciate for your supports and attendance.

I would like to request to our Minister of Health to officially open this conference.

Finally, I would like to thank all delegates for your participation and support for this conference. I wish all these two days will bring the mutual understanding and beneficial program.

I wish you every success in your deliberations and a very pleasant stay in Jakarta Metropolitan Area.

Thank you. Have a wonderful day,
Wassalamualaikum Wr. Wb.

Yupi Supartini, SKp, MSc

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ANALYSIS OF OCCURRENCE FACTORS (UPPER RESPIRATORY INFECTION) IN POST-EARTHQUAKE INFANTS AT THE PENIMBUNG GUNUNGSARI HEALTH CENTER LOMBOK WEST NUSA TENGGARA YEAR 2018

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ABSTRACT

The aim of this research for knowing Relationship Between Smoking Habit Factor Against Genesis Family ISPA In Toddlers Post-Earthquake in Puskesmas Penimbung Gunungsari District of West Lombok Regency 2018 The method used is quantitative method, incorporating qualitative. The study design used is cross sectional ie observing all of the independent variables and the dependent variable at the same time. The population in the study were all mothers of children aged 12-24 months who were working area health centers in Gunung Sari, West Lombok district in 2018 with a sample size of 80 respondents using poposive sampling technique. The results showed that there was a significant association between immunization status (p value = 0.003), educational level (p value = 0.011), smoking (p value = 0.002), with ARI in infants after the earthquake in Penimbung West Lombok Public Health Center 2018. Suggestions in this study are expected health workers can improve outreach to the community about how to prevent and deal with respiratory disease in infants in the community, especially after the earthquake that occurred in the district of West Lombok.

Keywords: Upper Respiratory Tract Infection, Smoking, Earthquake

INTRODUCTION

An earthquake is one of the natural phenomena that can be caused by man-made / as a result of human activities or due to natural events. earthquakes always come suddenly and surprisingly, causing a general panic because it is so unpredictable that no one is prepared (Sunart, 2012). The impact of the earthquake itself has an impact on health problems. The emergence of health problems, among others, starts from a lack of clean water which results in poor personal hygiene, poor environmental sanitation which is the beginning of the proliferation of several types of infectious diseases. One of the health problems caused by disasters is the increased potential for infectious and non-communicable diseases. In fact, it is not uncommon for extraordinary events (outbreaks) for certain infectious diseases, such as outbreaks of diarrhea and dysentery that are affected by the environment and sanitation that has worsened due to disasters such as floods. URTI (Upper Respiratory Tract Infection) are the most common complaints suffered by refugees. URTI (Upper Respiratory Tract Infection) occurs because of the entry of germs or microorganisms into the human body and multiply, causing symptoms of the disease.

URTI (Upper Respiratory Tract Infection) is one of the heaviest respiratory diseases and most cause death. Until now, URTI (Upper Respiratory Tract Infection) is still a global health problem. This can be prevented from the high morbidity and mortality due to URTI (Upper Respiratory Tract Infection). Death due to URTI (Upper Respiratory Tract Infection) in infants reaches 12.4 million in children aged 0-4 years every year worldwide, where two-thirds are babies, namely the 0-1 year age group and as much as 80.3% of these deaths occur in developing countries (WHO, 2007).

In 2015, WHO reported nearly 6 million children under five died, 16% of which is estimated as many as 920,136 children under five in 2015 of this number caused by ISPA as the number 1 killer of children under five in the world. An estimated 2 toddlers

die every minute due to ARI. Populations susceptible to ARI are children less than 2 years old, elderly over 65 years and people who have health problems (malnutrition, immunological disorders) (Ministry of Health Republic of Indonesia, 2017).

Based on UNICEF data, in 2015 there were more than 14% of the 147,000 children under 5 years old in Indonesia who died of URTI (Upper Respiratory Tract Infection). From these statistics, it can be interpreted as many as 2-3 children under the age of 5 years die from URTI (Upper Respiratory Tract Infection) every hour. This is what causes URTI (Upper Respiratory Tract Infection) as the main cause of death for children aged 5 years in Indonesia. In addition, it turns out that ARI is a more deadly disease for children than diarrhea, malaria, or measles (IDAI, 2017).

The mortality rate due to URTI (Upper Respiratory Tract Infection) in infants in Indonesia in 2014 was 0.08% and experienced a significant increase in 2015 which was 0.16% and slightly decreased in 2016 which was 0.11% but experienced another increase in 2017 which was 0.30%. In 2017 the mortality rate due to URTI (Upper Respiratory Tract Infection) in the 1-4 age group was slightly higher at 0.32% compared to the <1 year age group of children under 0.27% (Ministry of Health of the Republic of Indonesia, 2018).

The number of URTI (Upper Respiratory Tract Infection) cases in children under five in Indonesia in 2017 was 447,431 consisting of 432,000 ARI cases and ARD 15,431 with CFR 0.30%. ARI cases were more often found in infants aged 1-4 years, namely 297,487 compared to infants aged <1 year, namely 149,944 cases. Based on the Case Fatality Rate (CFR) pneumonia is also higher in infants aged 1-4 years which is 0.32% compared to toddlers aged <1 year which is 0.27%. The five most provinces that have the number of URTI (Upper Respiratory Tract Infection) cases in toddlers in 2017 in sequence are West Java (126,936), East Java (65,139), Central Java (52,033), DKI Jakarta (43,500), Banten (30,402), and West Nusa Tenggara (West Nusa Tenggara) (28.3) (Ministry of Health of the Republic of Indonesia, 2018).

The cause of ARI is a number of infectious agents including viruses, bacteria and fungi. Factors that influence the risk of increased ARI severity, namely poor nutritional status or poor nutrition, breastfeeding (ASI) less than 6 months (not exclusive breastfeeding), low birth weight babies, not complete basic vaccination, air pollution in the room especially from cigarette smoke and smoke, and mother's education (Kartasasmita, 2010).

Possible factors that can affect ARI events are parents who smoke, maternal education, immunization status, nutritional status, house ventilation, population density and LBW (WHO, 2008). According to WHO (2010), high risk factors for ARI are found in children who have a low immune system that is in a state of malnutrition or malnutrition, especially in infants who are not exclusively breastfed, diseases such as measles also increase the risk of children contracting ARI. Environmental factors that can increase a child's vulnerability to ARI are indoor air pollution caused by cooking and heating with fuel such as wood or dirt, living in overcrowded homes and parents who smoke.

The purpose of this study was to determine the factors - the occurrence of upper respiratory infections in children at the pusimbang Gunungsari puskesmas, Lombok, West Nusa Tenggara, 2018.

METHOD

This research is analytic with quantitative approach. The research design used was *cross sectional*. The sample used in this study was 80 respondents with a *random sampling technique*. The data analysis technique uses univariate and bivariate tests.

RESULTS

Univariate Analysis of the Relationship Between Factors of Family Smoking Habits Against URTI (Upper Respiratory Tract Infection) Occurrence in Post-Earthquake Toddlers in the Work Area of Penimbung Health Center, Gunung Sari District, West Lombok Regency, NTB Province 2018

Table 1. Recapitulation of Univariate Analysis, Frequency Distribution (Upper Respiratory Infection) at Penimbung Gunungsari Health Center, Lombok, 2018

Variable	Frequency	Percentage (%)
Immunization Status		
Incomplete	45	56.3
Complete	35	43.8
Total	80	100
Level of education		
Low	57	71.3
High	23	28.8
Total	80	100
Smoking habit		
There is	38	47.5
There is no	42	52.5
Total	80	100

Bivariate Analysis of the Relationship Between Factors of Family Smoking Habits Against URTI (Upper Respiratory Tract Infection) Occurrence in Post-Earthquake Toddlers in the Work Area of Penimbung Health Center, Gunung Sari District, West Lombok Regency, NTB Province, 2018.

Table 2. Recapitulation of Bivariate Analysis, Factors of Occurrence (Upper Respiratory Infection) at Penimbung Gunungsari Health Center, Lombok, 2018

Variable	P value
Immunization Status	0.003
Level of education	0.011
Smoking habit	0.002

DISCUSSION

a) Relationship of Immunization Status to Upper Respiratory Infection

Immunization status variable obtained value of $P Value = 0.03 < (0.05)$ this shows that there is a significant relationship between immunization status with the incidence of URTI (Upper Respiratory Tract Infection) in toddlers after the earthquake. The results of this study are in line with the research of Handayani, R. W (2016) found that the proportion of respondents who did not have DPT-HB-Hib immunization (44.8%) was more in the case group than the controls. Immunization is the process by which a person is made immune or resistant to infectious diseases, usually by administering a vaccine. The vaccine stimulates the body's own immune system to protect people against subsequent infection or disease. Immunization is a proven tool to control and eliminate life-threatening infectious diseases and is estimated to prevent between 2 and 3 million deaths each year (WHO, 2018).

Acute respiratory infections (ARI) is a disease which can be prevented by immunization. One of the factors causing (ARI) is immunization status in toddlers. ARI originated from the types of diseases that develop from preventable diseases such as diphtheria, pertussis, and measles, then increase immunization coverage will play a big role in an effort to eradicate (ARI) (Anik, 2010). The proven method is most effective now is by giving measles immunization, immunization complete before the child reaches age 1 years, the child will be protected from several the main cause of infection breathing including whooping cough, diphtheria, tuberculosis and measles. People with diphtheria, pertussis if you don't get it adequate help will result fatal. By giving immunizations can completely prevent the death of ARI caused by complications of the disease measles and pertussis (Ministry of Health, RI. 2007).

b) Relationship of Education Level To Incidence of Upper Respiratory Infection

The education level variable obtained the value of $P Value = 0.011 < (0.05)$ this indicates that there is a significant relationship between the level of education with the incidence of ARI in toddlers after the earthquake. The results of this study are in line with research Rasyid, Z, (2013) found a statistically significant relationship between maternal education variables and the incidence of ARI in infants. Parental education has a major influence on parenting generally determined by parents and especially mothers. The high mortality and morbidity of URTI (Upper Respiratory Tract Infection) is caused by the lack of information and understanding obtained by parents (Bansu, I. A, 2017).

This education will later be able to influence the level a person's knowledge of being alive clean and healthy and with attitude utilize existing health services surrounding. High level of education will make it easier for someone to absorb information and implement in daily behavior and lifestyle, specifically related to health (Notoadmodjo, 2007)

c) Relationship between smoking and the incidence of upper respiratory infection

The smoking habit variable obtained $P value = 0.02 < (0.05)$ this shows that there is a significant relationship between smoking habit and the incidence of URTI (Upper Respiratory Tract Infection) in post-earthquake toddlers. The results of this study are in line with research by Fatichatur rahchma *et al* (2016) which shows that toddlers who live at home who have smokers in the house have a 2.9 times greater risk of developing URTI (Upper Respiratory Tract Infection). Susanna (2003), the effects of cigarette smoke can increase the fatality for sufferers of URTI (Upper Respiratory Tract Infection) and kidney failure and high blood pressure, even harmful substances and toxins in cigarettes not only cause health problems for smokers but also for those around them who don't smoke, most of whom are babies, children, and mothers who

are forced to become passive smokers because their members smoke inside the house.

Smoking behavior of parents and family members who live inside one house is a trigger for ARI in infants in the working area of the Puskesmas Sempor II. Research Winarni, et al (2010), In addition, a person who is not a smoker but smoke at least 15 cigarettes minutes in one day for one week categorized as passive smokers. Smoke smoking is more dangerous for passive smokers than active smokers.

CONCLUSION

Factors influencing the incidence of URTI (Upper Respiratory Tract Infection) in toddlers after the earthquake in West Lombok in this study consisted of only three variables, namely, immunization status, family smoking and education level, while there are many other factors that influence ARI in toddlers that still need to be studied.

THANK-YOU NOTE

Thank you to the Gunungsari District Health Office and the community health center in Gunungsari sub-district, West Lombok regency, and the bhakti kencana university for providing support and funding for the publication of this article.

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THE DIFFERENCE OF LANGUAGE DEVELOPMENT BEFORE AND AFTER GIVING STORY TELLING METHOD IN PRESCHOOL at TK PERTIWI 01 SUMURREJO GUNUNGPATI

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ABSTRACT

Children who experience language disorders at preschool 40% to 60% will have difficulty learning in language, writing and academic subjects. Stimulation will be effective when paying attention to the needs of children according to their developmental stages. Stimulation as a way for children's development. One form of stimulation in children using Story Telling, is an effort made by storytellers in conveying the contents of feelings, thoughts or a story to children orally. This study aims to determine differences in language development before and after giving story telling to preschoolers in Kindergarten Summurejo 01 in group A.

The number of samples in this study were 19 students in Kindergarten Summurejo 01 in group A. This study used a quasi-experimental study (Quasi Experimental) with One Group Pre-test and Post-Test Design. The results of the normality test using Shapiro-Wilk (sample <50) obtained the results of p value <0.05 so it is said that the data is not normally distributed. To determine differences in language development before and after the administration of story telling methods using the Wilcoxon test, with the results there are differences in language development before and after the administration of Story telling.

INTRODUCTION

The process of growth and development of children can take place naturally, but the process is very dependent on adults or parents. An important period in child development is the toddler period. Because at this time basic growth will influence and determine the child's next development. The ability and growth and development of children need to be stimulated by parents so that children can grow and develop optimally and according to their age (Nia, 2006).

In the age period of children there are many health problems that determine the quality of children in the future. These health problems include general health, developmental disorders, behavioral disorders and learning disorders. These health problems will disturb the achievement of students in school. Unfortunately these problems are not given much attention either by parents or clinicians and other health professionals (Farida, 2013). The incidence of developmental delays in general occurs around 10% in children throughout the world. While the incidence of delays in global development is estimated at 1 -3% in children aged <5 years (Widiaskara and Wardani, 2017). General developmental delay is part of developmental delay, with a prevalence of 1% - 3% (Tjandrajani et al, 2016). Aspects of development in children include fine motor, gross motor, language development and social development.

Language development is one aspect of early childhood development. This means that this aspect plays an important role in children's development and influences the child's developmental period in the future. Language (language) is a form of communication both oral, written, and sign based on a symbol system. Language consists of words used by people (vocabulary) and rules for varying and combining these words (grammar and syntax). Language functions as a communication tool and is an important tool in children's lives. Through language,

children can be interconnected, share experiences, and can improve intellectually, namely in the context of developing their language knowledge and skills. For children at an early age it is a period of development that must be fostered and developed so that they can make full use of their language abilities. If guidance, direction, and handling are not appropriate or even obtained by children, it is very possible that there is a language development that is not in accordance with what is expected by parents at home or by educators at school (Anita, 2015). Children who experience language disorders in pre-school 40% to 60% will have difficulty learning in written language and academic subjects.

There are four risk factors that affect children's development in developing countries, namely severe chronic malnutrition, inadequate early stimulation, iodine deficiency and iron deficiency anemia. One important risk factor and is related to the interaction of mother and child is the provision of early stimulation (Heart and sustainability, 2016). Provision of stimulation will be effective when paying attention to the needs of children according to their developmental stages. Stimulation is stimulation (vision, speech, hearing, touch) that comes from the child's environment. Children who get targeted stimulation will develop more quickly than children who lack even do not get stimulation. Stimulation also give beneficial for children's development (Nia, 2006). One form of stimulation in children using Story Telling, is an effort made by storytellers in conveying the contents of feelings, thoughts or a story to children as well as verbally. Nurjanah (2018) said that Story Telling affects the development of speech and language in preschool children. Firyanti et al (2018) say that story telling can improve early language language skills.

THEORY

1. Language Development

Development is the result of the interaction of the maturity of the central nervous system with the organs it affects, for example the development of the neuromuscular system, speech, emotions and socialization. All of these functions play an important role in human life as a whole (Sudirjo and Alif, 2018).

Zubaedah (2004) said the development of 3-year-old children, vocabulary increases every day. At that age, according to Jalongo (1992) children have a vocabulary of between 200 to 300 words. At the age of 4 years, children have been able to apply pronunciation and grammar. The child has a vocabulary of 1400 to 1600 words. At the age of 5 to 6 years, children already have the correct sentence structure and grammar, both in using prefixes and in using verbs now. The average sentence length is half a sentence per line, then increased to 6-8 words.

The child has been able to use a vocabulary of about 2500 words, and the child understands about 6000 words.

2. Story telling

According to Echols (in Aliyah, 2011) story telling consists of two words story and telling means story telling. Combining the two words of story telling means telling a story. In addition, story telling is also called storytelling as suggested by Malan, storytelling is storytelling based on oral tradition. Story telling is an effort made by the storyteller in conveying the contents of feelings, thoughts or a story to children orally. According to the Indonesian dictionary, stories are narratives or essays that tell the deeds, experiences, events and so on (both those that actually happened and those that are merely fiction).

Sa'adatun (2013) said the story telling method will add interest in reading and language in preschoolers. Ullumudin and Haryati (2016) say story telling can be used to instill values and morals. Besides story telling can be used as a medium in learning (Asri, Indriati, et al, 2017). Purwanto, Khoisanan (2017) said story telling can reduce

anxiety. Nurjanah (2018) said effective story telling is used to help speech development in preschool children. Media application of story telling can vary as Nuraini (2009) says story telling using flascard media can improve children's skills in telling stories. Wastam et al (2010) say story telling with flascard media shows a positive response to learning. Story telling method with puppet stage media in improving listening and speaking abilities, because this method and media is one of the effective methods and media to improve listening and speaking abilities of young children (Aliyah, 2011). Widianti et al (2015) say the story method with pictorial media to display speaking skills in children.

METHOD

This research uses quasi-experimental research (Quasi Experimental) with One Group Pre-test and Post-test Design. The design form is as follows:

Pretest Post Test Treatment

Pretes	Intervention	Post test
Q1	X	Q2

Information :

- = Description of children's language development before Story telling is done using observation sheets via flashcard media
- = Description of children's language development after Story telling using observation sheets through flashcard media
- X = Treatment of Story telling 4 x by using pictorial media in the form of folklore

The population in this study were students in preschool age at TK Pertiwi Summurejo 01. The number of samples in this study were 19 students. The sampling method uses total population. The language development instrument used is derived from Utami (2014).

Data normality test results using Shapiro-Wilk (sample <50) obtained p value <0.05, said the data were not normally distributed. To find out the differences in language development before and after giving the story telling method using the Wilcoxon test.

RESULTS AND DISCUSSION

Characteristics of Respondents:

Table 1 Distribution of Respondents by Gender

Gender	Frequency	%
Male	11	58
Female	8	42
Total	19	100

Table 2 Distribution of Respondents Based on Mother's Occupational Characteristics Job Type Frequency

Occupational characteristic	Frequency	%
Working	7	33
Not working	12	63
Total	19	100

Table 3 Distribution of Respondents Based on Mother's Education Level Type of Education Frequency

Educational	Frequency	%
Low	10	52
Intermediate	6	32
Height	3	16
Total	10	100

Table 4 Distribution of Maternal Age

Category	Frequency	%
Early Adulthood	16	84,2
Midle Adulthood	3	15,8
Total	19	100

Table 5. Distribution of Respondents' Answers Based on Language Development

Number	Statement of Language Development 3-5 Years	Pre Test		Post Test	
		Yes	No	Yes	No
1	Showing Own pronouns	13	6	10	9
2	Following 1-2 Commands at Once	14	5	16	3
3	Saying Needs	15	4	16	3
4	Say the name as Identity	14	5	16	3
5	Saying the sex of the child	15	4	18	1
6	Speak Smoothly with Simple Sentences and Contain meaning	13	6	16	3
7	Showing and mentioning of parts of body	17	2	19	0
8	Recognize words that indicate position	16	3	19	0
9	Singing Some Children's Songs	10	9	16	3
10	Say Six Words	13	6	19	0
11	Showing some sitting, running and crying movements	16	3	18	1
12	Tells the Story of Surrounding and Simple Events	14	5	18	1
13	Answering Questions about short stories that have been told by the teacher	10	9	11	8
14	Providing Information About the Family	14	5	19	0
15	Sort and discrib the contents of the image	10	9	15	4
16	Mention the names of animals and plants	15	4	17	2
17	Mention four colors	16	3	18	1
18	Tells about self-made images	11	8	15	4
19	Mention the names of the days of the week	11	8	14	5
20	Using and answering 5W and 1H	4	15	15	4
21	Make the initial Words provided in Oral Forms	13	6	17	2
22	Know antonym word ex noon-night	13	6	16	3
23	Pronounce vowels and consonants correctly	9	10	15	4
24	Dialogue clearly	14	5	16	3
25	Mention three adjectives	7	12	15	4
26	Calculate 1-5	17	2	19	0
27	Using the right intonation in speaking	12	7	17	2

Based on the distribution of answers to language development, the indicators say 6 words, answer questions about the short story told by the teacher, sort and tell the contents of the picture, use and answer 5 W and 1 H, pronounce vowels and consonants correctly, and mention 5 minimum adjectives still lacking at the time of measurement before treatment. After treatment, the six indicators have increased, this is in line with research Nurjanah (2018) which says effective story telling is used to assist the development of speech in preschool children.

Table 6 Difference of Language Development Before and After Giving Story Telling Method in Preschool At tk Pertiwi 01 Sumurrejo Gunung Pati

		N	Mean Rank	Sum Ranks	of
Post Pre	Negative Ranks	2 ^a	2.50	5.00	
	Positive Ranks	16 ^b	10.38	166.00	
	Ties	1 ^c			
Total		19			

Test Statistics^a

	post – pre
Z	-3.512 ^b
Asymp. Sig. (2-tailed)	.000

To know the differences in language development before and after giving story telling using the Wilcoxon test. Wilcoxon test results obtained p value = 0.00 so that the p value <0.05 so that there are differences in language development before and after giving Story telling at Summurejo 01 kindegarten. The above research results are in line with sasmiyati et al (2016) showing that there is an influence of using storry telling method on language skills of children aged 4-5 years at Nurul Amal Bandar Lampung Kindergarten 2016/2017 Academic Year. Indatul Siti and Lestari Indah (2014) say there is an effect of story telling on language development in preschool children (TK B). Story telling is an art of storytelling that can be used as a means of instilling values in children which is done without the need to patronize the child. Story telling is a creative process of children in their development and children's imagination that not only prioritizes the ability of the left brain but also the right brain. The method of storytelling can be said as one of the media for early childhood learning that can provide positive benefits for children's development, especially moral, language and socio-emotional development. Stimulation of child development can be done in several ways, one of which is story telling because in this case the child will play an active role as a hearer (when hearing the teacher's story) as well as a speaker (when telling stories with the teacher and other children) Amalia & Sa'diyah (2014).

Rahmawati (2012) said in storytelling children will learn about language and recognize various emotions and feelings. Storytelling is also an effective means of introducing cultural values to children. Isbell (2004) says story telling can increase their understanding of storytelling again. In this story telling researchers used pictorial media that contained folklore. Pictorial media is an image media related to learning material that functions to convey messages from teacher to students. Widiанти et al (2015) say the story method with pictorial media to display speaking skills in children

Folklore is very popular with the community because it can be used as a role model and solace, as well as humorous. Therefore, folklore usually contains teachings of character or moral education and entertainment for the supporting community. In the period before the availability of formal education, such as school, the folklore has a function and a very important role as a medium of education for parents to educate children in the family. Although currently formal education is available, folklore still has

an important function and role, especially in fostering the personality of the child and instilling character as a whole in the family (Daud 2012). The results of Bloom's research (2002) in Utami (2014) suggested that the growth of brain tissue cells in children aged 0-4 years reached 50%. This age is easier to be given a stimulus to improve its development. Children will easily catch stimulation or stimulation if done repeatedly and continuously. Story telling with pictorial media is a form of stimulation in language development in children.

Language development is one aspect of the stages of children's development which is expressed through children's thinking by using words that mark the child's ability and creativity to increase according to their developmental stages. Language development is influenced by several things, including maturity, namely the level of maturity that influences language development, personal factors such as children's intelligence, gender, family members where the words of a parent will influence the child's development. Safitri (2016) said language development in toddlers is influenced by parents' knowledge and parenting provided by their parents. The results showed that the majority of Kindergarten Summarejo 1 students amounted to 58% according to Hurlock 1978, biologically, girls were more mature than boys. The types of girls' games are more varied so that it allows more talkative than girls. But at this time advanced technology so that it is more possible for boys to get varied games with more language exploration thereby increasing their language proficiency in Utami (2015). Nelson (2006) said language development is one indicator of the overall development of children's cognitive abilities related to school success. (Marisa 2015). Language development plays an important role in promoting and improving the quality of education especially in kindergarten because with language development children can communicate verbally with their environment. The environment in question includes peers, playmates, adults both at home, at school. Neither the neighbors around his residence. Therefore, language development should not be ignored by the teacher. Having a teacher's insight into language development is the basis for implementing learning programs.

Based on the results of the study in table 4, 84.2% of mothers aged in the early adulthood phase in age range of 21-40 years. This early adulthood is a time of forming independence, learning to live, starting a family and raising children (Hurlock, 2017)

CONCLUSION

Story telling is effectively used to stimulate children's language development. Suggestions that can be given are story telling can be used as a learning method in preschool children.

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LOGO THERAPY REDUCES THE DEPRESSION ON PULMONARY TUBERCULOSIS CLIENTS

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ABSTRACT

Until now, pulmonary tuberculosis is still as the health threatening and it has become as a major cause of morbidity and mortality for millions of people worldwide despite the latest control efforts are progressed and keep doing. The study goal was to knowing the influence of logo therapy toward depression reduces of pulmonary tuberculosis client at the Sorong Regional Regency General Hospital. The research method used was quasi experiment with pretest-posttest control group design (95% C.I) using paired t test with non random sampling technique. The research result data analysis from the 11 respondents of intervention group and the 11 respondents of control group were recruited shows that p value=0,002 (<0,05), which means that there was an influence of logo therapy toward depression reduces of pulmonary tuberculosis client. Logo therapy could be applied in both hospital and at home settings as the nurses independent intervention in order to decreasing the pulmonary tuberculosis client depressions level.

Keywords: logo therapy, depression, pulmonary tuberculosis client

INTRODUCTION

An estimated 10.4 million new cases of pulmonary tuberculosis (TB) worldwide in 2015, of which 5.9 million (56%) were men, 3.5 million were women (34%) and 1 million children (10%). There are people living with HIV/AIDS (PLWHA) pulmonary TB co-infection reaching 1 million (10%) of the total new cases as well. Approximated 1.4 million deaths of TB cases in 2015, 0.4 million of the co-infected mortality cases of pulmonary TB in PLWHA (WHO, 2016). Although there has been a 22% decrease in the number of pulmonary TB deaths between 2000-2015, pulmonary TB is still the 10th leading cause of death worldwide (WHO, 2016).

Pulmonary depression and TB are known as one of the important public health concerns, contributing to 2.5-2% of disability adjusted life years (DALYs) worldwide in 2010. In Europe, the prevalence of depression was found to reach 9.1% in representative samples nationally and in a population-based survey identified in southern Europe, depression was found to be the 7th cause of the disease burden contributing to 6.5% of DALYs in 1998 (Ambaw, Mayston, Hanlon, & Alem, 2015). Evidence from cross sectional studies in several African countries hospitals indicates a very high prevalence of co-morbid depression (range 10-52%) among pulmonary TB clients (Ambaw, Mayston, Hanlon, & Alem, 2015). However, because longitudinal studies on pulmonary TB and depression are still rare, the nature of relationships and comorbid pathways is little understood (Ambaw, Mayston, Hanlon, & Alem, 2015). Naidoo and Mwaba's research (2010) of 166 respondents of pulmonary TB (82 women & 84 men) found a high incidence of clinical depression of 64.3%.

Logo Therapy was a therapy who developed by Viktor Frankl (1905-1997) which emphasizes the psychotherapy of the meaning of life spiritually (Asagba, 2009). Logo Therapy can be considered as an adjunctive therapy, more strengthening than as a substitute for other therapeutic approaches (Southwick, Gilmartin, McDonough, & Morrissey, 2006). Logo therapy is different from traditional psychological therapy which

focuses more on the psychopathological treatment and psychological symptoms (Southwick, Gilmartin, McDonough, & Morrissey, 2006). The application of logo therapy is more specifically intended to improve the ability of clients to find their true identity about the meaning and purpose of life. Logo therapy is used in both diagnostic and demographic categories, in particular it can be applied when clients face an existential crisis (Southwick, Gilmartin, McDonough, & Morrissey, 2006). Logo therapy applies specific techniques such as self-distance (learning to widen distance from self-observation), intentions of opposing expectations (hoping for or doing what is feared), Socratic dialogue (interviews are designed to elicit client's own wisdom) and reflected (no attention directly from oneself to others or goals are very meaningful). Logo therapy promotes the adoption of a radically optimistic review of human potential (Frankle's tragic optimism), and the ability to surpass oneself through the continuity of meaning that is specific to the client's personal life. Clients can "find meaning in an action, in a job, or in love" or with the attitude that the client adopts for a difficult situation that cannot be changed (Frankl, 1988 in Southwick, Gilmartin, McDonough, & Morrissey, 2006)

Thomas et al (2016) reviewed 282 articles of publication of scientific research results that focused on the psychosocial issues of Multi-Drug Resistant (MDR) pulmonary tuberculosis (TB) patients with a "thematic synthesis" approach, finding that all of these studies noted the range of experiences of psychosocial and economic challenges by a pulmonary MDR-TB client. Depression, stigma, discrimination, side effects of drugs causing psychological pressure and financial limitations are common problems experienced by pulmonary MDR-TB clients. Therefore, psychosocial and economic intervention research is needed to help complement MDR-TB pulmonary clients in coping with pain, improve medication adherence, treatment outcomes and overall quality of life for pulmonary MDR-TB clients (Thomas, et al., 2016).

In the Sorong City, since 2013 there were 494 cases of pulmonary TB was found, mostly at the productive age of 15-55 years (Radar Sorong, 2014). The number of cases is clearly not an actual number when associated with HIV /AIDS co-infection. From the survey data in the Directly Observed Treatment Short-course (DOTS) room at Sorong District Hospital, MDR-TB client cumulative identification until May 2017 is \pm 38 cases. Based on the results of interviews from the DOTS room manager, data were obtained that most MDR-TB clients experienced depression, both mild to moderate to severe when initiating therapy. From the data, those appears that there has been a significant increase in the last 4 years, particularly in 2014 there were 4 cases, in 2015 11 cases, and in 2016 increased to 17.

METHOD

The research method of this research is Quasi experimental with pretest-posttest with control group design. This design is used to study phenomena within the framework of cause-effect relationships by providing treatment or manipulation on research subjects, so that the treatment effects can be studied (Bahtiar, 2000). The study was conducted to determine the reduction in pulmonary TB client depression before being given a treatment in the form of logo therapy and compare it with a reduces of depressed pulmonary TB client after being given logo therapy treatment.

RESULTS

The Regional General Hospital (RSUD) of Sorong Regency is the only central hospital for pulmonary MDR-TB referral cases at the West Papua Province area, particularly from Sorong Raya region (the Sorong City & the Sorong Regency, the Raja Ampat Regency, the South Sorong Regency, the Maybrat Regency and the Tamberau Regency), so that the researchers consider it appropriate as a representative research location. However, if it is associated with co-morbid depression, it will be subjective in

nature for each pulmonary TB client regardless of whether pure pulmonary TB or pulmonary MDT, or new or old cases, all have a chance of developing co-morbid depression. Therefore, the researchers decided to take pulmonary TB cases according to inclusion criteria.

The research implementation mechanism is as follows: 1) after the research request has been approved by the Hospital, the Hospital recommends that the room will be used as the research location according to the research needs; 2) The researcher communicates with the room nurses and appoints 2 room nurses (DOTS & Cassowaries) as enumerators; 3) researchers equate perceptions with enumerators about filling out questionnaires for determining rates of depression for pulmonary TB clients; 4) the enumerator identifies the pulmonary TB client in the treatment room, if the depression is identified then the enumerator requests approval as a respondent and if agreed, immediately submitted it to the researcher for further research.

The research processes were conducted to 1 respondent takes 5 days, consisting of 3 meetings in 4 sessions (1 session takes 30 minutes) as follows: meeting I including session 1 and 2 at the first day (45-60 minutes); meeting II session 3 at the third days (30 minutes); and meeting III session 4 at fifth days (30 minutes time).

From the results of research conducted at both the DOTS room and Kasuari inpatient room of Sorong Regional General Hospital since Nophember,13 to 30,2017, the researchers managed to obtain 22 respondents who were in the depression category (11 intervention groups & 11 control groups) from the initial plan of 38 respondents. The following are research data that have been analyzed using statistical software applications displayed in the form of: frequency distribution based on respondent characteristics, the results of paired t test interventions, pre-post controls.

1. Univariate Analysis

Table 1. Frequency Distribution Based on Characteristics of Respondents at both the DOTS Room and the Kasuari Inpatient Room of Sorong Regional General Hospital by the Year 2017.

Respondent Characteristics	Interventions Group		Controls Group	
	n	%	n	%
Ages				
Adult	8	72,7	9	81,8
Elderly	3	27,3	2	18,2
Sex				
Male	2	18,2	7	63,6
Female	9	81,2	4	36,4
Formals Education				
Elementary School	5	45,5	3	27,3
Junior High School	2	18,2	5	45,5
Senior High School	2	18,2	3	27,3
College	2	18,2	0	0
Occupations				
Civil Duty	0	0	1	9,1
Work on Company	1	9,1	0	0
Private	1	9,1	1	9,1
Etc	2	18,2	4	36,4
None	7	63,6	5	45,5

Table 1 shows that the largest proportion of respondents were adults (72.7% intervention group & 81.8% control group), female (81.2% intervention group) and male (63.6% control group), educated elementary school (45.5% intervention group) and junior high (45.5% control group) and none (63.6% intervention group versus 45.5% control group). While the smallest proportion were the elderly (the intervention group 27.3% versus the control group 18.2%), were male (the intervention group 18.2%) and female (the control group 36.4%), had junior high school, senior high school and college (intervention group 18.2% each) and college (control group 0%), and work as civil duty and private sector (intervention group 0% & control group 0%).

Table 2. Average Distribution of Depression Value Based on Treatment at both the DOTS Room and the Kasuari Inpatient Room of Sorong Regency Regional General Hospital by the year 2017.

Interventions	Mean	SD	Min-Max	N
Pre test Intervention	33,09	6,268	22 – 40	
Post test Intervention	28,91	5,243	20 – 38	11
Intervention deviation	4,18	3,371	0 – 10	
Control Pre test	27,73	5,350	19 – 37	
Control Post test	26,82	5,326	19 – 34	11
Control Deviation	0,91	3,448	-4 – 8	

From the table 2 as we can see that the mean values changes in post-intervention depression levels is 28.91 with a standard deviation of 5,243. In the control group the average changes in the value of post intervention is 26,82 with a standard deviation of 5,326. So the difference in the intervention group is that the mean of 4,18 with a standard deviation of 3,371, while the difference in the controls group is a mean of 0,91 with the standard deviation of 3.448.

2. Bivariate Analysis

Before testing the hypothesis, first of all the researchers conducting the data normality screening. Researchers used the Shapiro-Wilk test because the number of study samples was less than 50 respondents (Dahlan, 2009). From the results of statistical tests, it appears that: depression pre test intervention group p value is 0.186, depression post test intervention group p value is 0.514; depression pre-test of the control group p value was 0.669; and depression post test control group p value was 0.095. All normality test results shows that the p value were >0.05 , means that the data is normally distributed. For this reason, researchers allowed to conducting a bivariate analysis using the Paired t test hypothesis test.

Table 3. Paired t test for Respondents Based on Treatment at Both the DOTS Room and the Kasuari Inpatient Room of Sorong Regency Regional General Hospital by the year 2017.

Interventions	Mean	SD	SE	p value	N
Intervention Pre-Post	4,182	3,371	1,917	0,002	11
Pre-Post Control	0,909	3,448	-1,408	0,402	11

The average reduces in the level of depression in the pre-post intervention group is 4.182 with a standard deviation of 3.371. The results of the paired t test analysis in table 3 shows that the p value = 0.002 (<0.05), meaning that there is a significant effect of logo therapy on the reduction in client depression after logo therapy, whereas in the control group it is seen that the p value = 0.402 (>0,05), meaning that there is no influence between logo therapy on the depression reduction of pulmonary TB clients without any logo therapy treatment.

DISCUSSION

Pulmonary TB, especially of the MDR case, is the case of resistance to certain type of pulmonary TB drugs as a result of low compliance with taking drugs (Javaid, et al., 2017), which is still as the biggest challenge in the world health problems nowadays (Javaid, et al., 2017). The consequences of MDR-TB certainly require treatment (line II) and the side effects are more complex and require more time length (1,8 to 2 years). This can have implications for the client's psyche, namely co-morbid depression (Javaid, et al., 2017). Depression in both Pulmonary TB and MDR-TB are already become as the global health problems because of has shows a major impact on human health (Javaid, et al., 2017). However, until now the relationship of depression and other reference factors that are very important in pulmonary MDR-TB clients is still done rare toward assess depression of pulmonary TB MDR clients (Javaid, et al., 2017). The frequency of psychiatric disorders associated with management of MDR-TB has also been reported to be 21,3% to 22% (Torun, Gungor, Ozmen, Bolukbasi, & Shamaei, et al. 2005; Aamir, 2010; Baghaei, et al. 2011). TB drugs that can cause psychiatric side effects such as hallucinations, anxiety, depression, behavioral disorders and suicidal ideas are INH, ethionamide, ethambutol and fluoroquinolones have been reported as 9,7% to 50% in clients who receive anti-TB drugs (Javaid, et al., 2017).

Therefore, alternative nursing interventions are needed that can contribute to reducing the co-morbid depression rates of pulmonary TB clients, especially cases of pulmonary MDR-TB. Until now, research on the effect of logo therapy on decreasing depression in pulmonary TB clients is still rare. This research can be an additional source to enrich the reference to logotherapy interventions in MDR-TB pulmonary clients who have comorbid depression.

1. Characteristics of Respondents

The results of this study showed the largest proportion of respondents were adults, female (intervention group) and male (control group), ementary school (intervention group) and junior high school (control group) and none (intervention group versus control group). The number of respondents who have not met the research sampling quota is the cause of this characteristic data representation. However, data analysis is still carried out to see the distribution of respondents' characteristic data.

From this data, it appears that there is no significant difference in proportion between the sexes of women and men diagnosed with co-morbid pulmonary TB depression. Those means, women and men have the same opportunity to suffering from depression, both mild, moderate and severe.

The results of this study are different from the study of Javaid, et al., (2017) in Pakistan about depression and its relationship with pulmonary MDR-TB factors in the community showing that the female gender were reported to have a high prevalence rate (155 or 53,6% of n=289) is associated with depressive disorders compared to men. This difference in gender proportion is more due to complex interactions in biological, physiological and socio-cultural vulnerability (Javaid, et al., 2017). Women with MDR-TB in developing countries experience loneliness, low self-esteem and experience social stigma with the consequences of depression (Javaid, et al., 2017). The results of research on age show that the highest proportion is adults (intervention & control groups). This study is in line with data from the Health Research and Development Agency (Litbangkes) Ministry of Health (Indonesia Republic) 2014 (Infodatin, 2016) showing that the age group >45 years has a higher prevalence among other groups. Other different research results by Javaid et al (2017) found that co-morbid depressed pulmonary TB clients can also be associated with young age. The latest data on pulmonary MDR-TB clients less than 30 years old, have had experience about depressive episodes compared with older clients (Javaid, et al., 2017). Explanations that can provide the reason that in the management of pulmonary MDR-TB are long-term, expensive, large quantities of drugs taken at the same time with various side effects, which cause young people more quickly experience loss of confidence and drive.

At the formal education level, the results of this study show that the largest proportion are in the elementary school (intervention group) and junior high school (control group) inversely proportional to the education level of tertiary education (intervention group). This can be caused by people with higher levels of education directly proportional to good knowledge to be able to prevent the transmission of TB bacteria so that they can avoid pulmonary TB and pulmonary MDR-TB. At the level of college education levels, although the pulmonary TB incidence is small, this is still of particular concern. The occurrence of pulmonary TB in those who are highly educated is caused of more excessive activities so as not to pay attention to take care of physical conditions that have an impact on decreasing the body's resistance so it is susceptible to infection with various diseases, as well as depressed co-morbid pulmonary TB.

In the employment sub-variable, the results of this study show that the largest proportion of co-morbid pulmonary TB incidence occurs in respondents who are not working (63.6% intervention group & 45.5% control group) and the lowest are those who work as civil duty, private and entrepreneurs 9.1% each. The results of this study are in line with the 2014 Ministry of Health Litbangkes data that the highest proportion is none (11.7%), but the second highest is employees (10.5%) and the lowest is others (8.1%).

Occupations were very closely related to the amount of income a person gets to support his/her life process, specifically in maintaining his health in order to remain stable. However, work can also have an impact on changes in physical and mental health status, especially the types of work that are at risk in factories and unskilled laborers such as those who do not pay attention to work with safety procedures, jobs that require a high (psychological) mental burden, etc. Interestingly, in the results of the study also found 1 incidence of depressed co-morbid pulmonary TB, as well as the 2014 Health Ministries research and development data which is the second highest. This data is certainly not the truth, the possible increase in the number of cases of pulmonary TB is definitely higher (iceberg phenomenon). Overworking one's work without regard to personal health can have an impact on decreasing the body's

resistance which makes the body vulnerable to various infectious diseases, without any exception of pulmonary TB infection.

2. Effects of logo-therapy on reduces depression in pulmonary TB clients

From the results of the study it was found to shows that there were a significant effect between the reduction in depression MDR-TB pulmonary client ($p = 0.004$). The study results are in line with research by Mohammadi, Fard, and Heidari (2014) on the effectiveness of logo therapy in increasing life expectancy in depressed women in Tehran, from 36 samples (divided into 2 groups: 18 intervention groups & 18 control groups) who experienced depression after multivariate analysis using analysis of covariance (ANCOVA) showed that logo therapy was effective in increasing the life expectancy of women suffering from depression. Another research that is in line as well is by Robotmili, Sohrabi, Shahrak, Talepasand, Nokani and Hasani (2015), who found that logo therapy has the potential to reduce the level of depression and improve the meaning of life of Iranian students. Although the subject of this study is different from the results of the study, but the core of this study is the same, namely in the decline in depression after logo therapy A randomized control trial study by de Godoy and de Godoy (2003) on the effects of psychotherapy on depressed clients on chronic obstructive pulmonary disease (COPD) clients in outpatient pulmonary rehabilitation programs at outpatient universities in Brazil, apparently during psychotherapy in pulmonary rehabilitation programs for COPD clients can reduce the level of depression (intervention group p value = 0.001 & control group p value = 0.02).

Life without meaning is empty. The meaning is available to every individual under every circumstance because a person has freedom from the desire and desire to find meaning (Robotmili, Sohrabi, Shahrak, Talepasand, Nokani, & Hasani (2015). Logo therapy views that individuals have the potential to overcome the environment and freedom and responsibility they are to make choices that are conducive to growth despite their downturn. Logo therapy suggests the following: (a) the basic and unconscious motivation in human existence is "the will of meaning", and (b) helplessness, depression and other pathologies often occur when individuals cannot identify and pursue meaning that is worthy (Brown & Romanchuk 1994; Frankl 1967; Guttman 1996; Lantz & Alford 1995 in Medicinemili, Sohrabi, Shahrak, Talepasand, Nokani, & Hasani, 2015).

1. Intervention group differences (pre-post) and control groups (pre-post)

There are significant differences between the 2 treatment groups as follows:

- a. Paired t test results showed that the intervention group showed a significant ($p = 0.002$) effect between logo therapy on decreasing depression in pulmonary TB clients, while the control group showed no effect ($p = 0.402$).
- b. The Difference in measurement results between the intervention group and the control group showed a significant differentiation, where the intervention group had a greater mean and median value (4.18 & 3.00), while the control group had a smaller difference value (0.91 & 0.00).

These differentiations in value indicates that logo therapy has a significant effect on decreasing depression in pulmonary TB clients.

RESEARCH LIMITATIONS

There are some study limitations as follows:

1. Inadequate of target research samples due to various things, including: 1) there are miss questionnaire items (not fully loaded); and 2) in the first interaction (sessions 1 & 2) the respondents wanted to interact with the researchers, but in the second interaction refused to meet again without reason.

2. Obtained the number of respondents in the control group that exceeds the intervention group, so there are 3 respondents who were excluded. This causes a reduction in the overall number of respondents.
3. Very limited research time is caused by a long process of ethical clearance. In the future, it is expected that a review of research proposals can be conducted at the beginning of the year, so that the process of ethical clearance can be accelerated.
4. Point 1 above has an impact on the research data, it cannot be continued proceed to multivariate analysis. Even if the research data is continued, a small or less significant r square value will be obtained in determining the strength of the effect of logo therapy interventions on reduces the depression levels of the pulmonary TB clients.
5. The method of communication with the enumerator can be further modified to equalize perception, so that respondents recruited as research samples are more valid.

CONCLUSIONS

1. There are differences in the mean and median values between the pre-post intervention group.
3. There are differences in the mean and median values between the pre-post control groups.
4. There are differences in the mean and median values between the pre-post intervention group and the control group.
5. There is an effect of logo therapy toward reduces of pulmonary TB clients at Sorong Regency Regional General Hospital.

RECOMMENDATIONS

1. Logo therapy can be used as a good alternative therapy in both the hospital and home to improve the meaning of life of client, so that compliance with taking anti-TB pulmonary medication clients could be improved.
2. For further researchers, if they are going to do logo therapy research in cases of other diseases to pay more attention iv the sample size that is more representative according to the research sample formulation. The large number of research samples must be multiplied by 2 (on the advice of Dr. Rudi Hartono's the research reviewer) for example, in the formulation of this study sample is 39, then 39 must be double twice equal to 78 samples (intervention group 39 & control group 39).

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PEER GROUP METHOD SIGNIFICANTLY AFFECTS THE PERCEPTIONS OF THE ADOLESCENTS ABOUT REPRODUCTION HEALTH IN SENIOR HIGH SCHOOL 1 SORONG CITY IN 2017

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ABSTRACT

Health reproduction is an important problem to be addressed especially in adolescence. The purpose of the study to determine if there is significant difference in perception of the students of Senior High School 1 Sorong City about reproductive health by using the method peer group. The type of research is Quasi Experiment study with pre-test and post-test design one group design, the sample used was 30 respondents.

The results showed that, obtained p value $0.000 < 0,05$ then H_a accepted, meaning there was a significant difference of the perceptions of students of Senior High School 1 Sorong City about reproductive health by peer group method.

Thus, the method of peer group can be used not only to provide information about reproductive health but can be utilized in the learning process.

Keywords: Information Services, Peer Group Method, Healthcare, Adolescence Reproductive Health

INTRODUCTION

Adolescence is a troubled time, adolescent problems that exist today are very complex, especially reproductive health problems that are often experienced by adolescents include: nutrition problems, sexual problems and sexuality, teenage pregnancy and unwanted pregnancy, unsafe abortion, sexual transmitted disease (STD) and HIV/AIDS, as well as infertility.

Adolescents are often faced with issues that are not important when considered more deeply such as adolescents who do not know the puberty, adolescent reproductive health, and how to care for reproductive organs (Efendi, 2010). Based on preliminary study conducted on 07 April 2017 by researchers by interviewing 10 female students, obtained the result that from 10 female students there were 3 female students did not know about the concept of reproductive health, while the other 7 students already knew the concept of health reproduction. From the seven female students who understood the concept of health reproduction stated that the information was derived from Life Skill Education and biology subject. They did not have any initiatives to access the information further about health reproduction through other media at school such as discussing it with peers, family, printed or electronic media, and they stated that they never get any socialization from health professionals during their study at Senior High School 1 Sorong City. Nowadays, electronic media like mobile phone which is almost be used every day by female students is not used maximally to access information useful for them, one of them is information about concept and behavior of reproductive health. Use of this media is used more to access social media sites and entertainment.

Based on the above explanation, the researchers were interested to conduct research on the Influence of Adolescence Reproductive Health Information Services by Peer Group to Perception of Adolescent Reproductive Health in Senior High School 1 Sorong City.

METHOD

The research type was Quasi Experiment study with pre-test and post-test design one group design which is design with two assessments; pre experiment (pre-test) and post experiment (post-test) assessment (Rizema, 2011). Population was taken from the whole subject of research. The population in this study were all students of Senior High School 1 Sorong City then the number of samples used was 30 students, taken from one class.

This research was held in Senior High School 1 Sorong City with preliminary study that was done in April 2017 and the data gathering that was done in July 2017. This study conducted by two researchers with two meetings in two weeks.

The data instruments used in this study was questionnaire with closed ended questions where the answers were provided (Notoatmojo, 2005). This questionnaire consists of 30 questions to be answered by the students to measure their perceptions.

Data analysis with univariate and bivariate, statistical test that was used for normality data test was *One Sample Kolmogorov-Smirnov test* with level of significance 0.05. Data was normally distributed if the significance was greater than 5% or 0.05. Furthermore, researchers need to test the similarity (homogeneity) of some parts of the sample, which is the uniformity of the variance of the samples taken from the same population. Homogeneity tests aim to ensure that the comparable groups are homogeneous groups. Homogeneity test using F-test with significance level 0,05. Data is homogeneous if the significance is greater than 5% or 0.05. After the basic assumption test was met then proceed with hypothesis test using paired samples t-test.

RESULTS

Table 1. Distribution of the Characteristic of The Respondents Based on Sex

Sex	Frequency	Percentage
Male	10	33,33
Female	20	66,67
Total	30	100

Based on table 4.1 most respondents with female gender (66.67%) compared with male respondents (33.33%).

Table 2. Distribution of Respondent Characteristics by Source of Reproductive Health Knowledge Information

Source of Information	Frequency	Percentage
Ever	23	76.67
Never	7	23.33

Based on table 4.2, it showed that respondent characteristics based on the most information source have received reproductive health information (76.67%) compared with those who have never received health information (23.33%).

Based on the hypothesis using paired samples t-test, obtained p-value 0.000 <0.05 then H_a accepted, meaning there is significant difference in perceptions of

students of Senior High School 1 Sorong City about reproductive health by peer group method.

DISCUSSION

Respondents from this research were generally female, female adolescents with percentage of 66,67%, compared with male adolescents 33,33%. The number of female adolescents is more than the number of male adolescents, so the more likely female adolescent become peer groups who are trained to become peer educators in the delivery of reproductive health education. Reproductive health disorders can be experienced both men and women but in fact many diseases that occur in women, generally reproductive health problems due to unexpected problems, because some women who often underestimate the hygiene of the reproductive organs are disrupted because the female reproductive organs is very sensitive and close to the anus so it is vulnerable to various infections or diseases that affect the death if not addressed quickly and precisely. Reproductive health depends on how to treat it from lifestyle, diet, to behaviors related to reproductive health as a whole. Not only the care of genitalia organs that need to be considered in women but also the younger female who do sexual intercourse will increase the risk of cervical cancer and other diseases (Nursalam, 2009).

Another characteristic was the experience of adolescents acquiring knowledge on reproductive health resources. The respondents which stated that they never obtain any information of adolescent reproduction health that was 7 students (23,33%), whereas others stated that they have got reproduction health education obtained from social media with 19 students (63.33%). The results above proved by the source of information about reproductive health obtained from various media both print media and electronic media including the most widely used social media as a source of information on reproductive health. The inadequate information about health obtained by the adolescents is also prone to inaccuracy of the information that leads to inability of the adolescents to care for their reproduction health. The inability to care for themselves increase the risk of Sexual Transmitted Disease infection for those who sexually active. The disease might be vaginal discharge, Chlamydia, Gonorrhea, until HIV / AIDS. If left unchecked, the disease may lead to further infection and harm themselves (Soetjningsih, 2009).

The hypothesis test resulted that there was significant difference in the perception of the students in Senior High School 1 Sorong City about the health reproduction with the peer group method. This result indicates that the use of peer group method positively affect the improve the perception of the adolescents about health reproduction.

This study finding is supported by a study conducted by Achjar (2010), that health reproduction education delivered by peer group significantly affected the the improvement of knowledge of the adolescent about health reproduction in Kemiri Muka Village, Depok. This is proven by hypothesis test using t-test, t-value counted 5.984 with $p < 0.05$ indicates that there is a significant influence with the occurrence of improved health knowledge.

Peer groups are groups of children or youth of the same age or association and have a closed public interest, such as the problems of school-aged children through adolescence. Peer groups are social groups where each member is in a close and personal relationship (Sarwono, 2008).

Adolescents has the tendency to interact with their peers and adopt information acquired by their peers without considering the validity, accuracy, and accountability of the information. This is because adolescents have more time spend outside the house with their peers, therefore, it can be understood that their interactions bring the big

impact on them compared to the family in terms of attitude, conversations, performance, and behavior (Handayani, 2011)

In peer groups, adolescents discuss about the problems and they find some problems that are not found in their home. This relationship that is private causes them to have private conversations about their feelings to peers regardless the good or bad experiences. This group generates the cooperation and helping each other but there are also competition and conflicts. (Connell, 2010).

The significant effect from the peer group during adolescence partly derived from the desire of adolescents to be accepted by the group and partly from the fact that they spend more time with peers. The search for identity to explain who he is and the role in society causes many adolescents outside the home with peers. Peer group become a means as well as a goal in searching their identity (Tome, 2012).

This research combined the delivery of health education by peer group with lecture method using leaflet, question and answer with researcher. This is in accordance with the statement. (Notoatmojo, 2009) that in choosing educational methods of groups and health education, it should be remembered the size of the target group and the level of formal education of the target.

CONCLUSION

Based on the study findings and discussion, it can be concluded that there is significant difference in perception of the students of Senior High School 1 Sorong City about the reproduction health with peer group method.

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THE EFFECT OF ADDITIONAL BEHAVIOR OF PLAYING ONLINE GAMES AGAINST MENTAL HEALTH DISORDERS

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ABSTRACT

The study aimed to discuss the effects of additional behavior on playing online games against mental health disorders. The analytical method used in discussing the topic of online game addiction, mental health disorders, the relationship between online games and mental health with the main source of literature review. The results of the discussion showed that the frequency of playing online games can be an addiction. This article concludes that online gaming can cause traits related to the inability to regulate emotions and feelings.

Keywords: Games, effects, addiction, mental disorders

INTRODUCTION

The results of Basic Health Research in 2007 showed that 11.6% of Indonesia's population aged 15 years and over experienced emotional mental disorders. As for people with mental disorders, they would experience mood disorders, thinking abilities, and emotional control that could ultimately lead to bad behavior even to mental disorders. Mental disorders or mental health in Indonesia today is still a serious problem.

Riskesdas 2013 data recorded the prevalence of severe mental disorders in Indonesia 1.7 per mile, which means 1-2 people in Indonesia experience severe mental disorders. Mental health disorders were initially affected by several types of mental health problems. The three types of mental health conditions that affect mental disorders are stress, anxiety disorders and depression.

Stress is a reaction or response from the body to psychosocial stressors (mental stress or the burden of life). Adolescence which is a transition period makes it vulnerable to stress. Based on research in Manado about the relationship of stress levels with the duration of playing online games on 66 people, the statistical test value of $p = 0.024 < = 0.05$ was obtained. The conclusion of this study is that there is a relationship between stress levels and the duration of playing online games for teens in Manado. (Phainel, 2009)

Based on research on the relationship between stress levels and the duration of playing online games in teens. A total of 56 people from the total respondents experienced mild stress, of the 56 respondents 22 people played online games with normal duration and 34 people played with excessive time duration. From the data it was found that stress levels can affect the duration of playing online games, ie the higher the stress level the more often a person plays online games (Phained, et al 2014).

It turns out that the excessive amount of time playing games can interfere with his mental health. The results of research on children in internet cafes located in Jatinangor, Sumedang showed that 38% of respondents were included in the category of non-addiction and 62% of respondents included in the category of addiction (Winsan, et al 2011). Often someone playing online games can cause addiction or addiction.

Several studies conducted in various countries also show a close relationship between online game addiction and depression. In a study conducted at Bolton University in England, the results showed that people who are addicted to video games have a tendency or risk of suffering from Asperger's Syndrome. From this study also obtained results that video game addicts are at risk of experiencing mental health disorders such as depression. The high frequency of playing games can make gamers become isolated and increase the risk of depression (Ani, 2008).

The rise of online games turns out to affect a person's mental state either stress or depression. Based on this we made writing about the Effects of Addiction Behavior Playing Online Games Against Mental Health Disorders. The purpose of this paper is to determine the effect of addicted behavior playing online games with mental health so as to minimize the addiction that occurs in order to avoid mental health disorders.

METHOD

The analytical model used in the discussion of the main topics in this article uses a causal analysis model that is effective in using a rational approach that is assembled based on the literature review.

RESULT AND DISCUSSION

1. ADDITIONAL ONLINE GAMES

In research on Addiction to Play Online Games at 71 School Age Children at Internet Cafes Online Game Provider Jatinangor Sumedang, the results obtained as much as 62% of respondents experienced addiction. The 54 child respondents among whom spend their free time to be able to play games. This criterion is often called salience. Playing games is used as the main activity that dominates thoughts, feelings, and behaviors. (Winsen, 2011)

Some Game Addiction Criteria are salience (players think about playing games all day), tolerance (players spend time playing games that are increasing), mood modification (players play the game until forgetting other activities), relapse (the tendency of players to play the game again after a long time no play), withdrawal (players feel bad or feel bad when they can't play the game), conflict (players fight with others because players play games excessively), and problems (players ignore other important activities that ultimately cause problems) (Lemmens, 2009).

The term addiction or "Internet addiction" in the study of Chaos and confusion in DSM-5 diagnosis of Internet Gaming Disorder: Issues, concerns, and recommendations for clarity in the field has been criticized and turned into Internet Gaming Disorder (IGD). The IGD diagnosis proposed in the latest (fifth) attachment to the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) states that the IGD usually involves certain Internet games. (Kuss, 2016)

Based on research on Internet Gaming Disorder and Well-Being: A Scale Validation that aims to validate the DSM-5 criteria of Internet Gaming Disorder (IGD), and analyze its relationship with five indicators of well-being: life satisfaction, loneliness, anxiety, depression, and academic performance The IGD scale shows validity and reliability that are satisfying and related in a way that is consistent with the welfare of the action (Sarda, 2016)

The Chinese version of the Online Game of Cognitive Addiction Scale (OGCAS; Li et al., 2008b) can be used to test cognitive style, compulsivity, withdrawal, and social function disorders related to online gaming. 16 items from OGCAS were calibrated with scores ranging from 1 (strongly disagree) to 5 (strongly agree) with higher scores reflecting a greater tendency towards Online Game Addiction (OGA). (HuanHuan, 2016)

Based on qualitative research on Online Game Addiction and its Handling in SMP Negeri 1 Palu students, it was found that the subjects (RZ) and (MT), both

research subjects became addicted or addicted to playing Online Games due to the availability of several supporting facilities to play games at home , the social factors of friendship with playmates and curiosity are very large for a type of game. (Ridwan, 2015)

2. MENTAL HEALTH DISORDERS

Mental health is the avoidance of a person from symptoms of mental disorders (neuroticism) and mental illness (psychoticism). If a person has good mental health he will be able to deal with existing problems and achieve harmony of the soul by feeling his happiness and ability positively. He can also develop and utilize all the potential that exists so as to avoid mental illness.

Based on research on television coverage of mental illness in Canada: 2013-2015 which aims to assess television coverage of mental illness in Canadian media and its changes over time. The data consisted of news releases which mentioned a number of 'mental illnesses' (N = 579) and were systematically collected using media search software, in trend analysis showing significant linear improvement and positively oriented. In 2013, less than 10% of broadcasts were positively oriented, whereas in 2015, this figure reached more than 40%. (Whitley, 2016)

The prevalence of severe mental disorders in the population of Indonesia is 1.7 per mil. Most severe mental disorders in DI Yogyakarta, Aceh, South Sulawesi, Bali and Central Java. The proportion of households that had confined households with severe mental illness was 14.3 percent and the most was in the population living in rural areas (18.2%), as well as in the population group with the lowest ownership index quintile (19.5%). (Riskseddas, 2013)

Some signs of mental health disorders are preceded by several types of mental health problems including stress, anxiety and depression. We need to be able to detect mental health in ourselves. As for there are several ways to detect stress, anxiety and depression, one of which is to detect stris is the College-student Stress Questionnaire (CSSQ; Chi and Lin, 2005). This instrument includes five subscales: academic stress, social communication stress, work-related stress, daily busyness, and major life events. The need to detect and manage stress to yourself (Coping Stress). (Huan Li, 2016)

3. RELATIONSHIP ONLINE GAME AND MENTAL HEALTH

Internet Addiction (IA) is a social and mental health problem that arises among young people. The results of research The relationship between recent stressful life events, personality traits, perceived family functioning and internet addiction among college students with 892 students as respondents. Respondents with severe addiction (9.98%) had a lower family relationship, (Symptoms of Mental Disease) neuroticism and (Mental Illness) high psychoticism, more stressful life events, and lack of learning. Mild addiction (11.21%) have high neuroticism and more health so that they can adapt to problems. (Yan Wi, 2014)

Online Game Addiction brings negative impacts, both from the physical and psychological aspects. From a psychological aspect, poor social relations with family and friends are often isolated from the community. This is what makes him vulnerable to psychiatric disorders, one of which is depression.

Based on research on the relationship between online game addiction and depression in Genesis Yogyakarta game center, respondents aged 17-24 years, as many as 64 people. The results showed that of the total subjects as many as 64 people, 35 people (54.7%) were low addiction, while 29 people (45.3%) were high addiction. A total of 39 subjects (60.9%) included in the category of no depression, 16 people (25%) mild depression, 8 people (12.5%) moderate depression, and 1 person (1.6%) severe depression. The results of the analysis using Spearman's non-

parametric correlation technique showed a significant relationship between online game addiction and depression (Warih, 2009)

The clinical picture of internet gaming disorders can be obscured by heterogeneous manifestations with other related factors, such as neurological factors, socio-cultural factors, and factors related to games that can influence pathogenesis and clinical course. To reduce these problems, doctors must be able to consider various aspects related to internet gaming disruption. Classifying such heterogeneous problems into subtypes that share the same etiology or phenomenology can provide additional clues in the diagnosis process and allow us to designate clinical resources available for susceptible factors. In this paper, we suggest the typology of 'impulsive / aggressive,' 'emotionally vulnerable,' 'social conditions,' and 'not determined' as subtypes of heterogeneous pathological phenomena of internet games. Implications of this subtype for assessment and treatment planning. (Lee, 2016)

Based on a study entitled Predictors and patterns of problematic Internet game use using a decision tree model, the results of six important predictors were found: game costs (50%), average game play time (23%), offline Internet gaming community meetings (13%), average weekend and game vacation time (7%), marital status (4%), and self-perception of addiction to using Internet games (3%). Additionally three patterns of the six classification rules are explored namely cost-consuming, socializing, and solitary gamers. Conclusion This study provides direction in the future for screening use for problematic internet games in adults (Rho, 2016)

The main objective of research on How Does Neighborhood Quality Moderate the Association Between Online Video Games Play and Depression? A Population-Level Analysis of Korean Students. Is to assess the relationship between playing online video games and mental well-being of adolescents based on a nationally representative sample. Data comes from the Korean Children and Youth Panel Survey (KCYPs), which was collected in 2011 and 2012. It investigated the extent of time spent playing online games related to depression. The multilevel regression model shows that respondents who are addicted to or play games are associated with greater depression. The findings also show that individual level variables (for example, sex, health, family background), who live in a community with more divorced families add to teen depression. In conclusion, cross-level interactions are observed: a positive relationship between game play and depression is also characterized by divorce rates. (Kim, 2016)

Addiction play game behavior can actually be detrimental both in terms of physical and mental. The need for good

4. HANDLING

Handling of time management so that someone does not addicted to online games, because we know the impact of online gaming addiction behaviors, including mental disorders such as stress, anxiety and depression which if not addressed can cause mental illness.

The handling of internet addiction that can be done according to Young (1999) is that the player sets the time by keeping a brief but frequent playing session and implementing a real schedule in playing the internet including games so that the player is in control. In addition, players can also do other activities besides playing online games. The social life support of players in real life is also very influential for handling internet addiction.

Wieland provides recommendations to psychotherapist nurse practitioners namely some handling addictions playing online games, including cognitive behavioral therapy (CBT) (Freeman, 2008). Cognitive Behavioral Therapy (CBT) is a treatment based on that thoughts determine feelings (Young, 2007). In school-age children the handling technique that can be done is family therapy. The Strategic Family Therapy

(BSFT) Brief is short-term therapy and focuses on therapeutic interventions. The target of handling this technique is children aged 6-17 years (Young, 2009).

Handling online game dependency for children at home with the attention of parents and family. As for handling in schools, namely assistance from various parties, especially the school. Giving trust to school counselors or counseling teachers to hold seminars for students about online games and problems that will be caused, manage children's learning and playing time, include material about online games and their impact on students and provide a good channel in choosing educational games and establish interpersonal communication so that children can be open with parents. (Ridwan, 2015).

CONCLUSIONS

Online games can cause traits related to the inability to regulate emotions and feelings. In this case triggers the individual to do negative things and affect mental health disorders such as bad-tempered, jolly, shy, lazy, liar, and so forth. It can even affect mental health disorders such as stress, anxiety disorders and depression.

As a result of mental health disorders can affect several social aspects in living everyday life, because the amount of time spent in cyberspace results in less interaction with other people in the real world. This certainly affects the social activities that are usually carried out by most other people.

Many children like to play games experience a decline in performance, experience problems with their personality, suffer from illness, and even fall into committing a crime. Therefore the need for handling in managing time and managing mental health disorders who that occur when playing online games. Internet and Online Games that have experienced progress need to be balanced with the ability of a person to manage themselves both time and mental health.

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EFFECTIVENESS OF PURSED LIP BREATHING (PLB) AND DIAPHRAGM BREATHING EXERCISE (DBE) TECHNIQUES AGAINST VITAL LUNG CAPACITY IN CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD) PATIENTS

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ABSTRACT

Chronic Obstructive Pulmonary Disease is a frequent respiratory system disorder occur with clinical manifestations in the form of shortness of breath and respiratory resistance. Patients often experience increased resistance to airflow, *air trapping* and pulmonary hyperinflation. Management of Chronic Obstructive Pulmonary Disease patients can be done with an exercise program as a non-pharmacological therapy such as breathing exercises. This study was to identify the effectiveness of the pursed lip breathing and diaphragm breathing exercise techniques to vital lung capacity in Chronic Obstructive Pulmonary Disease patients. The research design was quasi-experimental with pre and post-test group with the sample Chronic Obstructive Pulmonary Disease patients amount of 60 people, with the division of 30 intervention groups taking pursed lip breathing actions and 30 control groups taking diaphragm breathing exercise actions. The results showed that there was a difference in the average maximum inspiration volume before and after the pursed lip breathing and diaphragm breathing exercise action. There was no difference in the average vital lung capacity after an action in the intervention group and the control group. Based on this study that the pursed lip breathing and diaphragm breathing exercise can be practice to Chronic Obstructive Pulmonary Disease patient to increase respiratory function.

Keywords: Pursed Lip Breathing; Diaphragm Breathing Exercise; Vital Lung Capacity; Chronic Obstructive Pulmonary Disease

INTRODUCTION

Chronic Obstructive Pulmonary Disease (COPD) is a chronic respiratory disorder that is not fully reversible caused by obstruction of the respiratory tract (Global Initiative for Chronic Obstructive Lung, 2017). Patients with COPD often experience increased resistance to airflow, *air trapping* and pulmonary hyperinflation.

The problem that can arise due to pulmonary hyperinflation is an increase an imbalance between the respiratory mechanism, strength and ability of breathe effort to meet tidal volume (Black and Hawk, 2014). These conditions can cause decreased lung ventilation function, where lung ventilation is the ability of the chest and lungs to move air into and out of the alveoli. The ventilation function of the person is affected by exercise, disease, age, sex and height (Guyton & Hall, 2014).

Chronic Obstruction Pulmonary a stout respiratory disorders suffered by people in the world. In 2020 is expected to be the fifth largest disease in the sequence and is projected to be the third highest leading cause of death (Black and Hawk, 2014). This disease will continue to increase in the future in line with exposure to risk factors for disease and aging of the population (GOLD, 2017). The high incidence of this disease will cause high mortality and decreased quality of life for these sufferers.

Indonesia is a country that is quite high in Chronic Obstructive Pulmonary Disease cases. It is estimated that in Indonesia there are 4.8 million Chronic Obstructive Pulmonary Disease patients with a prevalence of 5.6%. The development of Chronic Obstructive Pulmonary Disease occurs slowly and symptoms often worsen

over time due to airway obstruction. Airway obstruction in Chronic Obstructive Pulmonary Disease patients causes impaired oxygen fulfillment which can be seen from a decrease in peak expiratory flow and patients to complain of shortness of breath. These conditions if not treated immediately it will hurt the patient's condition.

Management of Chronic Obstructive Pulmonary Disease patients can be done with a therapy program or exercise program (GOLD, 2017). The training program is a non-pharmacological therapy in the management of Chronic Obstructive Pulmonary Disease patients. One non-pharmacological therapy that can be performed on Chronic Obstructive Pulmonary Disease patients is breathing exercises. Type of patient exercise respiratory conducted in Chronic Obstructive Pulmonary Disease may be a technique pursed lip breathing and the diaphragm breathing exercise. Based on Singh & Singh's (2012) study, it was explained that the pursed lip breathing technique was considered effective in the pulmonary rehabilitation approach that was used to increase peak expiratory flow and reduce shortness of breath. Other studies explain that Chronic Obstructive Pulmonary Disease patients over 40 years of age show results that the pursed lip breathing technique increases peak expiratory flow and oxygen saturation in Chronic Obstructive Pulmonary Disease patients and decreases the respiratory frequency and significantly increases the physical tolerance of patients suffering from Chronic Obstructive Pulmonary Disease (Sachdeva et al, 2013).

Diaphragm breathing exercise is a breathing technique that uses a diaphragm while breathing through your nose and exhale through the mouth. The diaphragm breathing exercise aims to develop abdominal breathing, contracting the main breathing muscles, the diaphragm, so that the auxiliary breathing muscles are not involved in this breathing and can reduce respiratory work so that diaphragm breathing exercise can reduce and control shortness of breath.

The results of Afrilia Safira's study (2016) explained that there was an effect of diaphragm breathing exercise on increasing oxygen saturation in asthma patients in the treatment group ($p= 0.000$). The results of other studies explain that there is an influence of diaphragm breathing exercise on vital lung capacity in asthma patients in the working area of North Denpasar community health centre (Mayuni, et al, 2015).

Based on the description above, the studyers are interested in comparing the effectiveness of pursed lip breathing and diaphragm breathing exercise techniques in increasing vital lung capacity in Chronic Obstructive Pulmonary Disease patients in the working area of Neglasari Health Center, Tangerang City.

The vital lung capacity referred to in this study is the amount of air volume that is in the lungs when the patient makes maximum inspiration (maximum inspiration volume) that measured using a spirometer to find out what amount of air during the maximum inspiration carried out for three times then the average value is searched. Pursed lip breathing technique is a breathing exercise by emphasizing the process of expiration with the aim to facilitate the process of expelling air trapped in the respiratory tract that done in a way that the patient is recommended to take a deep breath through the nose and exhale through the mouth by mouth mouthing, carried out twice a day, in the morning and before dinner for two weeks. Diaphragm breathing exercise is breathing exercise that relaxes the breathing muscles when doing deep inspiration that carried out by means of the patient sleeping in the supine sleeping position, the head is propped up with a pillow, the position of the legs is bent on a pillow and one hand is placed on the chest and the other hand is placed on the stomach, exhale through the mouth. This action is carried out twice a day, in the morning and before dinner for two weeks.

METHOD

This study was a quasi-experimental study using a control group design with pretest and posttest. The population in this study were all COPD patients in the working area of the Neglasari Community Health Center in Tangerang City. The sampling technique is quota sampling. Respondents were divided into two groups namely group one as an intervention groups was given pursed lip breathing action and group two as a control groups was carried out by diaphragm breathing exercise action. The first day before the action pursed lip breathing and diaphragm breathing exercise measured of the maximum inspiration volume value using spirometry in both groups. After that each action was carried out on both groups for two weeks. This study was conducted from April to November 2018. The univariate analysis was carried out to describe the characteristics of the respondents. The results of the data analysis are the distribution of the frequency and presentation of each variable for the categorical data, while the results of the analysis for numerical data include the mean and standard deviation. Bivariate analysis using t dependent test to test the effect of the technique of pursed lip breathing and diafragma breathing exercise to vital lung capacity, while to determine the effectiveness between the two actions using an independent t test. Data normality test was done before conducting bivariate analysis.

RESULT

Table 1. Distribution Of Respondents By Sex, Occupation, Family History Of Asthma, And Smoking History In The Intervention And Control Groups (N=30)

Variable	Frequency	Percentage (%)
Sex		
Male	12	40
Female	18	60
Work		
does not work	20	66.7
working	10	33.3
Family history of asthma		
nothing	20	66.7
there is	10	33.3
Smoking history		
do not smoke	1	3.3
passive smokers	21	70.0
active smoker	8	26.7
<hr/>		
Control group (DBE)		
Sex		
male	7	23.3
female	23	76.7
Work		
does not work	25	83.3
working	5	16.7
Family history of asthma		
nothing	15	50
have asthma in family	15	50
Smoking history		
do not smoke	6	20.0
passive smokers	20	66.7

Variable	Frequency	Percentage (%)
Active smoker	4	13.3

The results of this study shows that most of the respondents either the intervention group or the control group was female 60% and 76.7%, most respondents did not work well in group control and intervention group 66.7% and 83.3%, the majority of respondents in the intervention group did not have a history of asthma in the family (66.7%) whereas in the control group have same percentage between the have and do not have a history of asthma in the family, most respondents to be passive smokers in the intervention and control groups 70% and 66.7%.

Table 2. Distribution of Respondents Based on Age, Weight, Long Suffered from Asthma, Frequency of Asthma Attacks, Vital Lung Capacity Average Before and After the PLB and DBE Action (n=30)

Variable	Mean	Standard deviation	Minimum-maximum	95% CI
Age	56.37	12.87	29 – 75	51.56-61.17
Weight	55.70	7.53	45 - 73	52.89-58.51
Long suffered from asthma	3.60	2.47	1-10	2.68-4.52
Frequency of attack	1.57	0.77	1 – 3	1.28 - 1.86
Average of vital lung capacity before PLB action	743.70	324.83	283 – 1567	622.4-865.0
Average of vital lung capacity after PLB action	1048.33	437.47	500 – 2167	884.98-1211.69
Age	51.67	13.17	24 - 73	46.75-56.58
Weight	56.47	13.08	35-82	51.58-61.35
Long suffered from asthma	7.20	3.38	1-10	5.94-8.46
Frequency of attack	1.80	1.32	1 – 5	1.31-2.29
Average vital lung capacity before DBE action	752.87	278.37	400–1317	648.92-856.81
Average of vital lung capacity after DBE action	1007.80	336.54	500 - 1667	882.14-1133.46

The mean age of respondents in the intervention group was 56.37 years, with a standard deviation of 12.87 years. The mean weight of respondent was 55.70 kg, with a standard deviation of 7.53. The mean long suffered from asthma was 3.60 years, with a standard deviation of 2.47 years. The mean frequency of asthma attacks is 1.57 times per month, with a standard deviation of 0.77. The mean of vital lung capacity average before action PLB was 743.70 ml, with a standard deviation of 324.83 ml. The

mean of vital lung capacity average after the act of PLB was 1048.33 ml, with a standard deviation of 437.47 ml.

The mean age of respondents in the control group was 51.67 years, with a standard deviation of 13.17 years. The mean weight of respondent was 56.47 kg, with a standard deviation of 13.08 kg. The mean long suffered from asthma was 7.20 years, with a standard deviation of 3.38 years. The mean frequency of asthma attacks is 1.80 times per month, with a standard deviation of 1.32. The mean of vital lung capacity average before action DBE was 752.87 ml, with a standard deviation of 278.37 ml. The mean of vital lung capacity average after the act of DBE was 1007.80 ml, with a standard deviation of 336.54 ml.

Table 3. Comparison of Vital Lung Capacity Average Before and After PLB and DBE Measures (N=30)

No	Variable	Activity	Mean	Standard deviation	t	Df	p value
Intervention group (PLB)							
1	average of vital lung capacity	Before	743.70	324.83	-5.47	29	0,000
		After	1048.33	437.47			
		Difference	304.63				
Control group (DBE)							
1	average of vital lung capacity	Before	752.87	278.37	-5.13	29	0,000
		After	1007.80	336.54			
		Difference	254.93				

The mean of vital lung capacity average before action PLB was 743.70 ml, with a standard deviation of 324.83 ml. The mean of vital lung capacity average after the act of PLB was 1048.33 ml, with a standard deviation of 437.47 ml. Statistical test result indicate there was an effect of PLB on vital lung capacity (pValue=0,000). The mean of vital lung capacity average before DBE action was 752.87 ml, with a standard deviation of 278.37 ml. The mean of vital lung capacity average before action DBE was 752.87 ml, with a standard deviation was 278.37 ml. The mean of vital lung capacity average after DBE action was 1007.80 ml, with a standard deviation of 336.54 ml. Statistical test result indicate there was an effect of DBE on vital lung capacity (pValue=0,000).

Table 4. Comparison of Vital Lung Capacity Average Difference After PLB And DBE Measures (N=30)

No	Activity	Mean	Standard deviation	SE	p value	N
1	PLB	3,046	305,298	55.74	0.406	30
	DBE	2,549	272.27	49.71		

This study show the difference in mean vital lung capacity after pursed lip breathing action was 3,046 ml with a standard deviation of 305,298 ml, while for diaphragm breathing exercise measures the difference in vital lung capacity was 2,549 ml with a

standard deviation of 272.27 ml. Statistical test results obtained a value of 0.406, meaning that at 0.5% alpha there was no significant difference in the mean vital lung capacity between respondents responding to pursed lip breathing and diaphragm breathing exercise measures.

DISCUSSION

The majority of respondents have female sex. The same research results are explained in a study conducted by Rahayu et al (2012) which explained that 59% of asthmatics have female sex. Likewise, the results of a study conducted by Dogra et al (2011) which explained that asthma respondents were more female. Herry Priyanto (2011) in his research results found that 66.7% of asthma patients were female. COPD disease (asthma) is more common in women because women report symptoms more often and women seek treatment more often from hospitals if they experience complaints. Non-specific bronchial hyperresponsiveness was found to be being to female rather than male (Alsagaf and Mukty. 2008).

The majority of respondents did not work either in the intervention group or the control group. The results of this study are in line with the results of the study of Herry Priyanto et al (2011) which explains that the majority of respondents do not work 46.1% while the rest have jobs as civil servants, students and teachers. The type of work can affect COPD disease indirectly. Some types of work cause excessive stress and fatigue which can lead to COPD (asthma) attacks. This type of work can trigger an asthma attack for those diagnosed with asthma. This can be related to the stress conditions experienced and the extent of coping mechanisms possessed by patients in managing the problems they experience.

Chronic Obstructive Pulmonary Disease is a genetic disease. Nurses need to do a genetic history assessment for asthma patients. The results of this study indicate that the majority of respondents have a family history of asthma.

The majority of respondents were passive smokers in both the intervention and control groups. Passive smokers mean the respondent does not smoke directly but in his daily life the respondent contacts directly with active smokers. The results of this study was in line with the research of Baiq Widia and Siti Khotimah (2017) which explains that 100% of respondents were passive smokers. Exposure to cigarette smoke in nonsmokers (passive smokers) has a significant relationship to the incidence of COPD. In cigarette smoke, more than 4000 chemical active substances are found that have the potential to cause lung and heart problems, besides these active substances are carcinogenic. The content of substances in cigarettes other than nicotine are carbon monoxides and tar. Carbon monoxide prevents the bonding between hemoglobin and oxygen so that the supply of oxygen to important organs is reduced. Tar carcinogenic compounds will irritate the bronchial mucous membrane so that it eventually becomes damaged and has the potential to become cancerous and COPD.

Physiologically with increasing age the ability of the organs of the body will decrease naturally, including lung function in this case the maximum inspiration volume. The chest wall and airway become stiff and less elastic and the amount of air exchange decreases with increasing age. Decreased lung function can occur gradually due to internal factors. Lung function in COPD patients more quickly decreased compared with the normal people of the same age, it is marked by an oil record elastic lung decreases, the chest wall stiffness and strength of respiratory muscles are weakened, resulting in a decrease in the score of expiratory volume and residual volume increased

The average respondent experiencing asthma was 11.18 years. The longer the respondent experiences complaints and clinical manifestations will increase the patient's adaptation to the disease. However, this condition is not always expected to

occur in patients. Sometimes there are conditions where the patient shows behavior that is not in accordance with the actions of the management of the disease he understands.

The average frequency of asthma attacks is 2.48 times a month. The frequency of asthma attacks experienced by patients is very dependent on the level of asthma control. The more controlled asthma, the less frequency of attacks. Controlled asthma conditions can be seen that asthma attacks that interfere with daily work have never been felt, sufferers have never felt complaints of shortness of breath, patients never complain of wheezing, coughing, shortness of breath, chest pain, the patient has never used lozenges emergency to relieve breathing and patients assess that the disease is fully controlled (Imelda, 2007).

The function of the lungs determines a person's oxygen consumption, which is the amount of oxygen bound by blood in the lungs for the body to use. Oxygen consumption is closely related to blood flow to the lungs. Airway obstruction can cause reduced air flow. The presence of obstruction can cause expiratory difficulties and lengthen the expiratory phase.

Breathing exercises are carried out with the aim of getting a better breathing arrangement from the previous breathing which is fast and shallow breathing becomes slower and deeper. This exercise is done to reduce and control shortness of breath. The purse lip breathing technique can help control the amount of breathing and shortness of breath. The pursed lip breathing technique helps get air into the lungs by incorporating energy to breathe. The purpose of deep breathing is to achieve more controlled and effective ventilation, with the pursed lip breathing technique being able to increase final expiratory volume and increase final inspiration. The pursed lip breathing technique can slow the rate of breathing and reduce the restrictive pressure in the airways, thereby reducing airway constriction during expiration so that it can reduce dyspnea. Pursed lip breathing technique in COPD patients will stimulate slow breathing patterns and is better done at rest (Muttqien, 2013).

Diaphragm breathing exercise was carried out to provide a significant increase in the expiratory peak flow in smokers. This effect can occur because diaphragm breathing exercise trains the main muscles of breathing, the diaphragm muscles that work on expiration. The respiratory process is an important component of a respirator pump and works well to produce more effective ventilation of air flow, reduce transmural gradient pressure, and maintain the patency of the airway that collapses during exhalation. The process helps reduce trapped air expenditure so that it can control expiration and facilitate alveoli emptying optimally so that there is an increase in the vital lung capacity in COPD patients.

The results of the study hypothesis test showed that there was an increase in the vital lung capacity after pursed lip breathing and diaphragm breathing exercise measures. Although there was a higher increase of vital lung capacity average in the PLB group compared to DBE group but because of the difference is only a little so there is no more effective action in increasing the vital lung capacity. This reinforces that pursed lip breathing and diaphragm breathing exercise techniques can increase the vital lung capacity of COPD patients. The vital capacity of the lungs is influenced by a person's habit of breathing exercises. Breathing exercises can increase blood flow through the lungs so that oxygen can diffuse into the lung capillaries with a larger and maximum volume.

CONCLUSIONS

This study show that pursed lip breathing and diaphragm breathing exercise was no significant difference in mean vital lung capacity after pursed lip breathing and diaphragm breathing exercise although there was a higher increase in the PLB group compared to DBE group. It was mean that pursed lip breathing and diaphragm

breathing exercise can be practice to COPD patient to increase respiratory function. Suggestions from this study that can be formulated in connection with this study are that the public health centre are expected to provide health education about pursed lip breathing and diaphragm breathing exercise for COPD patients and carry out the process of mentoring these breathing exercises so that COPD patients can increase their productivity.

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MATERNITY CLASS INFLUENCE IN CHANGING MOTHER BEHAVIOR ON PRELACTEAL FOOD DELIVERY AT NEONATES AGE 1 - 3 DAYS IN PANCURBATU DELI SERDANG REGENCY PUSKESMAS WORKING AREA

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ABSTRACT

In order to reduce morbidity and mortality rates, UNICEF and WHO recommend that children should only breastfed for at least six months. Solid food to be consumed after 6 months, and breastfeeding continues until the child is two years old. The target of exclusive breastfeeding in 2014 is 80%. Nationally, the exclusive breastfeeding coverage of 52.3% has not reached the target, with West Nusa Tenggara Province reached the target with 84.7%. One of the factors of exclusive breastfeeding success is the implementation of early breastfeeding initiation. The coverage of breastfeeding pattern for infants aged 0 months was 39.8% of exclusive breastfeeding, 5.1% of predominant breastfeeding and 55.1% of partial breastfeeding. The percentage of exclusive breastfeeding decreases with increasing on age group. As stated by 2013 Riskesdas, the Province of North Sumatra is the province with the highest prelacteal feeding coverage in infants which is 62.7% and the lowest is East Nusa Tenggara province of 22.2%. This study aims to determine the effect of maternal class on prelacteal feeding.

The research design used is Quasi Experimental method with one group design before and after intervention. The population is pregnant women with gestational age of 28-36 weeks who received service at Posyandu in Pancur Batu Puskesmas working area, Deli Serdang Regency on March to August 2017. The sample is normal pregnant women in Pancur Batu Community Health Center, Deli Serdang regency. The sampling was taken by purposive sampling.

The result of the research shows that the average increase of respondent behavior before and after done by pregnant mother class are; knowledge 26,44; attitude 8,4237; action 55,47458 with P value 0,000.

Maternity Class influence changes in mother's behavior. It is expected to health workers especially midwives to actively continue in providing counseling to pregnant women and to provide support to the family about prelacteal food.

Keyword: Maternity Class, Prelacteal Food Delivery, Neonates 1-3 days.

INTRODUCTION

Child health care efforts are aimed at preparing future generations who are healthy, intelligent, and of high quality and to reduce child mortality. Efforts to maintain children's health from the time the fetus is still in the womb, born, after birth, and until the age of 18 (eighteen) years. Child health efforts are expected to reduce child mortality. namely Neonatal Mortality Rate (NMR), Infant Mortality Rate (IMR), and Toddler Mortality Rate (TMR). Attention to efforts to reduce neonatal mortality (0-28 days) is important because neonatal deaths contribute to 59% of infant deaths. (RI Ministry of Health, 2015)

Based on the results of the 2012 Indonesian Demographic and Health Survey (IDHS), the Neonatal Death Rate (NDR) in 2012 was 19 per 1,000 live births. This figure is the same as the NDR based on the 2007 IDHS and only decreased by 1 point compared to the 2002-2003 IDHS, which is 20 per 1,000 live births (LB). The highest deaths in infants and toddlers occur in the neonatal period. The results of Riskesdas

2007 showed that 78.5% of neonatal deaths occurred at the age of 0-6 days (Ministry of Health Republic of Indonesia, 2015)

This mortality rate is higher in children of less educated mothers than in children born to more educated mothers. During the period 1999-2007, the infant mortality rate for children of uneducated mothers was 73 per 1,000 KH, while the infant mortality rate for mothers with secondary education or higher was 24 per 1,000 LB.

This difference is caused by behavior and knowledge about better health among educated women. To achieve the target of reducing the IMR on the 2015 Millineum Development Goals (MDGs) of 23 per 1,000 LB, increasing access and quality of services for newborns (neonatal) is a top priority. The global commitment in the MDGs sets targets related to child mortality, namely reducing child mortality by two-thirds in the period 1990-2015. (RI Ministry of Health, 2015).

In order to reduce the morbidity and mortality rate of children, the United Nations Childrens Fund (UNICEF) and the World Health Organization (WHO) recommend that children should only be breastfed for breast milk (ASI) for at least six months. Solid food should be given after the child is 6 months old, and breastfeeding is continued until the child is two years old (WHO, 2005) in 2003 the Indonesian government changed the recommendation for the duration of exclusive breastfeeding from 4 months to 6 months. (RI Ministry of Health, 2014)

Referring to the target program in 2014 of 80%, nationally the coverage of exclusive breastfeeding by 52.3% has not reached the target. According to the province, there was only one province that had achieved the target, namely West Nusa Tenggara Province at 84.7%. West Java Province was 21.8%, West Papua 27.3%, and North Sumatra 37.6% were the three provinces with the lowest achievements. Government Regulation of the Republic Indonesia Number 33 of 2012 concerning Exclusive Breastfeeding Article 6 reads "Every mother giving birth must give exclusive breastfeeding to the baby she is born",

Decree of the Minister of Health Number 450 / MENKES / SK / VI / 2004 concerning Exclusive Breastfeeding in Indonesia Establish exclusive breastfeeding in Indonesia for 6 months and are recommended for up to children aged 2 years or more by providing appropriate supplementary food. and health workers to inform all new mothers to give exclusive breastfeeding by referring to the 10 steps to successful breastfeeding. (RI Ministry of Health, 2014)

WHO has recommended to all babies to get colostrum, namely breast milk on the first and second day to fight various infections and get exclusive breastfeeding for 6 months (Ministry of Health, 2012). The policy of implementing early breastfeeding initiation is also expected to reduce infant mortality (IMR) in accordance with the achievement of MDGs by 23 per 1000 live births in 2015 (MOH, 2013).

One of the success factors of exclusive breastfeeding is the implementation of early breastfeeding initiation. Early breastfeeding and exclusive breastfeeding initiation from birth to the age of six months are two important breastfeeding practices that are essential for optimal survival and growth of infants (Noer, 2011). Early breastfeeding initiation becomes very important in relation to maintaining the productivity of breast milk.

In the Riskesdas report breastfeeding patterns are grouped into 3 categories, namely exclusive breastfeeding, predominant breastfeeding and partial breastfeeding. Coverage of breastfeeding patterns in infants aged 0 months was 39.8% exclusive breastfeeding, 5.1% predominant breastfeeding and 55.1% partial breastfeeding. The percentage of exclusive breastfeeding decreases with increasing age groups of infants. In infants aged 5 months exclusive breastfeeding was only 15.3%, predominant breastfeeding 1.5% and partial breastfeeding 83.2%. Based on Riskesdas 2013, Province of Sumatra.

METHOD

This research was conducted in the Working Area of Pancurbatu Health Center in January to December 2017, collecting data from July to October 2016. The design of this study was a quasi-experimental, with one group design before and after intervention, to determine differences in maternal behavior before and after the pregnant mothers class towards prelacteal feeding in neonates. prelacteal food in Neonates aged 1-3 days. The population in this study were all pregnant women in the work area of Pancur Batu Health Center, Deli Serdang Regency for the period of July to October 2017, of which 70 were. The sample size can be calculated using the proportion estimation formula with absolute precision. Total of 53 mothers

Anticipate Drop Out, Loss to Follow, or Disobedient Subjects estimated to drop Out 10% Then the sample size can be calculated using the formula:

$$n' = \frac{n}{(1 - f)} = 59 \qquad n = \frac{z_{1-\alpha/2}^2 P(1 - P)}{d^2}$$

Sample

The sample in this study was third trimester pregnant women who came to carry out antenatal care checks to the posyandu / midwife of independent practice and Puskesmas in the working area of the Pancurbatu Puskesmas Deli Serdang district by purposive sampling with

Inclusion Criteria

1. Third trimester pregnant women
2. Pregnant women who live in the Pancur Batu Health Center working area for at least 1 year in the future

Exclusion Criteria

1. Pathological pregnant women
2. Residence is not settled

Data analysis is done by Univariate Analysis, Bivariate Analysis with dependent t-test is often called Pair / Related t test

RESULTS AND DISCUSSION

This research was conducted in the working area of Pancur Batu Health Center in Deli Serdang Regency for 3 (three) months, after evaluating the results it can be presented in the following tables.

Univariate Analysis

- 1.1. Results of Univariate Analysis, Characteristics of Pregnant Women, Behavior Of Pregnant Women Before And After Classes Of Pregnant Women Classes Of Pregnant Women

Table 1
Distribution of Pregnant Characteristics Respondents Working Area in Pancur Batu District Deli Serdang at 2017.

Respondent Characteristic	F (59)	Amount %
Mother's Age Characteristic		
< 20 years	2	3,4
20 – 35 years	41	69,5
35 years	6	27,1
Mother's education		
Low education	20	33,9
Middle education	33	55,9
Higher education	6	10,2
Mother's job		
Doesn' t work	53	89,8
Work	6	10,2
Parity		
1	16	27,1
2-3	34	57,6
3	9	15,3

Above from table 2 it can be concluded that most pregnant women aged 20 -35 years were 41 people (69.5%) and there were still respondents aged less than 20 years as many as 2 people (3.4%) and more than 35 years as many as 6 people (27.1%). Judging from the education of the majority of respondents having a secondary education of 33 people (55.9%) and at least a tertiary education of 6 people (10.2%). Judging from the work of the majority of respondents as housewives as many as 53 people (89.8%) and the minority work as civil servants, private and farming namely 6 people (10.2%). Based on the parity of the majority of mothers with parity of 2-3 people as many as 34 people (57.6%), and there are still mothers with parity of more than 3 as many as 9 people (15.3).

Description of respondent's behavior regarding pre-actual feeding in neonates aged 1-2 days

Table 2
Distribution of Maternal Behavior about Prelacteal Foods Before and After
Conducting Pregnant Women classes in the Pancurbatu Puskesmas Deli
Serdang District in 2017

Respondent Behaviour	Mothers Class Pre Pregnant		Mothers Class Post Pregnant	
	F	%	F	%
Knowledge				
Less	39	66,1	2	3,4
Enough	17	28,8	19	32,2
Good	3	5,1	38	64,4
Attitude				
Support	7	11,9		
Doesn' t support	52	88,1	59	100
Action				
Corresponding				
Doesn't Corresponding	42	71,2	16	27,1
	17	28,8	43	72,9
Amount	59	100	59	100

From 2 table can be seen Respondents' knowledge before the classes of pregnant women the majority of them lack knowledge as many as 39 people (66.1%), only a small proportion of people who have good knowledge about prelacteal food in neonates are as many as 3 people (5.1%).

After the pregnant mothers class about pre-treat food in neonates the respondent's knowledge increased with good knowledge to 38 people (64.4%) Based on the attitude of respondents before and after classes of pregnant women the majority of attitudes support not providing prelacteal food and 7 pregnant women (11.9%) supportive attitude to be given Prelacteal Food

Based on respondent's actions. Based on experience from previous deliveries the majority of respondents provided pre-realistic food as many as 42 (71.2%) respondents and after the Pregnant Women class was carried out in the class of pregnant women and based on observations obtained from 59 respondents 17 mothers (27.1%) of mothers gave pre-realistic food namely neonates have been given formula milk, starch water and water

Bivariate Analysis

The difference between the respondent's behavior before and after the Pregnant Women class about pre-actual feeding in Neonates can be seen in the following tables

The difference between the respondent's behavior before and after the Pregnant Women class about pre-actual feeding in Neonates can be seen in the following tables.

Table 3.
Distribution of Pretest and Posttest Results of Respondents Knowledge Before and After Conducting Classes of Pregnant Women in the Working Area of Pancurbatu Health Center in 2017

Variabel	Mean	Deviation standard	Mean cut	P. Value	SD pre & post
Knowledge					
- Pretest	52,73	14,102	26,44	0,00	2,885
- Posttest	79,17	12,83			

From the results of the research that has been obtained, the average knowledge score of pretest 52.73 and posttest 79.1729 and an increase in knowledge 26.44407 means that there is a difference in knowledge between before and after the Class of Pregnant Mothers class of pregnant women about preteal food in neonates.

This study is in accordance with the research of Tia Komala Sari, et al. In the Working Area of Pringapus Health Center, Semarang Regency in 2015, one of the causes of failure in exclusive breastfeeding was low maternal knowledge. The Mamon to research results show that there is a significant relationship between the place of delivery of the mother and the knowledge of the mother with exclusive breastfeeding.

Based on the results of Husnah's research, Detty Siti Nurdiati, Emy Huriyati et al were conducted at the Banda Aceh Nangroe Aceh Darussalam Maternity Clinic shows that knowledge and behavior of midwives have a relationship with lactation initiation with (p = 0.041 OR = 3.94).

According to Purwodarminto, (1999); Notoatmodjo, (1993) knowledge is the result of knowing because of learning knowledge, experiencing, seeing and hearing after people have sensed a certain object. To achieve changes in knowledge of a class of Pregnant Women requires the right methods and appropriate learning conditions. Knowledge is a dominant factor that is very important for the formation of one's actions (Notoatmodjo, 2003). This research is also in accordance with the Stimulus-Organism-Response (SOR) Theory assumes that the cause of behavior changes depends on the quality of the stimulus (stimulus) that communicates with the organism.

This means that the quality of the communication sources (sources) such as credibility, speaking style will determine the success of changing the behavior of a person, group or society. In the opinion of Hosland, et al (1953) said that the process of behavior change is essentially the same as the learning process, namely by providing information will increase respondents' knowledge. Changes in behavior in this way take a long time, but the changes achieved are lasting because it is based on their own consciousness (not because of coercion). Improvement of knowledge also depends on the quality of the sources of communication (sources) such as credibility, speaking style is crucial to the success of changing one's knowledge. From the results of the study, there were 39 (66.1%) respondents who lacked knowledge after having a class of Pregnant Women, only 2 (3.4%) respondents who lacked knowledge.

This was due to the education of the majority of respondents having secondary education, making it easier for respondents to receive information and there was a

desire from respondents to change, according to opinions (Arikunto, 2002) the level of education is also one of the factors that influence one's perception to more easily accept new ideas and technologies, can support or influence one's level of knowledge, and a low level of education is always coupled with information and limited knowledge, the higher the education the higher one's understanding of the information obtained and the better the knowledge.

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Differences in Respondents 'Attitudes Before and After Pregnant Mothers' Classes about Prolactal Foods in Neonates

Table 4.
Distribution of Pretest and Posttest Results of Respondents' Attitudes Before and After Conducting Classes of Pregnant Women in the Working Area of Pancurbatu Health Center in 2017.

Varia bel	Mean	Deviation Standar	Mean cut	P. value	SD pre & post
Attitude					
- Pretest	31,46	5,05	39,88	0,00	5,86
- pos test	39,88	4,52			

From the results of the research that has been done, there is a significant difference between the attitudes of respondents about the prolactal food before the class of pregnant women and pregnant mothers after classes of pregnant women. with a difference of 8.42373 with a standard deviation of 5.8663, a value of $p = 0.00$,

Attitude is a condition in human beings that moves to respond to pre-actual feeding, besides attitude also provides readiness to respond in a positive or negative nature about prolactal feeding. From the research conducted before and after the class of pregnant women there were no more respondents with supportive attitudes towards providing prolactal food, the results of the study are in line with the theory of supportive attitude based on good knowledge, according to B.F. Skinner (in, Azwar 2005) attitude formation is influenced by personal experience, because attitudes will be more easily formed if the personal experience involves emotional factors. The influence of others who are considered important. in general, individuals are conformist or in line with the attitudes of those they consider important. This tendency is motivated, among others, by the desire to be affiliated and the desire to avoid conflict with people who are considered important. Mass media as a means of communication, various mass media such as television, radio, have a major influence in the formation of people's opinions and beliefs. New information about something provides a new cognitive basis for the formation of attitudes towards it. Suggestive messages carried by the information, if it is strong enough, will provide an affective basis in perceiving and evaluating things so

that certain attitudes are formed. There is now a lot of information about early breastfeeding insurance provided at least half an hour after the baby is born, with the hope that exclusive breastfeeding can be achieved

Different Actions of Respondents Before and After Pregnant Mothers' Classes about Prolacteal Foods in Neonates

Table.5.
Distribution of Pretest and Posttest Results of Respondents' Actions Before and After the Class of Pregnant Women in the Working Area of Pancurbatu Health Center in 2017

Variabel	Mean	Deviation standard	Mean cut	P. value	SD pre & post
Action					
- pretest	21,03	9,99	55,47	0,00	9,53
- posttest	76.51	16.44			

Of the 59 respondents studied 42 (71.2%) of respondents gave prolacteal food to the neonates before with an average of 21.03 respondents' actions and after the Class of Pregnant Women performed in the class of pregnant women and based on observations obtained from 59 respondents 17 mothers (27 , 1%) mothers gave pre-treat food namely neonates had been given formula milk, starch water and plain water even though previously the respondent had planned not to give pre-treat food until breast milk was smooth. this is due to the feeling of the mother who cannot bear to see the baby crying and also the tradition of hereditary from parent to child based on experience feeling there is no problem with prolacteal feeding and the influence of parents / in-laws always intervene to intervene in childbirth and are supported by lack of knowledge about the impact of prolacteal feeding.

The results of this study are in accordance with research conducted by Tia Komala Sari, et al., causing factors maternal failure to provide breast milk for exclusion due to low support from husbands, and public awareness in encouraging increased breastfeeding is still low (Maryunani, 2012) similar to what Novianti conducted her research on factory workers in Jakarta said the level of mother's education, mother's knowledge, traditions of the mother in providing prolacteal intake and family support for the provision of prolacteal intake are related to the feeding of preelacteal food. In the opinion of Kurt Lewin (1970) that human behavior is a balanced state between driving forces (restructuring forces).

This behavior can change if there is an imbalance between the two forces within a person. According to Pavlov behavior changes occur because of the practice and repetition of habits and willingness to act.

CONCLUSIONS AND SUGGESTIONS

Based on the discussion of the results of the study, conclusions can be drawn about the influence of the class of pregnant women on changes in maternal behavior in the feeding of prolacteal in the work area of the Puskesmas District of Pancur Batu, Deli Serdang Regency, Deli Serdang. After univariate and bivarial testing, it can be concluded as follows:

- a. Mother's behavior about giving prelacteal food to infants before pregnant mothers class; knowledge of mothers 39 (66.1) lacking knowledge, attitude does not support 7 people (11.9%), and the act of giving prelacteal 42 people (71.2%) provide pre-treat food
- b. Behavior after being given a class of pregnant women is obtained; good majority knowledge 38 people (64.4%), attitude does not support 59 (100%)
- c. After the mother gave birth 16 mothers (27.3%) gave prelacteal food, because because it was uncomfortable hearing the crying baby and the influence of the family and there was no support from the family.
- d. Based on the bivariate test, there is a significant difference in the behavior of the mother before the class of pregnant women, the class of pregnant women and after the class of pregnant women, the class of pregnant women is a very significant change is the average increase in knowledge with a value of 26.44, all respondents are ready to give ASI day 1 - day 3 after birth

Suggestions

Based on the conclusion above the changes that occur in knowledge there is still lack of knowledge, it is expected

- a. For health workers, especially midwives who work in puskesmas or maternity clinics or private practices, don't get tired of giving counseling and motivating mothers to keep breastfeeding on days 1-3, even though the milk has not yet come out.
- b. Need to do a class of Pregnant Women by participating husband / family in order to provide support to his wife to give milk only without giving food other than breast milk

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POSTER PRESENTATION

THE DIFFERENCE IN THE ANXIETY LEVELS OF PREGNANT WOMEN WHO JOINED PREGNANCY EXERCISE AND PREGNANCY WOMEN WHO JOINED PRENATAL YOGA IN FACING LABOR

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ABSTRACT

Prolonged parturition as one of the causes of bleeding could be affected by emotional or psychological factors, i.e. mother's unmanaged fear and anxiety during labor. Around 65% of prolonged parturition incidents are caused by inefficient uterine contraction as a response to anxiety, inhibiting uterine activities. Pregnancy with anxiety will affect the physical health of pregnant woman and fetal development. Anxiety could increase fear of birth by 3 times and could increase caesarean section incident by 1.7 times. Beside pregnancy exercise, prenatal yoga is one of the alternative light exercises which could be taken by pregnant women for relaxation before labor and to reduce anxiety. The purpose of this study was analyzing the difference in the anxiety levels of pregnant women who joined pregnancy exercise and pregnant women who joined prenatal yoga in facing labor. The research design was comparative cross sectional study. The research subjects were pregnant women in their third trimester in the working area of Putri Ayu Public Health Center, Jambi. Anxiety was measured using Hamilton Anxiety Rating Scale (HARS) after joining pregnancy exercise and prenatal yoga. The collected data was analyzed by univariate and bivariate analysis. There is significant difference between pregnant women who joined pregnancy exercise and pregnant women who joined prenatal yoga with p-value of 0.025 (CI 95%).

Keywords: Anxiety, Yoga, pregnant woman

INTRODUCTION

The reduction of Maternal Mortality Rate (AKI) in Indonesia faces various obstacles, as indicated by the failure to reach the fifth Millennium Development Goals (MDGs), i.e. improving maternal health. The target to reach in 2015 was reducing up to $\frac{3}{4}$ of maternal mortality rate, i.e. 102 per 100.000 live births (Indonesian Ministry of Health, 2013).

The biggest causes of maternal mortality in Indonesia are bleeding (32%), eclampsia (14%), prolonged parturition (12%), infection (11%), miscarriage (14%), heart disease (5%), and others (12%). Bleeding could happen due to placenta retention, severe anemia, prolonged parturition, etc. (Mariati et al, 2011)

Prolonged parturition as one of the cases of bleeding could be affected by emotional or psychological factors, i.e. mother's unmanaged fear and anxiety during labor. Around 65% of prolonged parturition incidents are caused by inefficient uterine contraction as a response of anxiety, inhibiting uterine activities. (Dolea C, Abouzahr C, 2003)

The anxiety and fear experienced by women in labor, especially primipara, could cause prolonged duration of labor and increase risk of caesarean section (OR 26.9 CI 95%) and vacuum extraction (OR 4.5 CI 95%). Felman et al state that over 12% of

women who have been in labor experience anxiety during labor and the experience is an unpleasant time in their lives. (Pairman, 2011 & Katona, 2012)

Anxiety is different during pregnancy and will increase as labor approaches. Pregnancy with anxiety will affect the physical health of pregnant woman and fetal development. Anxiety could increase fear of birth by 3 times and could increase caesarean section incident by 1.7 times. (Varney H, 2010 & Rubertsson, 2014)

Everyone has different coping mechanism in handling anxiety, including among pregnant women. Coping is defined as a process to face stressful situation and is done by someone to reduce assessment on the stress (Santrock, 2006). In pregnancy, a woman's physical change could be a psychological stress which requires management. According to Lazarus, there are two classifications of coping, i.e. problem-focused coping, which is problem-solving action or looking for relevant information for solution, and emotion-focused coping, which includes efforts to reduce negative emotion such as distraction, relaxation, or finding support (Davison et al, 2004)

Exercise which suits pregnant women is exercise which is safe for the pregnancy. The exercise could be individual, e.g. morning walk, or group exercise, e.g. pregnancy exercise or yoga.

Mental health, including pregnancy anxiety, could be reduced or removed through physical exercise. One of the common physical exercises today is pregnancy exercise, in which pregnant women could train their muscles and breathing using pregnancy exercise movements.

Pregnancy exercise is an effort to ease birth. Pregnancy exercise aims to prepare and train muscles to allow them to function optimally in normal delivery. Performing pregnancy exercise regularly and intensively could maintain physical and fetal health optimally (Manuaba, 2010).

Pregnancy exercise has many benefits, e.g. managing weight during pregnancy, improving health and stamina, and providing physical relaxation to pregnant women. During the exercise, the brain releases more norepinephrine, i.e. a neurotransmitter which could reduce depression, thus relaxing pregnant woman's body (Corry, 2004).

Beside pregnancy exercise, prenatal yoga is an alternative light exercise for pregnant women for relaxation before labor and to reduce anxiety. Yoga is also very effective for pregnant women because it's low cost, easy to do and very beneficial for physical fitness and psyche. Yoga during pregnancy is more effective in reducing anxiety and depression (Hall, 2016, Shiraishi 2016 & Davis, 2015)

Prenatal yoga explains the relation between human physique, mentality, and spirituality to obtain overall health. Performing yoga exercise during pregnancy will prepare the body and mind to be ready and strong for labor. (Shindu P, 2009 & Wiadnyana, 2011)

Yoga affects hypothalamic pattern due suppress CRH secretion, which will affect anterior pituitary gland to reduce the secretion of ACTH to produce adrenal and reduce cortisol, as well as commanding anterior pituitary gland to release endorphin. Yoga will inhibit increased sympathetic nerves, so that hormones which cause physical dysregulation could be reduced. Parasympathetic nervous system gives signal to affect the release catecholamine. As a result, there's reduced heart rate, breathing rhythm, blood pressure, muscle tension, metabolism, and production of hormones which cause anxiety or stress. (Vijayalakshmi, 2004 & Streeter, 2012)

RESEARCH METHOD

The present study used cross sectional study comparative design to see the difference in the anxiety levels of pregnant women who joined pregnancy exercise and pregnant women who joined prenatal yoga in facing labor. The research design used two subject groups, i.e. pregnant women who joined pregnancy exercise and pregnant women who joined prenatal yoga. The anxiety level is measured after the pregnant

women performed pregnancy exercise and prenatal yoga. The instrument to measure the anxiety level was Hamilton Anxiety Rating Scale (HARS). Pregnancy exercise was performed in public health center with trained pregnancy exercise instructor and prenatal yoga was performed with certified prenatal gentle yoga instructor.

The present study was performed in the working area of Putri Ayu Public Health Center, Jambi. The research population was pregnant women in their third semester in the working area of Putri Ayu Public Health Center. The research sample was 16 pregnant women who joined pregnancy exercise and 16 pregnant women who joined prenatal yoga.

After data was collected from questionnaires completed by respondents, it was processed using computerization and analyzed by univariate and bivariate analyses. The statistical test was Independent T-Test. The test was used to see the difference in the anxiety levels of pregnant women who joined pregnancy exercise and pregnant women who joined prenatal yoga in facing labor with a degree of confidence of 0.05.

RESULT AND DISCUSSION

Based on the collected and analyzed data, the following result was obtained:

1. Characteristic Result

Table 1 Respondent Characteristic

Characteristic	Pregnancy Exercise		Prenatal Yoga	
	f	%	F	F
Age (yr)				
20-35	13	81.3	15	93.7
>35	3	18.7	1	6.3
Education				
Elementary School	0		1	6.3
Junior High School	5	31.3	5	31.3
High School/Vocational	9	56.2	9	56.2
High School	2	12.5	1	6.3
University				
Occupation				
Housewife	13	81.3	0	0
Honorary Staff	1	6.3	14	87.6
Private Employee	2	12.4	2	12.4

Based on the research result in the table above, most respondents in both pregnancy exercise and prenatal yoga groups were 20-35 years old, i.e. 81.3% pregnant women who joined pregnancy exercise and 93.7% pregnant women who joined prenatal yoga. Most respondents had high school education (56.2%). Most respondents in the pregnancy exercise group were housewives (81.3%) and in the prenatal yoga group were honorary staffs 87.6%.

2. Univariate Result

Table 2 Univariate Analysis

Characteristic	Group			
	Pregnancy	Exercise	Prenatal Yoga	
	f	%	f	%
Mild	8	50	10	62.5
Moderate	3	18.8	2	12.5
Severe	5	31.2	4	25

3. Bivariate Analysis

Table 3 Bivariate Analysis

Anxiety	Group		P-value
	Pregnancy Exercise	Prenatal Yoga	
x(SD)	23.06 (6.6)	16.19 (9.5)	<0.025

Based on the research result in the table above, most pregnant women who joined pregnancy exercise and prenatal yoga had mild anxiety (50% and 62.5%, respectively). Based on the research result in the table above, on average, the respondents in the pregnancy exercise and prenatal yoga groups had mild anxiety. However, the anxiety score of the pregnant women who joined pregnancy exercise group was higher than the pregnant women who joined prenatal yoga. There was significant difference between pregnant women in the pregnancy exercise group and pregnant women who joined prenatal yoga with p-value 0.025 (CI 95%).

DISCUSSION

Anxiety among women in labor is related to length of labor, result in difficult delivery. One of the causes of prolonged parturition is stress response, and it's the number one cause among other causes. (Hayati F, 2018)

Stress will activate sympathetic neural system and hormonal system, e.g. catecholamine, epinephrine, norepinephrine, glucocorticoid, cortisol and cortisone. Hypothalamic-pituitary-adrenal (HPA) system is an important part of neuroendocrine system related to stress. Hypothalamus will secrete corticotrophin releasing factor (ACTH) which stimulates anterior hypothalamus to produce glucocorticoid, especially cortisol. Cortisol plays a role in body adaptation to stress, including anxiety. (Guyton, 2010)

Labor is generally accompanied by pain due to uterine contraction. The intensity of pain during labor could affect the delivery process and wellbeing of the fetus. Labor pain could cause stress which leads to secretion of catecholamine and steroid, causing vasoconstriction of blood vessels so that uterine contraction weakens. (Sumarah, 2009)

When performing pregnancy exercise or yoga, pregnant women relax because in that situation, hypothalamus will affect autonomous neural system, i.e. reducing the activities of sympathetic nerves and increasing the activities of parasympathetic nerves. Breathing in pregnancy exercise and prenatal yoga will inhibit increased sympathetic nerves, so that the hormones causing physical dysregulation can be reduced. Parasympathetic nervous system gives signal to release catecholamine. As a result, there's reduced heart rate, breathing rhythm, blood pressure, muscle tension, metabolism, and production of hormones which cause anxiety or stress. (Vijayalakshmi, 2004)

From the description above, the author concludes that prenatal yoga is more effective in managing the anxiety of pregnant women in facing labor than pregnancy exercise.

In prenatal yoga, physical exercise is also accompanied by positive affirmation which is considered more effective in managing anxiety. Affirmation is a combination of verbal and visual techniques about situations one likes. Strong affirmation could be very strong and could be used by almost everyone to reach their objective and fulfill their desires. (Chapman, 2010)

Harris & Epton (2009) argues that effective positive affirmation could change one's negative thoughts. Affirmation manipulation has a potential to improve motivation to be involved in social/healthy behaviors and follow them through, in this case changing pregnant women's anxiety into happiness in welcoming their babies.

CONCLUSION

Based on the research result in the table above, most pregnant women who joined pregnancy exercise and prenatal yoga had mild anxiety. There was significant difference between pregnant women in the pregnancy exercise group and pregnant women who joined prenatal yoga.

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**DRUG INVENTORY CONTROL
WITH ABC ANALYSIS OF CRITICAL INDEX
IN PHARMACY INSTALLATION OF KALABAHİ GENERAL HOSPITAL, 2014**

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ABSTRACT

There is often a vacancy of medicine in Pharmacy Installation of Kalabahi General Hospital, Alor Regency, which makes the patient having to buy drug at other service facilities. The purpose of this study is to determine the control of drug inventory at Kalabahi General Hospital, Alor Regency. This research used descriptive quantitative method. The population in this study was the drug inventory data in the Kalabahi General Hospital, pharmacy installation in 2014 as the secondary data and the doctor as the respondent was the primary data. In this research, ABC usage analysis, ABC investment analysis, and ABC index critical analysis will be performed to find out which drugs are included in group A, group B, and group C. The results of the study showed that based on ABC analysis, the value of use showed Group A amounted to 69.05% of all used and consisted of 17 drug items. Group B amounted to 21.55% of the total used and consisted of 40 drug items. Group C amounted to 9.40% of all used and consisted of 224 drug items. Based on ABC analysis of investment value, Group A was 69.80%, Group B was 20.09%, and Group C was 10.11%. Based on critical index value of Group A was 0.71%, Group B was 39.50% and Group C was 59.79%.
Keywords: ABC Analysis, ABC Critical Index, Pharmacy Installation, RSUD

INTRODUCTION

Pharmaceutical service is a direct and responsible service to patient related to pharmaceutical preparations with the intention of achieving definite result to improve the patient quality of life (Anonymous, 2014). Pharmaceutical service in hospitals is a supporting service and is also the main revenue center in hospital.

The management of pharmaceutical inventory is a cycle of activities from planning to evaluation that are interrelated each other. One way to find out the effective and efficient management of pharmaceutical inventory is to use critical index ABC analysis (Anonymous, 2008).

ABC critical index analysis is used to improve the efficiency of the use of fund by grouping drug or pharmaceutical inventory, especially drugs that are used based on their impact on health. Group A uses 70% of the total drug use and absorbs 70% of the total drug investment, group B uses 20% of the total drug use and absorbs 20% of the total drug investment, group C uses 10% of the total drug use and absorbs 10% of the total investment drug.

According to Febriawati (2013), the advantage of ABC analysis is the organization can control inventory better, the organization can pay more attention to cost, and the organization can provide inventory with the right type, amount, and time so as to reduce immediate purchase and inability to fulfill the demand. The formulation of the problem of this research is How to control drug inventory with the analysis of ABC Critical Index in the Kalabahi General Hospital, Alor Regency in 2014? With the aim of this research is to determine the control of drug inventory with ABC analysis of Critical Index.

METHOD

This research used descriptive quantitative method. The study was conducted at the Pharmacy Installation of Kalabahi General Hospital, Alor Regency. The study was conducted at January to Juni in 2015. Indicator research ABC Usage, ABC Investment, ABC NIK analysis. Research Population Drug inventory data at the Pharmacy Installation of Kalabahi General Hospital, Alor Regency in 2014 and research sample drug use and investment data for the January-December 2014 period. The research instrument used were in form of questionnaire sheets, report on the number of drug uses, report on drug prices, and report on

the total number of drugs that are in the pharmaceutical installation of Kalabahi General Hospital, Alor Regency. Primary data was obtained by distributing questionnaires that contain a list of drugs that are often prescribed by doctors. The doctors chosen to fill the questionnaire were 3 doctors who wrote the most prescriptions. Doctors are asked to classify by giving a checklist in each type of drug based on the critical drug to service the patient. With classification: Group X or a group of vital drugs that are essential or vital drugs to prolong life, to overcome the disease that causes death. This group may not occur vacancy, Group Y or group of essential drugs that are drugs that work causally at the source of the cause of the disease. This group of drug vacancy can be tolerated in less than 48 hours and Group Z or nonessential is a supporting drug for better treatment. Vacancy of this group of drugs can be tolerated for more than 48 hours. Data analysis was carried out with the following steps: Calculate total usage, calculate the investment value, determine the critical value of the drug and critical Index value.

RESULT AND DISCUSSION

From the ABC analysis, there were 281 drugs at the Pharmacy Installation of Kalabahi General Hospital, Alor Regency, obtained the following results:

1. Usage Value

From the 281 drugs at the Pharmacy Installation of Kalabahi Hospital, Alor Regency, are grouped according to the amount of use with a 70-20-10 system. Group A is a group with a high of use which is 69.05% of all uses and consisting of 17 drug items. Group B is a group with a moderate amount of use which is 21.55% of the total amount of use consisting of 40 drug items. Group C is a group with a small amount of use, which is 9.40% of all uses consisting of 224 drug items.

Table 1. Value of Drug Use Based on the Number of Item and the Number of Usage

Group	The Number of Item	Percentage (%)	The Number of Usage	Percentage (%)
A	17	6,05	625.261	69.05
B	40	14,23	195.139	21.55
C	224	79,72	85.124	9.40
Total	281	100	905524	100

2. Investment value

For drug grouping based on investment value, the following results are obtained: drug inventory in Pharmacy Installation of Kalabahi General Hospital, Alor Regency at the 2014 period based on ABC analysis, from ABC analysis calculation the investment value is obtained that group A with an investment amount was 69.80% of the total investment consisted of 31 drug items which was 11.03% of the total drugs. For group A medicine, the special attention is needed by the management in its control because this group has a large investment value. With the large investment value of this group, it would cause the amount of drug storage cost and the amount of hospital lost if the drug damage. This drug needed to be considered in its planning and use. The minimum inventory can be kept as low as possible, but if there are drugs that are classified as a critical index group, the inventory can be raised.

Table 2. Drug Grouping Based on Investment Value

Group	Total	Percentage (%)	Investment Value (Rp)	Percentage (%)
A	31	11,03	Rp.1.054.501.826	69,80
B	56	19,93	Rp. 303.458.188	20,09

C	194	69,04	Rp. 152.754.600	10,11
Total	281	100		100
			Rp.1.510.714.614	

3. The comparison between Analysis of Usage Value and Investment Value

Grouping distribution based on the usage value and the investment value showed that there was a difference in quantity based on the number of items and their percentage. In group A, there were 17 drug items with high usage value, but based on the investment value, there were 31 drug items with high investment value, this showed that it was not certain that the drugs widely used would also be expensive.

Table 3. The Comparison Between Usage Value And Investment Value

Group	Usage Value			Investment Value			
	Number of Items	Percentage (%)	Number of Usage	The number of Items	Percentage (%)	Investment Value (Rp)	(%)
A	17	6,05	625.261	31	11,03	1.054.501.826	69,80
B	40	14,23	195.139	56	19,93	303.458.188	20,09
C	224	79,72	85.124	194	69,04	152.754.600	10,11
Total	281	100	905524	281	100	1.510.714.614	100

4. Critical Value

This will reduce the storage and distribution constraints. From the table above, it can be seen that the largest group was group A and B or the group of drugs with high and medium critical values that was equal to 65.83%. this is not in accordance with the pharmaceutical installation service unit that requires fast service and fast drug availability.

Table 4. Critical Value

Group	The Number of Item	Percentage (%)
X	9	3,20
Y	176	62,63
Z	96	34,17
Total	281	100

5. Critical Index Value

The frequent occurrence of vacancy, *cito* purchase, purchase to other pharmacy or the presence of expired drugs at the Pharmacy Installation of Kalabahi General Hospital is due to the lack of proper planning of the need and management of the drugs, so the inventory at the installation has not been properly controlled.

By using ABC analysis of critical index, control and supervision of drugs can be carried out with priority according to the result of the ABC index of critical index. It is aimed at the efficient use of fund and the effective effect of drug therapy on patient.

Table 5. Critical Index Value

Group	Critical Index Value	The Number of Item	Percentage (%)
A	9,5-12	2	0,71
B	6,5-9,4	111	39,50
C	4-6,4	168	59,79
Total		281	100

CONCLUSION AND SUGGESTION**Conclusion**

Based on the result of research conducted, the following conclusions are obtained : Based on ABC analysis, the value of usage showed that Group A was 69.05% of all used and consisted of 17 drug items. Group B was 21.55% of the total used and consisted of 40 drug items. Group C was 9.40% of all used and consisted of 224 drug items, Based on the ABC analysis of investment value, Group A was 69.80%. Group B was 20.09% and Group C was 10.11% and the critical index value of Group A was 0.71%, Group B was 39.50% and Group C was 59.79%.

Suggestion

For the Pharmacy Installation of Kalabahi General Hospital, Alor Regency, especially the drug management officer at the Pharmacy Installation in making an order is expected to pay attention to drugs that have the greatest influence in the hospital and it is hoped that the Institution will provide opportunities for students who wish to carry out further research on drug inventory control using advanced methods namely Inventory Cost (TC), Economic Order Quantity (EOQ) and ABC VEN Analysis.

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STORYTELLING THERAPY TO IMPROVES PEER EDUCATOR ABILITY IN MANAGING VIOLENT BEHAVIOR

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ABSTRACT

Introduction: Violent behavior is an extreme result of anger or fear (Yosep, 2010). Anger is an expression of feelings that are normal for individuals. However, this feeling of anger can be manifested in the changes of behavior from the adaptive to the maladaptive range. Children, with all the limitations of their growth and development factor, have an inability to manage their will or needs. The age that is still relatively young makes them less able to control anger which results in violent behavior ranging from mild to very destructive. An unstable emotion is allegedly a dominant factor that makes children less able to manage their anger that is felt through unhealthy behavior.

Method: The design of the study is a design model used in conducting research (Hidayat, 2007). The type of this study is observational quantitative research. It used the One Group Pre and post-test with control design

Conclusion and Discussions The results of statistical tests of stress levels in the intervention group obtained p value of 0.000, which means there is a significant difference between ability managing violent behavior before and after treatment because the p value is <0.005. The use of spiritual story telling therapy as a non-pharmacological effort to improve children ability managing violent behavior. Spirituality is a good choice to be mixed in story-telling. Society is more receptive to the moral message to be conveyed when it is packed in the values of spiritualism. The combination of these two things produces new concepts and ways, namely spiritual storytelling by utilizing the values and stories of religiosity so that the spiritual elements color a story.

Keywords : Violent, Spiritual Story Telling

INTRODUCTION

Violent behavior is an extreme result of anger or fear (Yosep, 2010). Anger is an expression of feelings that are normal for individuals. However, this feeling of anger can be manifested in the changes of behavior from the adaptive to the maladaptive range. In the adaptive range, a person can usually express anger in a healthy manner so that psychological satisfaction is achieved and does not affect interpersonal relationships in the future. Healthy anger is expressed without blaming others and providing calm.

Children, with all the limitations of their growth and development factor, have an inability to manage their will or needs. The age that is still relatively young makes them less able to control anger which results in violent behavior ranging from mild to very destructive. An unstable emotion is allegedly a dominant factor that makes children less able to manage their anger that is felt through unhealthy behavior.

Through peer educators (peer educators) with the method of spiritual story telling, children as their own resource for peer groups. Peer educators are needed because they use more or less the same language so that information is easily understood by peers. Peers are also easy to express their thoughts and feelings in front of peer educators. Through peer educators, sensitive messages can be conveyed more openly and casually so that much knowledge of violent behavior is obtained.

The city of Semarang, especially Bandarharjo Urban Village and, more specifically, residents in RW 3 are portraits of the Bandarharjo community in general. With a relatively dense population, this environment has a number of school-age children as many as 240 people. They are spread in 5 RTs that are close together. As an illustration, there are 6 out of 10 children (60%) have difficulty expressing anger in a healthy manner. Of the 60% of

children, there are 2 children choose to be quiet and buried when angry; 2 children choose to beat in groups/mobs when they feel they have problems with the environment and peers; and the remaining 2 children said to leave home to avoid discomfort due to feeling anger felt.

Learning theory stated that violent behavior is the result of individual learning towards the immediate environment with examples of models and behaviors imitated from the media or the surrounding environment that allows individuals to imitate these behaviors. We often find news in the media that a child is able to do a very damaging behavior to himself, others and the environment. The incident was caused by the results of the accumulation of frustration that occurs when the child's desire to achieve something fails or is hampered.

METHOD

The design of the study is a design model used in conducting research (Hidayat, 2007). The type of this study is observational quantitative research. It used the One Group Pre and post-test with control design

DISCUSSION AND CONCLUTION

From the above description, all parties have made various efforts to suppress the increasing number of violence. Counseling institutions, mental nurses concerning in the field of mental health of children and adolescents, child protection agencies as well as the learning community and policymakers continue to work to lower the number of violent behaviors in children. Although various attempts have been made, the incidents of violent behavior are still found and continue to increase for an indefinite period of time. This is a challenge from various parties to continue to empower various ways, methods and breakthroughs to produce findings that can relieve all parties, especially the world of children.

The wonderful world of children should be filled with the development of healthy and beneficial imagination. Several studies have been conducted to find the causes of violent behavior in children. Several studies have also tried to help find solutions to overcome this problem of violent behavior. One of the methods tested was through telling story. Telling a story is a very old technique for conveying messages. This story is also called Storytelling which is a good learning media as a therapy to overcome anxiety, reduce stress and increase intelligence. Journal of Strategic and Systemic Therapies (Connel, 1997) stated that intensive communication is needed to carry out the therapeutic process. A similar statement was also conveyed by Gardner (2000), it was stated that it is important to emphasize therapeutic communication with children in doing storytelling to children who experience anxiety.

Therapeutic communication that is owned by psychiatric nurses and a tool for conducting therapy is a combination that eases them to perform spiritual storytelling. Spiritual is one aspect that is easily accepted by all groups including children. Spiritual therapy has long been done to overcome some psychological complaints. To overcome various children's problems in controlling violent behavior, based on the results of a study conducted by Setyowati (2017), it was stated that Spiritual Story Telling is an effective method to enhance the ability to control violent behavior.

Telling a story is already familiar to our ears. This method is more commonly known as storytelling. A fairy tale is a translation of a story based on a fictional story and sometimes a true story, connected to a complete storyline. Usually, there is a message to be conveyed in the fable. It is a moral message aimed at changing one's behavior or at least changing one's perception. The tale that adorns our lives today is the imaginary world of imagination from the thoughts or opinions of someone from generation to generation.

Nowadays, storytelling has experienced development according to the conditions of human life. Some aspects include intellectual aspects, social sensitivity, refinement of character, art, and culture which are packed in a good flow of imagination so as to produce a fairy tale that is enjoyable to be heard. Through fairy tales, moral messages are sent, advice is given so that it doesn't make someone feels judged, cornered and patronized. Messages in fairy tales are more easily absorbed by the listener through the decoding process, giving rise to new perceptions for the listener. Gradually a person will change his thoughts, attitudes, and behavior towards the direction in which the story is given.

Spirituality is a good choice to be mixed in story-telling. Society is more receptive to

the moral message to be conveyed when it is packed in the values of spiritualism. The combination of these two things produces new concepts and ways, namely spiritual storytelling by utilizing the values and stories of religiosity so that the spiritual elements color a story.

Some techniques to convey moral messages in fairy tales related to religiosity include, (1) moral messages included in the story conveyed, (2) fairy tales delivered contains religious values by inserting true stories from prophets and apostles, (3) moral messages highlighted through the cast of characters that are delivered as living and real, (4) asking children to deduce the value that is picked at the end of speech.

The implementation of the Community Partnership Program can be said to be successful and satisfying the community service team. Technically, from the preparation to get a very good response from the community both cadres and the village. During the activity, all young cadres enthusiastically followed the material and learned to do Spiritual Story Telling and followed it to the end.

Before being trained, youth cadres were unable to control violent behavior by 81%. From the cadre's speech revealed that violent behavior is often a tool / way to satisfy emotions and express anger. Angry expressions are usually done in the form of satire, chasing, hitting, saying rude, insulting, doing activities that hurt the physical. Social, emotional.

Some of the benefits of storytelling therapy include helping children relax the brain so that tension decreases and children easily capture messages, practicing concentration and increasing vocabulary, training catching power, thinking power and imagination ability, as a therapeutic medium and develop social feelings, develop children's emotions and help recognize the positive and negative values of a fairy tale that is delivered.

After giving the material and learning through Spiritual Story Telling, youth cadres get enlightenment in the form of the ability to control violent behavior and natural feelings of anger that are felt (89%). Spiritual Story Telling is proven to be able to increase the ability of cadres to control violent behavior in children. Introduction in the form of fairy tales packaged and adapted to the sex of children and adolescents.

Peer educators are needed because they use more or less the same language so that information is easily understood by peers. Peers are also easy to express their thoughts and feelings in front of peer educators. Through peer educators, sensitive messages can be conveyed more openly and casually so that knowledge about controlling violent behavior is gained.

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PESTICIDE EXPOSURE AND THE USAGE OF SELF-PROTECTIVE EQUIPMENT RELATED TO THE ACTIVITIES OF CHOLINESTERASE ENZYME IN FARMER GROUP

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ABSTRACT

The Samudrajaya Bekasi farmer group is a multi-cultural farmer. Small landholdings are used to grow rice, vegetables, fruit, and other horticultural commodities as the main livelihood. To increase crop production, farmers use organophosphate and carbamate, and most Dursban insecticides with chlorpyrifos active ingredients as much as 49.4%. Farmers' exposure occurs from formulation to spraying from the beginning of planting to harvest. Duration of exposure, the dosage of pesticides and use of personal protective equipment can affect the decrease in the activity of the enzyme cholinesterase in the blood. The purpose of this study was to determine the relationship of exposure and the use of personal protective equipment with the activity of cholinesterase enzymes in a group of farmers in Samudrajaya village, Tarumajaya District, Bekasi. Quantitative observational analytic research with cross-sectional design. Data obtained from interviews with questionnaires and direct examination of blood specimens for all farmers. The sample in this study is a saturated sample that is the entire population is used as a sample. Mild poisoning was experienced by 17 respondents (39.5%), moderate poisoning by 15 respondents (34.9%) and severe poisoning by 10 respondents (23.3%). The results of the chi-square analysis of the last exposure time with cholinesterase enzyme activity (p value = 0.007), the use of doses with cholinesterase enzyme activity (p value = 0.021), the use of PPE that is not in accordance with the activity of the cholinesterase enzyme in the blood (p value = 0.031). Farmers in Samudrajaya Village are 97.7% experienced poisoning. There is a significant relationship between the time of last exposure, the use of doses and the use of PPE that is not compatible with the activity of the enzyme cholinesterase in the blood.

Keywords: Exposure, Cholinesterase Enzyme Activity, PPE

INTRODUCTION

The use of pesticides by farmers aims to increase crop yields, improve welfare in supporting food needs such as rice, vegetables, and other horticultural crops. Its use to control pest, vectors and disease-transmitting animals are increasing from year to year. Proven in research conducted in developed and developing countries, the use of pesticides has succeeded in increasing agricultural production and controlling disease-carrying insects (Rahmawati and Martiana, 2011).

Samudra Jaya Village Farmer Group, Tarumajaya Subdistrict, located in the north of Bekasi Regency, is specifically a multi-cultural farmer with land ownership that is not too large and utilizes every inch of land to be planted starting from rice, vegetables (spinach, kale), cantaloupe and horticultural crops others as the main livelihood. To increase agricultural yields with limited land, many farmers use pesticides, especially from the organophosphate and carbamate groups.

The pesticide commission in Djojosumarto, 2008 recommends farmers to use organophosphate and carbamate because it is easily lost in the environment, but the residue can cause poisoning in humans both acute and chronic. Organophosphate and carbamate are anti-cholinesterase, which are pesticides that interfere with the activity of the cholinesterase enzyme that functions to hydrolyze acetylcholine to acetic acid and choline. Cholinesterase is an enzyme found in cholinergic nerve terminal membranes, blood plasma and placental cells as biological catalysts in body tissues that function to keep muscles and nerves working in an organized and harmonious manner (Sartono, 2002). Acetylcholine is a neurohormone found in nerve endings and muscles that function to continue nerve receptors in muscle cells and glands. Exposure to these pesticides causes continuous stimulation of central nervous system (CNS) disruption, muscarinic and nicotinic nerve/impulses, loss of

reflexes, salivation, confusion, speechlessness, ataxia, tremor, to the most severe paralysis, heart failure, respiratory failure and breathing death (Sartono, 2002).

Risk factors for organophosphate and carbamate exposure that can influence the activity of the cholinesterase enzyme include exposure time, dosage and use of personal protective equipment (PPE). Organophosphate and carbamate exposure to farmers can occur from formulation to spraying, from the beginning of planting to harvest (Kresnawati, 2008). According to research by Mahmudah et al, 2012, in onion farmers in Kedunguter Village, Brebes who used organophosphate and carbamate, the results of cholinesterase test contained poisoning of 78.4%. Research by Rustia et al, 2010 in vegetable spray farmers in Campang Village, all respondents experienced a decrease in the activity of the enzyme cholinesterase in the blood below 75%. The duration of organophosphate exposure can influence the decrease in the activity of the cholinesterase enzyme in the blood of vegetable farmers. According to Hana Nika research, 2010, showed that all onion vegetable farmers in Brebes Regency 71.4% experienced mild poisoning and 28.6% moderate poisoning.

The dose for usage of organophosphate and carbamate is recommended according to the rules of use on the packaging. But the reality on the ground is that the farmers add a dose to save plants from pests so it can be a risk of 8,367 a decrease in the activity of the enzyme cholinesterase compared to farmers who use the dosage following the packaging (Suparti, S et al, 2016).

Organophosphate and carbamate exposure into the body through the respiratory, skin and digestive tracts. Exposure is easier to enter if farmers do not use personal protective equipment (PPE) while working. Visionary 2009, the use of PPE by farmers is very important to avoid exposure, which starts from head protectors, hand protectors, body protectors, mouth protectors, eye protectors, and foot protectors. Pesticides are contact poisons, so the use of PPE is very important to avoid exposure during formulations and spraying. In accordance with the guidelines for the use of pesticides (Ministry of Health, 2012), implementing staff must use PPE to protect them from the danger of poisoning. In accordance with research conducted by Pujiono, 2009 regarding the relationship between work environment factors and pesticide management practices with the incidence of poisoning at the pesticide sales point, Subang Regency, showed that there was a significant relationship between the use of PPE and practice.

METHOD

The design of the study was a quantitative observational analytic cross-sectional method. The study population is the Farmers Group Samudrajaya Village, Tarumajaya District, Bekasi. The research sample is a total sample of a population of 43 farmers. Retrieval of dependent variable data for cholinesterase enzyme activity using farmer capillary blood samples and examination using a digital Che-Check Mobile Portable Cholinesterase Testing System. Independent variable data retrieval is done by interview using a questionnaire instrument containing data on the identification of respondents, exposure to pesticides (length of work, duration of exposure per day, duration of exposure per week, time of last use, type of pesticide used), dose of pesticides (use and number of mixing types pesticides) and the use of Personal Protective Equipment (PPE). The results of the study for the analysis of the relationship using chi-square between independent variables with the dependent variable. Approval of research ethics obtained from the Health Polytechnic Commission of the Ministry of Health Jakarta III No. KEPK-PKKJ3 / 148 / IV / 2018, April 5, 2018.

RESULT

The pesticide that is widely used by farmer group in Samudrajaya village is the Dursban insecticide type with an active ingredient of chlorophyllos organophosphate group of 49.4%. Types of Pesticide that are used in table 1.

Table 1. List of the Pesticide Types usage in Farmer Group

Trade Name	Pesticide Types	Active Ingridient	%
Abasel	Insecticide	Abamectin	1,1
Antracol	Fungicide	Propinep	19,5
Chix	Insecticide	βSipametrin	1,1
Curacon	Insecticide	Prefenufos	6,9
Dursban	Insecticide	Chlorpyrifos	49,4
Kejora	Insecticide	sipametrin	2,3
Plenum	Insecticide	Pymetrozine	4,6
Regen	Insecticide	Fipronil	4,6
Rizotin	Insecticide	Sipermetrin	5,7
Sidametrin	Insecticide	Sipermetrin	1,1

The classification of cholinesterase enzyme activity by farmer groups according to the Indonesian Ministry of Health in table 2, as follows:

Table 2. Distribution Frequency of Cholinesterase Enzyme Activity in Farmer Group

Cholinesterase Activity	Frequency(n)	%
Normal (75%)	1	2,3
Mild poisoning (50% - 75%)	17	39,5
Moderate poisoning (25% - 50%)	15	34,9
Severe poisoning (0% - 25%)	10	23,3
Total	43	100

As many as 97.7% of Samudrajaya Village Farmers experienced mild, moderate and severe poisoning. The frequency distribution of the exposure duration, dosage and use of PPE of Desa Samudrajaya farmer groups in table 3 are as follows:

Table 3. Distribution Frequency of Exposure Time, Dosage and Usage of PPE in Farmer Group

Independent Variable	Frequency (n)	%
Length of Work		
15 years	27	62,8
< 15 years	16	37,2
Duration of Exposure per day/week		
2 hours	27	62,8
< 2 hours	16	37,2
Time of the Last Exposure		
< 4 hours	22	51,2
4 hours	21	48,8
Dose		
Not suitable	28	65,1
Suitable	15	34,9

Use of PPE		
Not suitable	24	55,81
Total	19	44,19

he duration of exposure per day is the same as the duration of exposure per week because farmers contact with pesticides both from the formulation until spraying is done once a week. Analysis of the relationship of exposure time (length of work, duration of exposure per day, time of last exposure), dose and use of PPE with the activity of the enzyme cholinesterase in the farmer group using chi-square with the results in table 4 as follows:

Table 4. Relation of Exposure Duration, Dosage, and Usage of PPE with Cholinesterase Enzyme Activity in Farmer Group.

Independent Variable	Blood Cholinesterase Enzyme Activity										P value
	Normal		Mild		Moderate		Severe		Total		
	n	%	n	%	n	%	n	%	n	%	
Length of Work											
15 years	1	3,7	9	33,3	12	44,4	5	18,5	27	100	0,272
< 15 years	0	0	8	50	3	18,8	5	31,3	16	100	
Duration of Exposure per day/week											
2 hour/day	1	3,7	9	33,3	13	48,1	4	14,8	27	100	0,066
< 2 hour/day	0	0	8	50	2	12,5	6	37,5	16	100	
Time of the last exposure											
< 4 days ago	1	4,5	13	59,1	7	31,8	1	4,5	22	100	0,007
4 days ago	0	0	4	19	8	38,1	9	42,9	21	100	
Doesn't											
Not suitable	0	0	8	28,6	10	35,7	100	35,7	28	100	0,021
Suitable	1	6,7	9	60	5	33,3	0	0	15	100	
PPE											
Not suitable	1	4,2	11	45,8	4	16,7	8	33,3	24	100	0,031
Suitable	0	0	6	31,6	11	57,9	2	10,5	19	100	

There is no correlation between length of work, duration of exposure per day/week with cholinesterase enzyme activity in Samudrajaya Village farmer group. There is a significant relation between the time of the last exposure to the activity of the enzyme cholinesterase in the blood of farmers from the chi-square test results obtained p-value = 0.007 ($p < 0.05$), meaning that the time of the last contact with pesticides will have a major effect on decreasing enzyme activity cholinesterase.

For the dosage, there is a significant relationship between farmers who use the recommended dosage and those who do not comply with the cholinesterase enzyme activity in the blood, p-value = 0.021 (< 0.05)

For the use of PPE, there is a significant relationship in farmers with the use of PPE that is not in accordance with farmers who use PPE that is in accordance with the enzyme cholinesterase activity $p\text{-value} = 0.031$ ($p < 0.05$).

DISCUSSION

The results of the study of 43 farmers who are members of the Samudrajaya Village farmer group using organophosphate and carbamate pesticides found that the normal cholinesterase enzyme activity was 2.3%. While 97.7% experienced poisoning which was grouped into mild poisoning 39.5%, moderate poisoning 34% and severe poisoning 23.3%. The number of respondents who experienced moderate and severe poisoning in this study was more than the study by Rustia et al., 2010 in vegetable spraying farmers in Campang Village, all respondents experienced a decrease in the activity of the enzyme cholinesterase in the blood below 75%, namely mild poisoning (71, 4%) and moderate poisoning (28.6%), none of the respondents experienced severe poisoning. According to the research conducted by Mahmudah et al, 2012, onion farmers in Kedunguter Village, Brebes who used organophosphate and carbamate from the results of the cholinesterase test contained poisoning of 78.4%. Poisoning occurs because of data obtained by farmers who have worked for at least 15 years and exposure to pesticides is cumulative in the blood and causes poisoning.

Farmers who show mild poisoning should stop the use of organophosphate and carbamate pesticides for two weeks, to give the body a chance to restore the level of cholinesterase back to normal. This was also made clear by Priyanto (2009) saying that the level of the cholinesterase enzyme could return to normal within a few days or weeks for the organophosphate group.

Farmers with moderate poisoning should stop all activities related to insecticides, if symptoms of poisoning immediately inspect (Rustia 2010). Generally the symptoms of organophosphate or carbamate poisoning will only be seen when the blood cholinesterase activity decreases to 30%. However a reduction of up to 50% in pesticide users is taken as a limit, and it is recommended that sufferers stop work related to pesticides (Oktofa.S.P, 2016).

The duration of organophosphate and carbamate exposure in Samudrajaya Village farmers group showed a $p\text{-value} = 0.066$ (> 0.05), meaning that there was no relationship between the duration of exposure per day / week with the activity of the cholinesterase enzyme. This is in accordance with research conducted by Budiawan (2013) based on Fisher's test, it was obtained $p\text{-value} = 1,000$, meaning that there was no relationship between the level of extraction time and the cholinesterase of red onion farmers in Ngurensiti Pati. This result is because the farmers spray for one spray per day not more than 5 hours / day as determined by WHO (2006). This study is different from Mahyuni (2014), the chi-square test results show that the frequency of spraying based on the duration of spraying (hours / day) has a relationship with health complaints where $p\text{-value} = 0.018$. Based on field observations, most farmers spray <5 hours a day, because the land owned by farmers is <1 Ha on average, so farmers work their own land starting from spraying, watering morning and evening, and cleaning grass.

The results of a study conducted on a group of farmers in Samudrajaya Village, showed that there was a relationship between the last spraying time and the activity of the enzyme cholinesterase in $p\text{-value} = 0.007$. The results of this study are not in line with the study conducted by Rustia (2010) which obtained $p\text{-value} > 0.05$, indicating there was no relationship between the last time with the activity of the cholinesterase enzyme. Pesticide residues can cause harmful effects on public health and the environment. Poisoning in the human body can cause a decrease in the activity of cholinesterase in the blood. There is a difference of interests between the health sector with the pesticide commission or the agricultural sector in the use of pesticides. Pesticides are used to increase agricultural yields and reduce crop pests, thus encouraging farmers to use pesticides with the composition, dosage, and frequency of spraying without appropriate rules, causing new health problems. This study is in line with Afriyanto (2008) to get a $p\text{-value} = 0.001$ which shows there is a relationship between the use of pesticide doses with the activity of cholinesterase enzymes. The results of observations and interviews in the field, farmers in general in determining the

dose using a packaging cap for liquid form pesticides. Farmers will increase their dosage and mix 2 -3 other types of pesticides to increase the killing power of pests.

Pesticide exposure can affect the decrease in the activity of the enzyme cholinesterase in the blood. Exposure can occur from formulation to spraying. The risk of exposure is greater if you do not use personal protective equipment. Lack of awareness of farmers to use personal protective equipment when spraying is a risk factor for poisoning.

Personal protective equipment is a means used as personal protection against exposure that is at risk for farmers. The modifying effect of the host on the toxic effect of a pesticide is also influenced by the use of personal protective equipment. (Frank C. Lu, 1995). Complete PPE (Visioner, 2009) ranging from cap or helmet head protectors, mouth protective masks, body armor and long pants, gloves, glasses and shoes. In theory, PPE will protect farmers from direct contact with pesticides when formulating, spraying and storing. The risk of poisoning can be avoided by using PPE in full. According to the Ministry of Health (2010) in Putri A et al, 2016), for workers who are associated with pesticides, the type of PPE equipment that is used is at least a head protector (hat / helmet), a protective sense of breathing (a mask), a body protector (a long sleeve shirt and long pants , protective feet (boots), hand protectors (gloves), and eye protection (safety glass) The relationship between the use of personal protective equipment in the Samudrajaya Village farmers group is a risk factor for the decrease in the activity of the enzyme cholinesterase p -value = 0.031. the majority did not use an appropriate PPE, so there was a significant relationship between the use of PPE with the activity of the enzyme cholinesterase in the blood. Results also showed that more than half (55.81%) did not use or use a PPE that was not suitable. it is not suitable to cause pesticides to enter the body Pesticide exposure in this study can occur through mela lui skin contact, digestive tract (oral) and respiratory tract (steam droplets). In a study conducted by Sylpanus T et al, 2010, the use of PPE that did not meet the requirements for cholinesterase levels became abnormal by 86.5%. The same study conducted by Sulastri, 2012, obtained 78% results in symptoms of poisoning in farmers who do not complete using PPE, and 22%) use a PPE symptoms of poisoning decreased with p value = 0.003. This shows a significant difference between the habit of using PPE and the appearance of signs of poisoning in farmer groups in Pendem Village, Mojogedang District, Karang Anyar Regency. In the results of research conducted by Ana Qomarih, et al, 2017, there is a relationship between the use of personal protective equipment with the incidence of pesticide poisoning in workers who work at pesticide sales points. In this study stated that workers who use PPE do not meet the risk of pesticide poisoning 9.71 times compared with workers who use PPE meet the requirements.

Even though the results of this study use of PPE are suitable but farmers also experience poisoning, meaning that the PPE that is suspected of using only an obligation but does not function properly. For this reason, field observations are needed regarding the use of PPE that is suitable and functioning properly to ensure that theoretically the use of PPE can prevent pesticides from being exposed to farmers.

CONCLUSION

The type of pesticide most widely used by farmers is Dursban with the active ingredient of chlorpyrifos from the organophosphate group. All farmers experienced both poisoning mild, moderate and severe poisoning. There is a significant relationship between the time of last exposure, dose and PPE with the activity of the cholinesterase enzyme in the blood.

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CORRELATION BETWEEN DURATION OF DIABETES MELLITUS TYPE 2 WITH HbA1c, UREUM AND CREATININ LEVEL IN RSUP PERSAHABATAN.

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ABSTRACT

Diabetes mellitus (DM) is a group of metabolic diseases characterized by hyperglycemia. HbA1c is used to measure glucose levels that bind to hemoglobin in the blood. Longer duration of diabetes mellitus will cause an increase in blood glucose levels (hyperglycemia) which binds to collagen resulting in microvascular and macrovascular damage. Diabetic nephropathy is a complication caused by patients with diabetes mellitus which are included in the complications of microvascular damage, which occurs in the kidneys. Increased urea and creatinine levels with increased fasting blood glucose levels indicate that it causes kidney damage. The purpose of this study was to determine the correlation between duration of type 2 diabetes mellitus and levels of HbA1c, urea and creatinine in Friendship Hospital. The study design used was cross sectional. The data taken is secondary data of type 2 diabetes mellitus patients in the period of January-December 2018 obtained from the medical records of Friendship Hospital. The research sample used was 89 people with type 2 diabetes mellitus. The results showed that people with type 2 diabetes mellitus with long duration of type 2 diabetes mellitus with HbA1c levels $p = 0.371$. As for the old variable suffering from type 2 diabetes mellitus with ureum and creatinine levels $p = 0.007$ and $p = 0.006$. The conclusion obtained in this study is that there is no correlation with type 2 diabetes mellitus with HbA1c levels. Whereas there is a correlation for the duration of type 2 diabetes mellitus with ureum and creatinine levels. The author recommends for people with diabetes mellitus, you should do a complete laboratory examination and other supporting examinations to avoid complications of type 2 diabetes mellitus.

Keywords: diabetes mellitus type 2, duration, HbA1c, ureum, creatinin.

INTRODUCTION

Non-communicable diseases (PTM) are the main causes of global death (Ministry of Health, 2012). According to the World Health Organization, deaths from PTM are expected to continue to increase worldwide. In 2030, it is predicted that there will be 52 million deaths per year due to PTM, up 9 million from 38 million deaths in 2012. More than 70% of the global population will die from non-communicable diseases such as cancer, heart disease, stroke, and diabetes. Diabetes mellitus is one of the four priorities of non-communicable diseases (WHO, 2016). This disease is a chronic disease characterized by high levels that exceed normal values (Utomo, Herlina, Sylvia, 2015).

The International Diabetes Federation (IDF) reports that 415 million adults between the ages of 20 and 79 suffered from diabetes in 2015 and is expected to increase to 642 million by 2040. In 2012 the incidence of diabetes mellitus in the world was 371 million, so it proved diabetes type 2 mellitus is 95% of the world population suffering from diabetes mellitus and only 5% of the number suffering from type 1 diabetes mellitus (Fatimah, 2015). The prevalence of diabetes is increasing in the world and WHO estimates that in 2030 the number of adults with diabetes will double on average, from 177 million in 2000 to 370 million (Saranya, Nithiya, 2015).

Based on research conducted by the World Health Organization (WHO) shows an increase in diabetes that occurs in Southeast Asian countries, including Indonesia. Report from WHO on DM in various countries, giving the number of DM in Indonesia in 2000 was 8.4 million people, the number is in the order of 4 after India (31.7 million), China (20.8 million) and the United States (17.7 million). Expected to increase in 2030, India (79.4 million), China (42.3 million), the United States (30.3 million) and Indonesia (21.3 million)

(Kurniawaty, 2014). Data from the International Diabetes Federation (IDF) in 2014 showed that 9.1 million Indonesians were diagnosed as DM sufferers. Diabetics increased 4-fold from 108 million in the 1980s to 415 million in 2015. By 2040 it is expected to increase to 642 million (International Diabetes Federation Atlas, 2015). HbA1c examination is an examination which is the most appropriate benchmark in DM examination. HbA1c examination is a standard in measuring glycemic levels even in non-diabetic people (Meloh, et al, 2015).

Based on the results of the Basic Health Research (RISKESDAS) in 2018, the national prevalence of DM was 1.1% which increased to 1.5% in 2013. In the 2007 RISKESDAS of DKI Jakarta province had a DM prevalence of 1.8% based on diagnosis of health professionals and symptoms. In the 2013 RISKESDAS, DKI Jakarta province had a DM prevalence of 2.5% based on the diagnosis of health workers. The prevalence of DM increased to 3.4% based on the results of the 2018 RISKESDAS. Based on the data above, there is an increase in the prevalence of DM in DKI Jakarta province.

Diabetes Mellitus (DM) is a chronic disease that occurs due to a pancreas that produces insulin or the condition that body cannot use insulin effectively which marked by existence polyuria, polydipsia, polyphagia, and an increase in blood levels. Insulin needed to be transferred from the bloodstream to body cells used as energy (International Diabetes Federation, 2017).

Diabetes mellitus also follows; Type 1 diabetes mellitus due to the destruction of pancreatic cell, generally leading to absolute insulin deficiency due to immunologic and idiopathic processes (Kurniawaty, 2014). Most of the day are often hungry and urinate frequently, most sufferers are normal or normal. Can occur at a young age and need insulin during life (Prayuda, M, 2016). Type 2 diabetes mellitus caused by the failure of insulin which cannot work properly. Insulin levels can be normal, lower or more elevated but insulin function for improvement is absent or lacking. However, hyperglycemia and 75% of sufferers of type 2 diabetes can develop type 2 diabetes after 30 years of age (Prayuda, M, 2016). Other types of diabetes mellitus are caused by various other types such as beta cell genetic defects, genetic defects in the action of insulin, pancreatic exocrine disease, endocrinopathy, due to drugs or chemicals, infections, immunological causes released, and other differences reported with DM (Kurniawaty, 2014). Gestational diabetes mellitus, which is diabetes that occurs in pregnancy, is allegedly caused by insulin resistance due to hormones such as prolactin, progesterone, estradiol, and placental hormones (Kurniawaty, 2014).

High blood sugar levels (hyperglycemia) will cause various complications such as chronic complications that can fight various organs such as eyes, kidneys, nerves and blood vessels (Mahara, 2016; I Gusti, et al, 2017). In a study conducted by AnissaPratiwi in 2017, out of 100 DM patients who performed creatinine testing in the Koja Hospital laboratory there were 61 patients with creatinine levels above normal, 21 patients there had helped about Chronic Kidney Failure (CKD), wherein CKD is one of the complications that occur in patients with Diabetes Mellitus (DM). Examination methods are carried out by measuring the body's acceptance substances that are excreted through the kidneys, such as urea and creatinine (Verdiansah, 2016).

In a study conducted by RestuPranandari and WoroSupadmi in 2015, it showed the facts of research regarding diabetes mellitus risk factors associated with chronic political problems in hemodialysis patients (OR = 5.395, $p < 0.05$, CI = 2.254 -12.916). Diseases caused by microvascular complications that can occur in patients with diabetes mellitus one of which is diabetic nephropathy. Diabetic nephropathy is kidney damage found in 35 - 45% of patients with diabetes mellitus, especially type 2 diabetes mellitus because type 2 diabetes mellitus is more common (Mahara, 2016). As many as 80% - 90% of cases of Diabetes Mellitus belongs to Type 2 Diabetes Mellitus (Garnita, 2012).

Based on the description above, researchers want to know the correlation between the length of suffering from type 2 diabetes mellitus with levels of HbA1c, ureum and creatinine in the Friendship Hospital.

METHODS

This study uses an analytic observer design with *cross sectional* approach. Using two variables, that is independent with duration of type 2 diabetes mellitus and dependent variables: HbA1c levels, urea levels and creatinine levels and a sample of 89 people taken from checkup, that are patients type 2 diabetes mellitus who check HbA1c levels, urea levels and creatinine together and exclusion criteria are type 2 diabetes mellitus patients who do not check HbA1c levels, ureum and creatinine levels together and kidney disease patients

Data analysis using the application SPSS 17.0 by using the correlation test that was previously performed data normality test to determine the distribution of normal data and to determine further testing with the Pearson / Spearman correlation test. The significance limit is if $p < 0.05$, which means there is a significant relationship between the two variables tested. The correlation coefficient (r) has a value of 0.00-0.199 very weak, 0.20-0.399 weak, 0.40-0.599 moderate, 0.60-0.799 strong, 0.80-1.000 very strong. The direction of a positive or unidirectional correlation means the greater the value of a variable the greater the value of other variables and the direction of a negative or unidirectional correlation means the smaller the value of one variable, the smaller the value of other variables.

RESULT

1. Univariate Data

This research was conducted on 89 respondents at the Friendship Hospital. Respondents are people with type 2 diabetes mellitus who do HbA1c, urea, and creatinine at the same time. The results of research on HbA1c levels with urea and creatinine levels based on the duration of type 2 diabetes mellitus, can be described as follows:

Table 4.1 Distribution Frequency of Type 2 Diabetes Mellitus Patients Based on Gender

Gender	Total (Person)	Percentage (%)
Male	40	44,9
Female	49	55,1
Total	89	100

Table 4.2 Distribution Frequency of Older Sufferers in Type 2 Diabetes Mellitus Patients.

Long suffered (Year)	Total (Person)	Percentage (%)
<5	46	51,7
5—10	28	31,5
>10	15	16,9
Total	89	100

Table 4.3 Distribution Frequency of HbA1c Levels in Type 2 Diabetes Mellitus Patients.

HbA1c	Total (Person)	Percentage (%)
Optimal	8	9
Diabetes risk	12	13,5
Diabetes	69	77,5
Total	89	100

Table 4.4 Distribution Frequency of Ureum Levels in Type 2 Diabetes Mellitus Patients.

Ureum	Total (Person)	Percentage (%)
Low	4	4,5
Normal	35	39,3
High	50	56,2
Total	89	100

Table 4.5 Distribution Frequency of Creatinine Levels in Type 2 Diabetes Mellitus Patients.

Creatinin	Total (Person)	Percentage (%)
Low	4	4,5
Normal	40	44,9
High	45	50,6
Total	89	100

2. Bivariate Data

The data that has been obtained is normality tested beforehand to determine the correlation test used. Based on the normality test, p value <0.05, which means that the data is not normal and then proceed by using the Spearman correlation test and the results obtained below:

Table 4.6 Long Correlation Test Results Suffer with HbA1c Levels, Ureum Levels, and Creatinine Levels of Type 2 Diabetes Mellitus Patients.

Variable	HbA1c		Ureum		Creatinin	
	Sig (p)	Coefficient Correlation (r)	Sig (p)	Coefficient Correlation (r)	Sig (p)	Coefficient Correlation (r)
Long Suffered	0,371	-0,096	0,007	0,284	0,006	0,291

DISCUSSION

Based on table 4.1 shows that most people with type 2 diabetes mellitus suffer by women, namely 49 people (55.1%). While 40 people (44.9%) sufferers of type 2 diabetes mellitus suffered by men. Women have a greater proportion than men. This can be due to several factors (Amira, Pandelaki, Palar, 2013). According to PERKENI 2015, women who have a BMI 23 kg / m² accompanied by a history of giving birth to a baby with a Birth Weight > 4 are included in the high risk group for type 2 diabetes mellitus. type 2 diabetes mellitus. The hormones estrogen and progesterone have the ability to increase insulin response in the blood. At the time of menopause, the response to insulin decreases due to low estrogen and progesterone (Meidikayanti & Wahyuni, 2017).

The risk of complications in diabetes mellitus is closely related to the length of the sufferer having diabetes mellitus (Lathifah. N, 2017). The duration of diabetes indicates how long the patient has had diabetes mellitus since the diagnosis was made (Restada, 2016). Based on table 4.2, patients with type 2 diabetes mellitus with long-suffering group <5 years as many as 46 people (51.7%), old group suffer 5-10 years as many as 28 people (31.5%), and with long-suffering group > 10 year as many as 15 people (16.9%). Based on data

obtained by researchers, people with type 2 diabetes mellitus suffer more from the old group suffering <5 years. This is thought to be due to changes in dietary habits of people who consume more foods that contain protein, fat, sugar, salt, and contain less fiber (Kurniawaty, 2014).

Modern lifestyle with many choices of food menu and unhealthy way of life which is increasingly spreading throughout society, causing an increase in the number of degenerative diseases. Diabetes mellitus is a degenerative disease (Sumangkut, Wenny, Franly, 2013).

According to PERKENI in 2015, one of the examination parameters for diagnosing diabetes mellitus is HbA1c. HbA1c is a measurement of blood glucose levels that are bound to Hb strongly and circulate with erythrocytes during the life span of erythrocytes (120 days) (Purnamasari, Bambang, 2011). Based on table 4.3, as many as 69 people with type 2 diabetes mellitus have HbA1c levels which are categorized as diabetes. This is supported by research by Airin Que, I Wayan Putu, and A.A. Wiradewi Lestari who showed that bad control (38.2%) still dominated the results of the examination compared to good control (36.0%) and moderate control (25.8%). Many factors are associated with controlling blood glucose levels in people with type 2 diabetes mellitus, one of which is compliance with taking medication. According to research conducted by Chess Mei Astuti and Asih Setiarini in 2013, showed that there was a significant relationship between medication adherence with controlling blood glucose levels ($p = 0.042$). Pharmacological therapy is one of the pillars of control of type 2 diabetes mellitus (PERKENI, 2015).

Ureum and creatinine are chemical compounds that indicate kidney function is still normal (Suryawan, 2016). Serin creatinine examination can serve as an indicator of the course of type 2 diabetes mellitus that has the potential to experience kidney failure and as a control of kidney function in patients with type 2 diabetes mellitus who have experienced complications of kidney failure (Padma et al, 2017). Based on table 4.4, there are 45 patients with type 2 diabetes mellitus who have high creatinine levels. Whereas in Table 4.5 shows that as many as 50 people (56.2%) patients with type 2 diabetes mellitus have high urea levels. This shows that patients with type 2 diabetes mellitus, have decreased kidney function. The kidneys filter most of the creatinine and throw it into the urine. Creatinine levels will change in response to kidney dysfunction, while the urea level will change in response to dehydration and protein breakdown (Suryawan, 2016).

Table 4.6 shows the duration of type 2 diabetes mellitus and HbA1c level has p value > 0.05, which is 0.371. This shows that there is no correlation between the length of suffering from diabetes mellitus with HbA1c levels. The duration of diabetes mellitus is not the only factor affecting HbA1c levels. This is supported by research conducted by Chess Mei and Asih Setiarini in 2013, which showed that the duration of the disease had no relationship with controlling blood glucose levels with a p value > 0.05, amounting to 0.106. Various factors also influence the control of blood glucose levels in patients with type 2 diabetes mellitus, including age, sex, medication adherence, diet compliance, intake, duration of diabetes mellitus, glycemic index, physical activity, knowledge, and family support (Catur Mei, Asih, 2013).

Based on table 4.6, it shows that the duration of type 2 diabetes mellitus and urea level has p value <0.05 of 0.007 with a correlation value (r) of 0.284. These results state that there is a weak correlation between duration of type 2 diabetes mellitus with ureum levels. Table 4.6 also shows that there is a weak correlation between duration of type 2 diabetes mellitus and creatinine levels. This is indicated by p value <0.05 of 0.005 with a correlation value (r) of 0.291. The duration of diabetes is a precipitating factor for complications of type 2 diabetes mellitus consisting of macrovascular and microvascular complications (Perdana, Eva et al, 2018). Macrovascular complications include blood clots in the brain, coronary heart disease, congestive heart failure and stroke, while microvascular include nephropathy, retinopathy, neuropathy and amputation (Setiyorini, 2017).

Researcher's data shows that there is a weak correlation between duration of type 2 diabetes mellitus and urea levels and creatinine levels. Ureum and creatinine are tests that are usually done to detect a decrease in kidney function (Andriyani, Mira, 2015). This shows that there are complications of type 2 diabetes mellitus of the kidneys or commonly called nephropathy. Diabetic nephropathy is a microvascular complication that causes kidney

disorders caused by patients suffering from diabetes in a long time (Ulhaq, 2018). According to Ertana Jihan Restada's research in 2016, nephropathy ranked third of the complications of diabetes mellitus after retinopathy and neuropathy with 11 patients.

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CORRELATION OF CD4+ CELL COUNTS AND SERUM ALBUMINS IN HIV-HCV COINFECTED PATIENTS

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ABSTRACT

Hepatitis C Virus (HCV) infection has become one of the biggest threats to the survival of patients with Human Immunodeficiency Virus (HIV) infection. Laboratory testing is important for HIV-HCV coinfecting patients, one of which is by examining CD4 + cell counts. CD4 + cell count is a good examination parameter to measure immunodeficiency. CD4 + cell count tests have been used routinely in a number of developed countries, but in the case of limited health facilities it is not certain that CD4 count tests are available. One of the biological substitute biomarkers that will be examined in this research is albumin. This study aims to determine the correlation between CD4 + cell count and serum albumin in HIV-HCV coinfecting patients. Source of research data obtained from the medical records of 38 HIV-HCV coinfecting patients from 2014 to 2018 who performed CD4 + cell count counts and serum albumin at Tarakan Central Jakarta Hospital. The prevalence of HIV-HCV coinfection was obtained at 7.3%. Data were analyzed using the Spearman correlation test with a confidence level of 95%. The average CD4 + cell count was 80.08 cells / mm³ while the mean serum albumin was 2.60 gr / dL, both of these parameters showed low numbers below the normal value in HIV-HCV coinfecting patients. It can be concluded that there is a moderate correlation between CD4 + cell count and serum albumin with a positive correlation direction ($p = 0.007$ and $r = 0.429$) which shows that if CD4 + cell count decreases, albumin also decreases.

Keywords: CD4, Albumin, HIV-HCV Coinfection

INTRODUCTION

HIV is a virus that spreads through body fluids that attack the immune system, specifically CD4 cells, or commonly referred to as T cells. Over time, HIV can destroy many cells so that the body cannot fight infections and diseases (CDC, 2019). Hepatitis C Virus (HCV) infection has become one of the biggest threats to the survival of patients with Human Immunodeficiency Virus (HIV) infection. The similarity of transmission modes between HIV and HCV causes a high prevalence of HIV and HCV coinfection (Kemenkes, 2017). Hepatitis C is a liver infection caused by the hepatitis C virus (HCV) (CDC, 2015). HCV can cause direct or indirect liver injury through mediated immune pathways. Pathways related to necrosis, apoptosis, angiogenesis are all regulated to cause progressive fibrosis (Joshi, Keane and Brind, 2015). HIV infection plays an important role in the natural course of HIV-HCV. Coinfecting patients have a three times higher risk for cirrhosis, decompensated liver disease, liver cancer or death but, the role of HCV infection in the natural course of HIV is not fully understood (Djauzi et al, 2014).

CD4 + cell counts show a direct measure of a patient's immune status and risk for opportunistic infections, so it is important for diagnostic decision making, especially for patients with advanced HIV infection (Ford N et al, 2017). CD4 + cell count is a good examination parameter to measure immunodeficiency. If used in conjunction with clinical assessment, CD4 + cell counts can be an early indicator of disease progression because the number of CD4 + cells decreases earlier than clinical conditions (Ministry of Health, 2014). Examination of CD4 + cell counts and HIV viral load has been used routinely in some developed countries, but in the case of limited health facilities it is not necessarily an examination of CD4 + cell counts and HIV viral load available. As an alternative to these two examinations, many other biological biomarkers that have been tested are either used as prognostics or qualitatively determine staging variations of HIV (Sharma S. S et al., 2016). Albumin is the most abundant protein in the human body that is synthesized in the liver. Albumin serves to maintain colloid osmotic pressure, the binding of various compounds, and also as a transport of bilirubin, hormones, drugs and vitamins (Peralta et al., 2016). Albumin

is an acute negative phase protein and its level decreases because during chronic inflammation during HIV infection an increase in cytokine levels is a tumor necrosis factor and interleukin 1 (Sundaram et al, 2009). Decreased albumin levels are associated with an increase in inflammatory biomarkers, such as tumor necrosis factor (TNF) and interleukin-6 (IL-6), which are responsible for decreasing hepatic albumin synthesis and increased albumin leakage into the extravascular space, while increasing albumin degradation (Leal et al. , 2018). Because HIV is characterized by systemic inflammation, serum albumin may have prognostic value in an HIV-infected population (Feldman et al, 2003; Mehta et al, 2006; Lang J, 2013).

METHOD

The study design used was cross sectional with research data sources from the medical records of 38 HIV-HCV coinfecting patients from 2014 to 2018 who performed CD4 + cell count counts and serum albumin at Tarakan District Hospital, Central Jakarta. This research was conducted using ethical clearance from the Health Research Ethics Commission of the Health Ministry of Health III Jakarta with the number KEPK-PKKJ3 / 30 / II / 2019. Statistically univariate analysis was performed which included frequency distribution based on sex and age range. Hypothesis testing uses bivariate analysis with the Spearman correlation test. This research uses partial correlation analysis, which is correlation analysis which shows the direction and strength of the relationship between two or more variables, the direction is expressed in the form of a positive or negative relationship, while the strength or weakness of the relationship is expressed in the magnitude of the correlation coefficient.

RESULTS AND DISCUSSION

This research was conducted at Tarakan District Hospital, Central Jakarta with research subjects, namely patients with HIV-HCV coinfection in 2014-2018. In 2018, out of 299 patients with HIV / AIDS infection, there were 23 patients with HIV-HCV coinfection in Tarakan District Hospital, so the prevalence of HIV-HCV coinfection was 7.3%.

Table 1. Frequency Distribution of HIV-HCV Coinfecting Patients by Sex and Age Group

Variable	N	%
Sex		
Men	36	94,7%
Women	2	5,3%
Age Group		
20 – 29	3	7,9%
30 – 39	28	73,7%
40 – 49	6	15,8%
60	1	2,6%
Total	38	100%

Of the 38 HIV-HCV coinfecting patients studied, the majority were male (94.7%). From WHO data, the prevalence of anti-HCV in patients with HIV infection is 6.2%, including high-risk people such as drug injection users, followed by male sex (MSM), and high-risk heterosexuals (WHO, 2017; CDC, 2019). The high cases of drug abuse among men are caused by the fact that men are more easily influenced into deviant behavior such as smoking, alcohol consumption, and drugs (Akifah, Noor, and Jumriani, 2014). Based on the age group of HIV-HCV coinfecting patients studied, the most dominant was in the age group 30-39 years (73.7%) with a total of 28 patients. This is because it is classified as a sexually active productive age group and includes a group that uses injecting drug drugs

Table 2. Descriptive Statistics of Numerical Data

Marker	Mean	SD	Min	Max	Shapiro Wilk
CD4	80,08	88,265	6	374	0.000
Albumin	2,59	0,61	1,17	3,97	0.603

The average CD4 count was $80.08 \pm 88,265$ cells / mm³ with the lowest value being 6 cells / mm³ and the highest value was 374 cells / mm³. The normal reference value for CD4 testing at Tarakan Central Jakarta Hospital is 410 - 1500 cells / mm³, so that all patients tend to have low CD4 counts. In HIV infection, there is a massive decrease in CD4 cell count, both due to the virus itself and its activation in the immune system which can cause CD4 apoptosis. This CD4 loss is due to decreased production in the bone marrow, increased degradation of the lymphoid organs, and increased use (Savira, 2014). Someone will be diagnosed with AIDS if their CD4 cell count falls below 200 cells / mm³ or when a person has a certain opportunistic infection that develops more severely (CDC, 2019).

The results of the average analysis of serum albumin levels in HIV-HCV coinfecting patients were 2.60 ± 0.61 gr / dL with minimum and maximum values of 1.17 gr / dL and 3.97 gr / dL, respectively. The normal reference value for albumin testing at Tarakan Central Jakarta Hospital is 3.5 - 5.2 gr / dL, so the patients studied tend to have low or below normal serum albumin levels (<3.5 gr / dL) namely as many as 35 patients (92.1%). Serum albumin levels depend on the rate of synthesis, the amount secreted by liver cells, distribution in body fluids, and the level of degradation (Peralta et al., 2018). The condition when serum albumin levels are below normal is also called hypoalbuminemia. Hypoalbuminemia can be caused by a variety of conditions including decreased albumin production, decreased synthesis due to damage to hepatocytes, lack of amino acid consumption, nephrotic syndrome, liver cirrhosis, liver failure, and malnutrition, but the main causes of hypoalbuminemia are acute and chronic inflammatory responses (Peralta et al., 2018).

Hepatitis C infection causes inflammation in liver cells, this virus lives and replicates in hepatocyte cells in the liver. In hepatocytes, viral nucleocapsids dissolve in the cytoplasm and secrete viral RNA, which then takes over the role of parts of the hepatocyte ribosome in making materials for the replication process. During this process the virus closes the normal function of hepatocytes or makes more hepatocytes infected, then triggers the mechanism of hepatocyte protein synthesis in producing the proteins that it needs (Pasaribu, 2017).

Table 3 Spearman Correlation Test

Spearman correlation	n	P	Correlation coefficient (r)
CD4 Albumin	38	0.007	0.429

Based on the results of the Spearman correlation analysis with a 95% confidence level, the p value is 0.007 and the r value is 0.429, which indicates a moderate correlation with a positive direction between CD4 and serum albumin, meaning that if CD4 has decreased, albumin will also decrease. This albumin examination cannot completely replace CD4 examination. Weak correlation strength in this study can be caused by the small number of samples, in contrast to previous studies with samples above 50, so that more can see the strength of correlation. In the research of Friedman A. N and Stephen Z. F (2010). explained that hypoalbuminemia was more likely to be an inflammatory marker than a malnutrition marker, and nutritional supplementation did not preclude an increase in serum albumin levels. HIV infection can cause chronic inflammation. Although the two parameters are statistically correlated, physiologically, HCV mono-infection can cause a decrease in serum albumin levels because the HCV virus attacks liver cells where albumin is synthesized. So in general, with or without hypoalbuminemia coinfection can be a good biomarker for predicting worsening HIV infection

outcomes, but on the other hand, with or without coinfection these two infections together contribute to hypoalbuminemia.

Another limitation of this study is that it does not examine other factors that can cause a decrease in serum albumin levels such as lack of protein intake, imbalance of body fluids, and also diseases caused by the kidneys.

CONCLUSION

From the results of a study of 38 HIV-HCV coinfecting patients who did a CD4 and serum albumin examination in 2014 - 2018 at Tarakan District Hospital, Central Jakarta, it can be concluded that:

1. The prevalence of HIV-HCV coinfection in 2018 in Tarakan District Hospital, Central Jakarta is 7.3%.
2. The majority of HIV-HCV coinfecting patients studied were majority male (94.7%), while according to the age group the most dominant was those in the age group 30-39 years (73.7%).
3. The average CD4 count in 38 HIV-HCV coinfecting patients was 80.08 cells / mm³ with a range of 6 - 397 cells / mm³.
4. The average amount of serum albumin in 38 HIV-HCV coinfecting patients is 2.60 gr / dL with a range of 1.17 - 3.97 gr / dL.
5. With a 95% confidence level, a moderate positive correlation was found between CD4 and serum albumin levels in patients with HIV-HCV coinfection ($p = 0.007$ and $r = 0.429$).

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BODY IMAGE AND HABITS RELATED TO THE BEHAVIOR OF MENSTRUAL HYGIENE

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ABSTRACT

Background: Menstruation is a natural process experienced by every woman and one of the signs of sexual maturity of a woman. During menstruation a person must take care of themselves more than usual. Body image and habits that are not good in conducting self-care during menstruation, can cause problems in the reproductive organs. Objectives: To know the relationship of body image and habits with the behavior of Menstrual Hygiene. Research methodology: Descriptive cross-sectional. Samples are all the first grade students majoring in Midwifery Poltekkes kemenkes Jakarta III academic year 2018-2019 which amounted to 159 people. The data used is primary data. Analysis: Univariate and Bivariate. Result: There is a relationship between body image (0.000) and Habit (0.000) with the behavior of menstrual hygiene. Conclusion: Body image and habits can affect a person's menstrual hygiene behaviour.

Keywords: body image, habits, behavior menstrual hygiene

INTRODUCTION

Menstruation is the process of spending blood from the uterus through a birth path that occurs routinely every month during the fertile period unless there is a pregnancy. This happens because of the decay from the uterine wall due to the influence of decreased progesterone hormone produced by the ovaries. Menstruation is a natural process that occurs in every woman and is an indicator of the sexual maturity of women (Laila, 2011).

Although menstruation is something natural, there are still many teenagers who consider menstruation as sensitive and taboo to tell, so they are more closed and embarrassed to tell it to others, including to his mother (Dasgupta & Sankar, 2008). This is what leads to a lack of understanding adolescents about the changes occurring in puberty, including about self-care during menstruation. Adolescents' understanding of menstrual hygiene is crucial. A person with less knowledge about menstrual hygiene, will tend to ignore the health of the reproductions and can perform actions that could harm him.

According to Hokkenberry & Wilson (2009), a person must do treatment more than usual during menstruation, because at the time there were some changes to his body. Self-care during menstruation can be in the form use of proper sanitary pads, the intensity of replacement pads, the use of clean water and how to clean the external genitalia area. At the time of menstruation, the production of sweat will increase as a result of prostaglandin work causing the hypothalamus to increase in temperature. Due to this increased sweat, the external genitalia area will become more humid so that it can increase the risk of microorganisms growth. Candida infections in the vaginal area are one of the risks that can occur at the time of menstruation.

If the hygiene of genitalia during menstruation is not guarded, it will cause irritation to the labia majora, vaginal discharge, reproductive tract infections, urinary tract infections and pelvic inflammatory diseases. If the use of sanitary pads is not right, can cause toxic shock syndrome. Sanitary pads that are used and not replaced for a long time will be a medium for the gathering of bacteria, and will be a poison that can enter the body through the vagina. This condition can be one of the predisposing factors of cervical cancer. Because of that, knowledge and information that is adequate about self care during menstruation is necessary for adolescents to avoid the various diseases, especially those related to reproductive organs.

Reproductive tract infections can be avoided if adolescents can maintain menstrual hygiene. Menstrual hygiene must be socialized as early as possible so that the young women avoid infectious disease due to hygiene that is not maintained during menstruation.

In Jakarta, there are still young women who have bad body image and habits in maintaining personal hygiene during menstruation, this may be due to the lack of information they get. There are still many people who consider menstruation is something that is taboo to be talked about by teenagers, causing limited communication between parents and adolescents about menstrual hygiene. This has resulted in adolescent becoming less understanding and sometimes wrong to take decisions about reproductive health (Suryati, 2012).

METHOD

The design of this research is a analytical descriptive study with a cross sectional approach. Non-experimental research using primary data to determine the relationship of body image and habits with the behavior of menstrual hygiene. The sample of this research is all students at level 1 of the Midwifery Department of the Poltekkes Kemenkes Jakarta III academic year 2017-2018 amounting to 159 people. The data collection tools in this study use questionnaires, consisting of questions about body image, Habits and behaviors of menstrual hygiene with closed question forms. Data analysis is with univariate and bivariate analysis.

THE RESULTS

1. Univariate Analysis

Table 1 Age of Respondents Menars

Characteristics	Variable	F	%
Age	> 17 Year	124	78
	17 Year	35	22
Age of Menars	> 12 Year	68	42.8
	12 Year	91	57.2
Total		159	100

Data Analysis: 78% of respondents aged > 17 years and the majority experienced menarche at the age of 12 years, which is around 57.2%.

Table 2 Characteristics of Respondents

Category	Variable	F	%
Behavior	Good	87	54,7
	Not good	72	45,3
Body Image	Good	78	49,1
	Not good	81	50,9
Habit	Good	99	62,3
	Not good	60	37,7

Data Analysis: the majority of respondents have good behavior about menstrual hygiene namely 54.7%, with a criteria of 50.9% with a body image that is lacking against menstrual hygiene and 62.3% have good habits regarding menstrual hygiene.

2. Bivariate Analysis

Table 3 Relationship Body Image with Behavior Menstrual Hygiene in Midwifery Students Jakarta

Body Image	Menstrual Hygiene Behavior				Total	p-Value	
	Good		Not good				
	N	%	N	%	n	%	
Good	55	70,5	23	29,5	78	100	0.000
Not good	32	39,5	49	60,5	81	100	
Total	87		72		159		

Data Analysis: Respondents who had good menstrual hygiene, the majority had good body image (70.5%) and respondents who had poor menstrual hygiene, the majority had poor body image (60.5%). Statistical test results obtained $p = 0,000$, $p < 0.05$ then H_0 is rejected, meaning there is a relationship between body image with menstrual hygiene behavior in Jakarta midwifery students.

Table 4 Relationship habits with Menstrual Hygiene Behavior in Midwifery Students Jakarta

Habit	Menstrual Hygiene Behavior				Total	p-Value	
	Good		Not good				
	N	%	N	%	N	%	N
Good	70	70,7	29	29,3	99	100	0.000
Not good	17	28,3	43	71,7	60	100	
Total	87		72		159		

Data Analysis: Respondents who behaved well menstrual hygiene, the majority had good habits (70.7%) and respondents who behaved less menstrual hygiene, the majority had poor habits (71.7%). Statistical test results obtained $p = 0,000$, $p < 0.05$ then H_0 is rejected, meaning there is a relationship between habits with menstrual hygiene behavior in Jakarta midwifery students.

DISCUSSION

1. Respondent Characteristics

The results of this study showed the majority of respondents aged > 17 years as many as 124 people (78%). This shows that respondents are classified as adolescents. Adolescence is a transition period between childhood and adulthood, and is a period of self-identity search. In addition to adolescence, they experienced very rapid physical and psychic growth, including the growth of their reproductive organs. They must get good information about the maintenance of reproductive health and if they do not get information then it is likely to cause problems in their reproductions health.

The age of menarche respondents majority at the age of 12 years, which is 91 people (57.2%). Menarche is menstruation that first came and is as a sign of sexual maturity in female adolescents. At this time, the woman is expected to take proper care of her reproduction organs, so there is no interference with her reproductive organs. Wiknjosastro et al (2008) argue, that the menarche in adolescence occurred at the age of 11-13 years. Age of menarche in adolescents influences menstrual-related behavior. Adolescents who experience menarche during early teens, will experience poor menstrual hygiene. Because at that moment his knowledge is still lacking about menstrual hygiene. If they are experiencing menstruation in the middle or late adolescents, then it is possible for them to have information about menstrual hygiene so that their menstrual hygiene behavior will be better (Anita, 2002).

In this study, the majority of respondents with good menstrual hygiene behaviors of 87 people (54.7%). Personal Hygiene is a way of human self-care to maintain the health

necessary for individual comfort, safety and health. Hygiene practices aim to improve health (Perry and Potter, 2005). The purpose of menstrual care is to maintain the cleanliness and health of individuals carried out during menstruation so as to obtain physical and psychic well-being and can improve one's health status (Patricia, 2005). It is expected that adolescents have good menstrual hygiene behaviors, so as to increase the degree of health.

Some respondents have a poor body image about menstrual hygiene, which is 81 people (50.9%). The body image is a subjective concept of one's physical appearance. This body image can change frequently. Body image affects how to maintain hygiene.

The majority of respondents have good habits regarding the behavior of menstrual hygiene, which is 99 people (62.3%). There is a habit of someone using a particular product in self care. Individual freedom to choose the time for self-care, choose the product want to use, and choose how to do hygiene.

2. Body Image Relationships with Menstrual Hygiene Behaviors

From the research results, respondents who behave in good menstrual hygiene, have a good body image as much as 70.5% and 39.5% have less body image. While respondents who behave less menstrual hygiene, have a good body image as much as 29.5% and 60.5% have a poor body image. Statistical test results concluded that there is a link between the body image with the behavior of menstrual hygiene in midwifery students Jakarta ($P = 0.000$).

The body image is defined as an overview of how far the individual is satisfied and receives its body parts as well as the overall physical appearance that is influenced by the perception of the individual itself, comparing with others and social Culture (Desmita, 2009).

An individual's image of him greatly affects self-hygiene for example because of physical change, so that the individual does not care about its cleanliness. A person's common appearance can illustrate the importance of hygiene. The body image is a subjective concept of one's physical appearance. This body image can change frequently. Body image affects how to maintain hygiene. Body image can be changed due to surgery or physical illness, it should make an extra effort to improve hygiene.

Body image is a group of conscious and unconscious individual attitudes toward his body including the perception and the feeling of the past and present about shape, size, usefulness, appearance and ability (Stuart, 2009). The body image produces a concept of an ideal body condition. As a result of this body image, young women are trying to keep her appearance included in doing menstrual hygiene. A person's body image appears as they start interacting with their social environment or peers and start comparing with other friends. (Cash, 2011).

3. Body Image Relationships with Menstrual Hygiene Behaviors

From the research results, respondents who behave in good menstrual hygiene, have a good habit as much as 70.7% and 28.3% have less habits. While respondents who behave less menstrual hygiene, have a good habit as much as 29.3% and 71.7% have less habits. Statistical test results are said that there is a relationship between habits with the behavior of menstrual hygiene in midwifery students Jakarta ($P = 0.000$).

The results of this study in line with Nita (2014) which states there relationship between individual habits and behavior in personal hygiene. The better a person's habit, the better their personal hygiene behaviour.

There is a habit of someone using a particular product in self care. Individual freedom to choose the time for self-care, choose the product want to use, and choose how to do hygiene. Everyone has a desire to determine when he is bathing, shaving hair, doing hair care and so on.

The habit of maintaining hygiene, including the cleanliness of sexual organs or reproduction, is the beginning of the effort to do menstrual hygiene. During menstruation, blood vessels in the uterus are very susceptible to infection. Therefore, hygiene of the genitalia area should be more guarded because the germs are easy to enter and can cause disease on the reproductive tract.

CONCLUSIONS AND RECOMMENDATIONS

The majority of respondents have good behavior about menstrual hygiene, which is as much as 54.7% with criteria 50.9% with poor body image to menstrual hygiene and 62.3% have good habits regarding menstrual hygiene.

There is a relationship between the body image (0.000) and the Habit (0.000) with the behavior of menstrual hygiene in midwifery students Jakarta.

It is expected that health institutions can promote health in the form of making guidelines or health media that are easily understood and interesting related to menstrual hygiene behavior.

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INVOLVEMENT OF HUSBAND IN THE CLASSROOM MENTORING PREGNANT WOMEN AND THE FACTORS THAT INFLUENCE IT

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ABSTRACT

Background: Involvement of husband in pregnancy improves the health of pregnant women and infants. Expectant mothers who are in a very attentive and engaged pregnancy tend to have more maternity care services and reduce bad things for their pregnancy like smoking. In addition, expectant mothers who feel emotional support from their husbands are also less stressed when pregnant.

Objective: To know the involvement of husbands in the mentoring of pregnant women and the factors that influence it.

Research methodology: This type of research uses cross sectional design with the primary data of the father accompanying the expectant mother in Depok Jaya Inpatient Clinic During the October 2018 research period. The sample uses the Lemeshow formula, amounting to 94 respondents with sampling techniques accidental sampled with the consideration of all fathers who come to accompany a check of pregnant women ANC have a chance of becoming a sample. Family. **Research results:** There is a significant link between factors with the involvement of husbands in the mentoring of pregnant mothers. (P value < 0.05) Data analysis using double logistic regression there is a meaningful relationship to the involvement of the husband following the pregnant women's class is education and social culture controlled age, knowledge, attitude and support (P Value < 0.05)

Keywords: involvement of the husband, mentoring the class of pregnant women, Mother's class

INTRODUCTION

Husband's involvement in pregnancy improve the health of pregnant women and infants. Pregnant women who have husbands attention and more involved in the pregnancy were more likely to receive prenatal care services and reduce the bad things to pregnancy such as smoking. Also pregnant women who feel they have the emotional support of a husband is also less stress during pregnancy.

The involvement of husbands among others, is to discuss the pregnancy with his wife, accompanied control to the doctor, feeling the baby's movements stomach and pregnant women attend classes or childbirth preparation classes with his wife. Maternity classes have been implemented around the year 2009. This event is part of the Maternal and Child Health Program. Class Activity Pregnancy is a form of intervention in the early stages of human life cycle. However, the successful implementation Maternity classes are still many obstacles. Factors that support the success of pregnant women class includes internal and external factors. Supporting factors include the potential internal strength and support from supervisors (center midwife) and facilities for health centers, participants KIH (pregnant women). Factors supporting external opportunities include community support, involvement of stakeholders.

With the involvement of the husband during labor then the relationship between mother, father and their baby will be increasingly strong.

Husband's role greatly affects the condition of pregnancy, childbirth and fetus. Support cooperation fetus father and mother also can be healing for their souls. Research shows that mothers who persalinannya accompanied by her husband will experience less postpartum depression compared with maternal unaccompanied. Another study also mentions the presence and involvement of the husband during childbirth make childbirth more quickly and reduce the birth canal laceration.

McNamara, M., Martin, L., Bloch, M., & Hair, E. (2007), In a study on male involvement male dikomunitas care program put forward, after the implementation of the program there is a change of behavior shown is more concerned about his wife and son, took his wife to discuss and participate in the care of their children.

With respect to the above authors wanted to do research on the relationship between the characteristics of the husband as seen from the factors of age, education, occupation, ethnicity, religion, income, number of children, as well as to social, cultural, knowledge of the husband, the husband attitude, and support your wife / family, as well as access to media / information with her husband's involvement in assisting pregnant women class.

METHOD

This study used cross sectional design, aims to determine the factors associated with the husband's involvement in assisting pregnant women class in Klinik Rawat Inap Depok Jaya 2018. The study was conducted at Klinik Rawat Inap Depok Jaya to the timeframe of October 2018. The population are the whole father who accompanied ANC pregnant women at Klinik Rawat Inap Depok Jaya.

Calculation of the sample refers to Lemeshow formula is: $n = \frac{Z_{1-\alpha} / -sP (1-P)}{d^2}$

Based on the calculation, a minimum sample of 92 respondents to the inclusion criteria: husband / men are couples of childbearing age who accompany pregnancy when memeriksa respondents who are willing to study.

Analysis was done using a simple logistic regression and multivariate analysis using logistic regression with SPSS.

RESULTS

Table 1 Distribution of Respondents by Socio-Demographic Characteristics N = 94

Variables	Frequency	%
Age husband		
20-30	68	72.3
31-40	26	27.7
Education husband		
SMU	52	55.3
PT	42	44.7
Income husband		
3-5 Million	47	50
> 5 Million	47	50
Husband Works		
Private / Entrepreneur	68	72.3
PNS / Police / Army / profession	28	27.7
Knowledge husband		
Well	34	36.2
Less	60	63.8
Attitude husband		
Well	58	61.7
Less	36	38.3
Family support		
Well	81	86.2
Less	13	13.2
Socio-cultural		
Well	72	76.6
Less	22	23.4
Access to Information		
Exposed	85	90.4
Not Exposed	9	9.6

According to the table 1 above can be seen the characteristics of respondents 72.3% were in the age range 20-30 years, 55.3% of high school education background, 50% income > 5 million, 72.3% had private employment / entrepreneurship, 63.8% less knowledgeable, most of the attitude of husband well that is 61.7%, the majority of family support at 86.2%, most husbands are exposed to information access that is equal to 90.4%.

Table 2 Proportion of Husband's Involvement Following the Class Top Maternity Clinic Inpatient Depok Jaya 2018 (n = 94)

Involvement husband	Frequency	%
Participate Class Mothers	58	61.7
Mother did not join class	36	38.3
total	94	100

Research shows that the greatest proportion of the husband's involvement in the category mother took classes in the amount of 58 (61.7%) and did not join the class of pregnant women that is equal to 36 (38.3%). Still the husband who has not followed the mother class is a situation that should be a concern for the government and health workers, especially midwives.

Table 3. Relationship of Age, Education, Employment, Income, with the husband's involvement following the Pregnancy Class

Variables	Husband's Involvement		Value	OR	CI 95%
	Participate Class	Do not participate			
Age					
20- 30 years	47 (69.1%)	21 (30.9%)	0,031	3,05	1.2-7.7
31- 40 years	11 (42.3%)	15 (57.7%)			
Education					
SMU equal	38 (73.1%)	14 (26.9%)	018	2.9	1.2-7.0
PT equal	20 (47.6%)	22 (52.4%)			
Income					
3-5 Million	28 (59.6%)	19 (40.4%)	832	0.8	0.3- 1.9
Over 5 million	30 (63.8%)	17 (36.2%)			
Work					
Private / Entrepreneur	44 (64.7%)	24 (35.3%)	.352	1:57	0.6-3.9
Civil / military / police / Profession	14 (53.8%)	12 (46.2%)			

Based on Table 3 above shows that among 94 respondents, a husband with a range of 20-30 years age group showed involvement of the husband to attend classes as much as 47 pregnant women (69.1%) while in the age group 30-40 years, there were 11 (42.3%) mengfollow class mother. The results of the statistical test obtained by value $p = 0,031$ there is no significant relationship between the age group with the husband's involvement in the classes for pregnant women. The results of analysis are also $OR = 3:05$, meaning the 20-30 age group has the opportunity to partake of 3.05 times compared to the 30-40 age group.

The results of the bivariate analysis on educational variables showed that the proportion of mothers grade education who joined the largest category in the amount equivalent high school education 73.1% with an OR of 2.9 times compared with the education husband PT equal to 0,018 with p value 95% CI 1.2-7.0.

The results of the analysis of the relationship between income status with the husband's involvement pregnant classes showed that no significant relationship between income groups with the involvement of the husband and there is no significant relationship between the husband's job with the involvement of pregnant women attend classes (P value > 0.05)

Table 4. Relationship Of Knowledge, Attitudes, And Socio-Cultural Family Support With Husband's Involvement Following The Pregnancy Class

Variables	Involvement husband		P Value	OR	CI 95%
	Participate Class	Do Not participate			
Knowledge					
Well	26 (76.5%)	8(23.5%)	0.03	2.8	1.1-7.2
Less	32 (53.3%)	28(46.7%)			
Attitude					
Well	30 (51.7%)	28 (48.3%)	0,016	0.3	0.1-0.7
Less	28 (77.8%)	8 (22.2%)			
Family support					
Well	57 (70.4%)	24 (29.6%)	0000	28.5	3.5-231
Less	1 (7.7%)	12 (92.3%)			
Socio-cultural					
Well	52 (77.2%)	20 (27.8%)	0000	6.9	2.3-20
Less	6 (27.3%)	16 (72.7%)			

The results of the analysis of the relationship between knowledge with her husband's involvement shows that there were 26 (76.5%) were knowledgeable good husband mothers attend classes. While among the less knowledgeable respondents 32 respondents (53.3%) of pregnant women attend classes. The results of the statistical test obtained by value p = 0.03 then failed rejected H_0 received means there is a significant relationship between knowledge class mothers with husbands involvement mothers attend classes. From the analysis results obtained by the value of OR = 2.8, meaning good knowledge husbands have 2.8 times the opportunity to attend a class for pregnant women.

The results of the analysis of the relationship between husband attitude with husband's involvement in mind there are as many as 30 respondents (51.7%) who acted both classes of pregnant women. Meanwhile, among those who act less as much as 28 respondents (77.8%) remained mothers attend classes. Statistical test results show the value of p = 0.016. is a significant relationship between the attitude of the husband's involvement mothers attend classes. OR value of 0.3 indicates that it has a good attitude peluang 0.3 times to follow mother classes sebangai form being less involvement than the husband.

The results of the analysis of the relationship between the support with husband's involvement shows that there were 57 (70.4%) husbands who get support from family follow mother classes. While among respondents who have less family support 12 respondents (92.3%) did not attend a pregnant woman. The results of the statistical test obtained by value p = 0.00 it means there is a significant relationship between family support with her husband's involvement mothers attend classes. From the results obtained by analysis of the value of OR = 28.5, meaning that the husband has the opportunity to get family support 28.5 times for pregnant women to attend classes than her husband who have no family support

The results of the analysis of socio-cultural relations between husband involvement shows that there were 52 (77.2%) support the socio-cultural community, mothers attend classes. While among respondents where sociocultural less support, there were 16

respondents (72.7%) did not attend a pregnant woman. The results of the statistical test obtained by value $p = 0,000$ so H_a is received failing rejected it means there is a significant relationship between socio-cultural community with her husband's involvement mothers attend classes. From the results obtained by analysis of the value of $OR = 6.9$, meaning that a husband with a social culture that supports 6.9 times have the opportunity to attend a class of pregnant women with the husband than sociocultural less supportive.

Multivariate analysis using multiple logistic regression with backward stepwise method is achieved in stages to get the best model The end result of elimination process can be seen in the table below:

Table 5 Results Of Multiple Logistic Regression Modeling Of The End Of Education And Socio-Cultural Variables With The Involvement Of The Husband

Variables	B	Wald	Sig	OR (95% CI)
Education	1,295	5076	.024	3.6 (1.18- 11.2)
Socio-cultural	1,718	6335	.012	5.5 (1.46- 21)

The final results of the multivariate analysis in Table 5.4 above shows the variables that influence husband involvement of pregnant women attend classes and socio-cultural education is controlled age, knowledge, attitude and family support.

DISCUSSION

Research shows that the greatest proportion of the husband's involvement in the category mother took classes in the amount of 58 (61.7%) and did not join the class of pregnant women that is equal to 36 (38.3%). Still the husband who has not followed the mother class is a situation that should be a concern for the government and health workers, especially midwives. The husband has a very important role in efforts to protect the health of his wife and children. Research on the pair's involvement in the management of complications, conducted in Uganda showed that knowledge of pregnant women who supported her husband had a positive influence on the planning and preparation for a safe delivery. (Kakaire O, Kaye DK, Osinde MO., 2011). Research on Health Education conducted in Nepal by Mullany BC et al showed that pregnant women who received the Health Education with him more prone to post-natal visits compared to only pregnant women who receive Health Education, Adamsons, K. (2013). The ability of women to seek health care or apply knowledge of a Health Education intervention is often determined by the head of the household, the husband. Support and role of the husband during pregnancy proved to improve the readiness of pregnant women in the face of the delivery process. Culture of some communities in Indonesia shows the role of the husband or family to take decisions in the family are very dominant (paternalistic culture) (Balitbangkes. 2010) Knowledge husbands and families about the danger signs of pregnancy, childbirth and postpartum become factors contributing to the high maternal mortality rate Support and role of the husband during pregnancy proved to improve the readiness of pregnant women in the face of the delivery process. Culture of some communities in Indonesia shows the role of the husband or family to take decisions in the family are very dominant (paternalistic culture) (Balitbangkes. 2010)

1. Knowledge of the relationship with her husband's involvement

Based on the results of research conducted on 94 respondents, most respondents have less knowledge of as many as 60 (63%). But still there who has good knowledge of 34 (36.2%). It is certainly reasonable for most of the response is the first pregnancy. Therefore midwives should be appreciated by husbands who already want to engage pregnant women to attend classes.

the results of analysis of the level of knowledge with her husband's involvement shows that there were 26 (76.5%) were knowledgeable good husband mothers attend classes. While among the less knowledgeable respondents 32 (53.3%) of pregnant women attend classes.

The results of the statistical test obtained by value $p = 0.03$ then failed rejected H_a received means there is a significant correlation between husband knowledge with husband involvement mothers attend classes. From the analysis results obtained by the value of $OR = 2.8$, meaning good knowledge husbands have 2.8 times the opportunity to attend a class for pregnant women. With the background of the entire respondents had higher education (more than high school), would also determine whether or not a person easily and understand the knowledge of the importance of pregnant women class, so that the husband will learn to follow mother classes. a good education is not a person participated mementukan absorb and use knowledge. The results are consistent with the WHO stating that the partner's behavior can be influenced by one of them is knowledge. The knowledge gained from their own experience or the experience of others.

2. **Attitudes relationship with her husband's involvement**

Based on the results of research conducted on 94 respondents, most respondents have a Good Attitude were 58 (61.7%). But still there who have less knowledge of support by 36 (38.3%). It is certainly reasonable for most of the response is the first pregnancy. Therefore midwives should be appreciated by husbands who already want to engage pregnant women to attend classes. The results of the analysis with the attitude category husband's involvement shows that there were 30 (51.7%) the husband has a good attitude mothers attend classes. While among the less knowledgeable respondents 28 (77.8%) of pregnant women attend classes. The results of the statistical test obtained by value $p = 0.016$ a significant relationship between the attitude of the husband's involvement mothers attend classes.

3. **Family Support engagement relationship with husband**

Based on the results of research conducted on 94 respondents, most respondents have family support as many as 57 (70.4%) It is certainly reasonable for most of the response is the first pregnancy. Therefore midwives should be appreciated by husbands who already want to engage pregnant women to attend classes. The results of the analysis of family support category with the husband's involvement shows that there were 57 (70.4%) the husband has a good family support would follow mother classes. While among respondents with less 12 families (92.3%) did not attend a pregnant woman. The results of the statistical test obtained by value $p = 0,000$ so H_a is received failing rejected it means there is a significant relationship between support keluarga with husband involvement mothers attend classes. From the results obtained by analysis of the value of $OR = 28.5$ means a husband with a good family support 28.5 times have the opportunity to attend a class for pregnant women. Family support refers to a support that is viewed by the members as something that can be beneficial. Family support is one factor Yag positive influence on behavior. The role of family support themselves divided into formal role is a role that is clearly visible, explicit, for example the role of husband / wife and the role of information as a direct assistance of the family (Notoatmodjo S 2010).

4. **Socio-cultural relationship with her husband's involvement**

Based on the results of research conducted on 94 respondents, most respondents have a good social culture or support as many as 72 (76.6%). Therefore midwives should be appreciated by husbands who already want to engage pregnant women to attend classes. The results of the analysis of socio-cultural category husband's involvement shows that there were 52 (72.2%) the husband has a good social culture that would follow mother classes. While among respondents with less cultural and social support as many as 16 (72.7%) did not attend a pregnant woman. The results of the statistical test obtained by value $p = 0,000$ so H_a is received failing rejected it means there is a significant relationship between social and cultural involvement mother's husband attend classes. From the results obtained by analysis of the value of $OR = 6.9$ means that a husband with a good family support have the opportunity 6.9 times for pregnant women to attend classes. Family support refers to a support that is viewed by the members as something that can be beneficial. Sociocultural against pregnancy is a condition in society that affect the engagement to be a father

CONCLUSION

1. Most of the husband's involvement in assisting pregnant women class as many as 58 respondents (61.7%)
2. There are several factors related to husband involvement in assisting pregnant women that age class; science education; Attitude; Culture Family and Social Support (P value <0.005)
3. Results Multivariate analysis showed controlled education and socio-cultural age, knowledge, attitude and family support. (P value <0.05)

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PARENTS ' KNOWLEDGE, ATTITUDES AND SUPPORT FOR YOUNG WOMEN'S BEHAVIOR ON CONSUMPTION OF FE SUPPLEMENTS DURING MENSTRUATION

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ABSTRACT

Introduction: Iron deficiency anemia is a anemia arising from the emptative iron reserves so that the supply of iron for hemoglobin formation decreases. Young girls are more at risk of anemia than young men because young women need more iron especially during menstruation. One of the efforts to prevent and overcome anemia in teenage daughters is to consume tablets of blood, tablets containing iron and folic acid. Young women are important to do anemia prevention by increasing knowledge of Fe supplements during menstruation. The purpose of this study is to know the relationship of knowledge, attitudes and parental support to the young women's behavior about the consumption of Fe supplements during menstruation (study in senior high schoolgirls 11 Bekasi).

Method: The research design is cross sectional analytic, with samples amounting to 352 students. Analysis of research using univariate and bivariate. **Results:** The results stated there was no relationship between the knowledge and attitudes towards the young women's behavior about the consumption of Fe supplements with the results of P value = 0.0092 and 0.0086. While the value of P value of Oorang-parent support = 0.000 So it is said there is a relationship with the young women behavior about the consumption of Fe supplements.

Conclusion: For the next expected role and function of UKS to make an outreach program by healthcare personnel to improve the awareness of young women about Fe supplements so it can behave to consume Fe supplement during menstruation.

Keywords: knowledge, attitudes, education, parental support, adolescent's behaviour, Fe supplements

INTRODUCTION

Adolescence is a period of rapid growth and development both physically, psychologically and intellectually. According to WHO, the youth is a resident of the age range of 10-19 years, according to regulation of the Minister of Health RI No. 25 of 2014, teenagers are residents in the range of ages 10-18 years and according to the population Agency and Family Planning (BKKBN) about the age Teenagers are 10-24 years old and not married. Number of age groups 10-19 years in Indonesia by population census 2010 as much as 43.5 million or about 18% of the population. In the world, groups of teenagers are estimated to be 1.2 billion or 18% of the world's population (Kemenkes RI, 2015).

Basic health Research year 2013 shows based on grouping age, obtained that adolescent anemia to young adults (34 years), age 15-24 is 18.4% and the age of 25-34 is 16.9%. Based on the gender it is derived that the proportion of anemia in females (23.9%) higher than in males (18.4%). If compared based on the residence it is found that anemia in rural areas (22.8%) Higher compared to urban areas (20.6%) (Rikesdas, 2013).

Women of childbearing age (WUS) tend to suffer from anemia because women have menstruation every month, and this will be exacted if iron intake of daily food is low. Women of childbearing age who have a nutritional anemia of iron will be easily sick because of low body resistance so that low working productivity. The rich food sources of iron and folic acid are generally found in animal protein sources such as liver, fish, and meat which are relatively expensive and not as low as affordable by most Indonesians. One of the factors of the cause of nutritional anemia due to lack of iron intake in foods that are made daily, marked by the level of Hemoglobin (Hb) under normal (Kemenkes RI, 2014).

Low female knowledge about anemia will obviously have an impact on the risk of their reproductive health experience someday. The risk of anemia in adolescents is higher in the time of a pregnant woman. Anemia allows the increased risk of death in women with anemia that have severe bleeding, also the risk of having a low birth baby (BBLR) and infants with

congenital abnormalities born. The risk of anemia not only occurs in women, but also men. The majority of female adolescents mention how to cope with anemia by consuming pills to add blood (54 percent), or increase consumption of vegetables that contain a lot of iron (25 percent) (SDKI, 2012).

Anemia is a condition when the amount of red blood cells or oxygen carrier concentration in the blood (Hb) is insufficient for the physiological needs of the body. According to WHO and the guidelines of Kemenkes 1999, cut-off points of anemia vary between age group, or individual groups. Certain age groups or individuals are considered to be more susceptible to anemia than other groups. Reference cut-off point women of childbearing age 15-49 years have anemia when the rate is Hb < 12.0 g/dL (Rikesdas, 2013).

Based on the research conducted by Lestari (2012) shows that the majority of respondents have knowledge with a sufficient category of 54 respondents (84.4%). For good knowledge category there are only 2 respondents from 64 respondents (3.1%) A knowledge category of approximately 8 respondents (12.5%).

METHODS

Research place at SMU 11 Bekasi. The study took place from July to September 2018. This research uses quantitative methods. This type of research is description with a cross sectional approach. Independent variables are knowledge, attitudes, parental education and parental support. While the dependent variable is the level of adolescent behavior about the consumption of Fe tablets population in this study is all 11 Bekasi high school students of 352 students. Sampling techniques use a total sampling. Data analysis using Chi Square.

RESULTS AND DISCUSSION

Table 1 The Young Women's Knowledge Relationship with Young Women's Behavior On The Consumption Of Fe Supplements During Menstruation.

Knowledge	Adolescent behavioral		Total (%)	P value
	Good	Not good		
Good	60 (35,9 %)	107 (64,1 %)	167 (100%)	0,092
Not good	51 (27,6 %)	134 (72,4 %)	185 (100 %)	
Total	111 (31,5 %)	241 (68,5 %)	352 (100 %)	

Source: Primary Data 2018

Based on table 1, there are research results of young women who have good knowledge of 167 people with details that behave well 60 people and 107 people behave less against the consumption of Fe supplements during menstruation. While the young women who have less knowledge there are 185 people with details that behave well 51 people and 134 people behave less.

Table 2. Relationship of Young Women Attitudes To The Young Women's Behavior On The Consumption Of Fe Supplements During Menstruation.

Attitude	Adolescent behavioral		Total (%)	P value
	Good	Not good		
God	68 (35,4 %)	124 (64,6 %)	192 (100%)	0,086
Noty good	43 (26,9 %)	117 (73,1 %)	160 (100 %)	
Total	111 (31,5 %)	241 (68,5 %)	352 (100 %)	

Source: Primary Data 2018

Based on table 2, there are research results of young women who have good attitude there are 192 people with details that behave well 68 people and 124 people behave less against the consumption of Fe supplements during menstruation. Whereas young women who have an attitude of less there are 160 people with details that behave well 43 people and 117 people behave less.

Table 3 Parental Education Relationship With Young Women Behavior About The Consumption Of Fe Supplements During Menstruation.

Parents education	Adolescent behavioral		Total (%)	P value
	Good	Not good		
Good	103 (32,3 %)	216 (67,7 %)	319 (100%)	0,344
Not good	8 (24,2 %)	25 (75,8 %)	33 (100 %)	
Total	111 (31,5 %)	241 (68,5 %)	352 (100 %)	

Source: Primary Data 2018

According to table 3, the results of young women study with parents in good education category there were 319 people with the details of young women who behaved both 103 people and 216 people behaved less against the consumption of Fe supplements while Menstrual. While the young woman has parents with an education less than 33 people with details of young women who behave well 8 people and 25 people behave less.

Table 4 Parental Support Relationship With The Young Women Behaviors Of Fe Supplement Consumption During Menstruation.

Parental support	Adolescent behavioral		Total (%)	P value
	Good	Not good		
Good	88 (52,7 %)	79 (27,3 %)	167 (100%)	0,000
Not good	23 (12,4 %)	162 (87,6 %)	185 (100 %)	
Total	111 (31,5 %)	241 (68,5 %)	352 (100 %)	

Source: Primary Data 2018

According to table 4, the results of young women research that have parents support in good category there are 167 people with details of young women who behave well 88 people and 79 people behave less against the consumption of Fe supplements when Menstrual. While the young women who have parental support in the category have less than 185 people with details of young women who behave well 23 people and 162 people who behave less.

The results of the research conducted in the young women in SMU Negeri 11 Bekasi was found that the results of knowledge about Fe's supplement in good category of 167 respondents (47.4%). This means most respondents have gotten information about the Fe supplement. In this study there are still respondents with less knowledge. Less knowledge can be caused by respondents less exposed to information media or never getting information from healthcare personnel. While the respondents who have good knowledge can obtain information from the media MASAA or information from health workers.

One of the factors that affects knowledge comes from external factors i.e. source of information. A source of information aims to facilitate the obtaining of information also helps expedite a person to acquire new knowledge (Wawan and Dewi, 2010). The theory is supported by the research carried out by Lestari (2012) that the respondents with enough categories of 83.3% have received information Fe tablet from electronic media by 26 respondents (40.6%). In addition, a possible factor that affects the outcome of knowledge with good categories is there are health workers in the school. The health worker is a midwife who works at UKS every Monday and Friday.

In this study there are still respondents with less knowledge. Factors that can affect the lack of knowledge of young women about Fe tablets, among others, lack of information obtained by respondents both from healthcare personnel, mass media, electronic media and from the family, as well as the ability of respondents To understand the information provided. (Lestari, 2012). This is in accordance with the research results there are still 185 respondents (67.6%) who have less knowledge.

The results of the study of Lestari (2012) showed that sufficient levels of knowledge in respondents were influenced by the low levels of Fe tablet consumption with the result that most respondents were 87% not consuming Fe tablets during menstruation. The lack of knowledge of experience regarding the consumption of the Fe tablets makes the information that the respondents have little so that the knowledge gained largely is sufficient.

In addition to measuring knowledge, this study also measured the young women's attitudes toward the consumption of Fe supplements. The results showed that most of the young women had a good attitude of 192 people (54.6%). The attitude is a person's closed response to a particular stimulus or object that already involves a factor of opinion and emotion in question. (Notoatmojo, 2011).

The results of this research show that teenagers are utri in this regard as respondents mostly have a positive attitude. Factors that influence to tend to be positive among other things because of the mass media. In the delivery of information as a fundamental task, the mass media carries messages that ripen suggestive that can direct a person's opinion, the voice of the information that is brought in when strong enough will give an affective basis in judging something. (Apiani, 2107)

In this study there was no meaningful link between knowledge and attitudes towards the young women's behavior for the consumption of Fe supplements during menstruation. The result of the P Value for their respective knowledge and attitudes is 0.092 and 0.086 meaning there is no relationship to the young women's behavior. Respondents with good knowledge and attitudes and implemented the consumption of each 60 (35.9%) and 68 (35.4%) Young women.

Parents' education has no meaningful relationship with the young women's behavior for the ingestion of the Fe supplement during menstruation in this study, with the result of p value = 0.344. As for the support of the elderly have a meaningful relationship with the young women's behavior to conate the Fe tablets during menstruation ie with p value = 0.000. Young women who have a Fe tablet consumption behaviour with education category and good parental support are 103 (32.3%) and 88 (52.7%) Respondents.

Parental support is a contributing factor to adherence to Fe tablets consumption. Dukungna from the family party, especially parents included in the effort to remind individuals of consuming Fe supplements during menstruation. Thus suggests that the subjective norm in the form of family support affects the strong or weak intention of a person to conduct a behavior. (Annisa).

Ajzen and Fishbein in the theory of planned behavior say that one person is influenced by three factors, namely attitudes towards behavior, subjective norms, and perception of behavioral control. The subjective norm is an individual's perception of the social pressure of the people deemed important by the individual to commit or not melakukan a behavior. The higher the support is given to do a behaviour then the stronger the intention of the individual to perform such behavior (Annisa).

Snehandu B. Kar's theory says that intention and social support are determinants that influence a person's behavior formation. Family support includes one social support that can affect the formation of intentions to conduct a behavior. (Annisa).

According to Koziar, someone who has an adequate network of support such as family, close friends, or a person of trust will have a strong awareness to realize that he or she is sick or at risk of getting the disease Maintain their health. Kozeir also argues that families will usually lower their patterns of behavior, habits, and lifestyles to the next generation, including in affecting the health of their family members. In addition Friedman says that one of the family functions is to maintain the health of the family members in order to keep high productivity. (Annisa).

According to Sheeran and Milne in Albery and Munafo in 2011, the formation of intentions became an action derived from the management of intent through how full of one's

belief in the conduct of such behavior. This belief is referred to as normative beliefs, which are beliefs supported by people we consider important as family, close friends, or experts who want us to do the behavior. Therefore, the intention of forming the young princess to consume blood-added tablets requires the social influence or support of others like the family. (Annisa). Factors that affect consumption is not only knowledge, but still a lot of factor that affects, among others, the individual, a factor that comes from the human self itself, such as soul emotion that has the nature of habit, body image, Food selection and meaning.

Consumption which is one form of behavior is very closely influenced by knowledge, but before people behave there is an adoption process that lubricated one's behavior. One of the process of adoption of behavior is trial (try). At this stage one has tried a new behavior according to the knowledge, awareness, attitude towards the stimulus. When there is this trial stage someone has knowledge but there is no awareness in acting, meaning the process of adoption of behavior is unsuccessful. The consumption behaviour of the Fe supplements is not only influenced by internal factors including knowledge, but influenced by the extention factor i.e. intelligence, perception, emotion, motivation that serves to process the stimulus from the outside. So it can be explained in the category of knowledge whether or not there are students who do not consume Fe supplements during menstruation. This can be due to low motivation and awareness so that the ability to process stimulation from outside is also low. (Lestari, 2012)

Related to this research, family support is one of the factors needed to form the intention of young daughters in consuming tablets of blood to prevent anemia. With the high support provided by the family, it will form a normative belief and the young daughter will tend to form a positive perception of the consumption of tablets plus blood, so formed a strong intention to Consume the tablet to avoid the risk of anemia. However, another factor that also affects the person's intention is the attitude and perception of behavioral control not examined in this study so that both factors can be used as reference for subsequent research.

CONCLUSIONS AND SUGGESTIONS

The results showed no relationship between knowledge, attitudes and parents ' education with the young women's behavior about the consumption of Fe supplements. However, there is a parental support relationship with the young women's behavior about the consumption of Fe supplements during menstruation.

Suggestions can be given:

1. Enhance the role and function of the UKS by making an outreach program by healthcare personnel to improve the young women's enforcement about the supplement Fe so that it can behave in consuming Fe supplements during menstruation.
2. Cooperation of the school with the nearest health service through the UKS program to socialize and realize the administration of Fe Supleemen in the young women during menstruation.

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EFFECT OF PROGRESSIVE MUSCLE RELAXATION EXERCISE INTERVENTION ON DECREASING BLOOD PRESSURE IN THE ELDERLY WITH HYPERTENSION AT ELDERLY CARE CENTER IN EAST JAKARTA

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ABSTRACT

Background: The elderly are individuals over the age of 60 years, with increasing age, the role and physiological function of the body decreases so that often experience non-communicable diseases one of which is hypertension. Hypertension is a condition in which blood pressure in the blood vessels increases chronically. Several ways can be done by physiotherapists to lower blood pressure including various interventions, one of which is progressive muscle relaxation exercises. The researchers aimed to determine the effect of progressive muscle relaxation exercise on reducing blood pressure in the elderly who have been classified as hypertensive. **Research Methods:** The design of this study was a pre-experimental One Group Pre Test-Post Test with a sample of 60 years old as many as 17 people selected according to the Lemeshow formula and tested using paired Samples T-Tests. Data collection techniques used in this study were blood pressure measurements with a sphygmomanometer and interviews. **Results:** Statistical tests using Paired Samples T-Test with a confidence level of 0.05 p-value 0.000 ($p < 0.05$) in systolic and for diastolic 0.001 ($p < 0.05$) to obtain the difference between before and after the intervention was given. **Conclusion:** Progressive Muscle Relaxation Exercise can significantly reduce blood pressure in the elderly with hypertension. It is expected for the elderly with hypertension to carry out Progressive Muscle Relaxation Exercise as an additional therapy program to control blood pressure.

Keywords: Elderly, Hypertension, Muscle Relaxation Exercise

INTRODUCTION

The life expectancy of a nation is often used as a benchmark for the progress of a nation. The UN-Population Department of Economics and Social Affairs (1999) states that the number of the elderly population 60 years is estimated to reach nearly 600 million and is projected to be 2 billion by 2050. Data from the USA-Bureau of the Census, Indonesia is expected to experience an increase in elderly citizens the largest worldwide, between 1990-2025 at 414% (Susilowati & Suratih, 2017).

According to the Law of the Republic of Indonesia, Number 13 of 1998 concerning Elderly Welfare stipulates that a person is said to be elderly if they have reached the age of sixty and above. Meanwhile, WHO categorizes the elderly starting from middle age, namely the elderly who are aged 45 years (Nugroho, 2009). The aging process is a setback process that includes organological, psychological, and sociocultural processes (Simanullang, 2012). Symptoms that arise during aging are characterized by changes and physiological conditions such as skin that begins to shrink, graying hair, and memory loss. Also, there is a limitation of physical activity which causes the elderly population to not be able to carry out their normal activities (Setiawan, Budiatomodjo, Ramadani, & Riana, 2015). The role and physiological function of the body decreases due to the aging process so that many non-communicable diseases appear in the elderly including hypertension or increased blood pressure, arthritis, stroke, chronic obstructive pulmonary disease, and diabetes mellitus (Ministry of Health, Republic of Indonesia, 2016).

In terms of health, the elderly group will experience a decrease in the level of health both naturally and due to disease (Kemenkes, 2014) More than half of the elderly population has blood pressure that is more than normal. Blood pressure that is more than normal will easily experience the risk of cardiovascular disease.

Hypertension or high blood pressure is an increase in systolic blood pressure of more than 140mmHg and diastolic blood pressure of more than 90 mmHg at two measurements with an interval of five minutes in a state of sufficient rest or calm.

Management of hypertension can be done with approaches to pharmacological therapy and non-pharmacological therapy. Early treatment of hypertension in the elderly, among others, by lifestyle modification, can reduce blood pressure and hypertension complications in the elderly (Loue, 2008). If lifestyle modification is not successful, then non-pharmacological therapy by administering blood pressure control drugs to help in lowering blood pressure. Also, pharmacological therapy can be combined with the exercise of the effect of progressive muscle relaxation exercises on changes in blood pressure in the elderly with hypertension.

Progressive Muscle Relaxation (PMR) Progressive Muscle Relaxation is a simple relaxation method that goes through two processes, which are tense and relax muscles. PMR is an exercise that can be done independently making it easier for someone to do the exercise without the need for help from others. Besides the training techniques from PMR can also be done in a sitting or lying position so that it can be done anywhere (Kumutha, Aruna, & Poongodi, 2014).

METODE

This research was conducted at Tresna Werdha Budi Mulia 1 Social Home located on Jl. Bina Marga No.58, RT 07 / RW 06 Cipayung, East Jakarta City. This research was conducted from March to April 2019 with a frequency of training three times a week with a total of 9 interventions.

The design of this study used a pre-experimental research design with the One Group Pre Test-Post Test approach.

This study was conducted to prove whether there is an effect of progressive muscle relaxation exercise intervention on reducing blood pressure in the elderly with hypertension in Elderly Care Center in East Jakarta

The population in this study were all elderly who were in Tresna Werdha Budi Mulia Social Home. 1. The subjects of the study were 16 people and would be treated in the form of progressive muscle relaxation exercise intervention with a frequency of 3 times a week for 3 weeks.

Before the intervention, sampling is based on selection or assessment that meets the inclusion criteria, exclusion criteria and drop out criteria.

RESULTS

The frequency distribution of samples by age can be seen in table 1 and distributed samples by age can be seen in table 2 below:

Table 1 Distribution of Sample Frequency by Age at Elderly Care Center in East Jakarta

Age	F	%
63	1	5.9
65	1	5.9
69	1	5.9
70	6	35.3
75	1	5.9
76	1	5.9
77	2	11.8
80	2	11.8
81	1	5.9
108	1	5.9
Total	17	100

Based on the table above, it can be seen that the age of 17 samples studied in the elderly with hypertension in Elderly Care Center in East Jakarta, East Jakarta. The highest number of samples is 70 years old, 35.3% and the lowest number is 108 years, 5.9% of the total sample. The average age of 75.4 is obtained with a standard deviation of 10.56 and a mean value of 75 years. The highest age is 108 years and the lowest age is 63 years.

Table 2 Distribution of Samples by Age at Elderly Care Center in East Jakarta

Mean	Median	Min	Maks	SD
74.7	70.0	63	108	10.04

Table 2 shows the average age of the sample is 74.7 years, a median of 70.0 years, a deviation of 10.04 years and an estimated interval test with a 95% confidence of 69.60-79.92 years with a minimum age of 63 years and a maximum age of 108 years.

Table 3 Sample Distribution Based on Blood Pressure

Blood pressure	Mean	Min	Maks	SD
Sistol pre	161.1	150.0	175.0	7.60
Sistol post	135.6	107.0	153.0	11.83
Diastol pre	99.17	90.0	109.0	6.29
Diastol post	85.05	70.0	100.0	9,01

From the table above it can be seen that the average value of systolic blood pressure before being given intervention is 161.1 mmHg and a standard deviation of 7.60 with a minimum value of 150.0 and a maximum of 175.0. While the average value of systolic blood pressure after being given the intervention becomes 135.6 mmHg and the standard deviation of 11.83 with a minimum value of 107.0 and a maximum value of 153.0. The average value of diastolic blood pressure before the intervention was 99.17 mmHg and the standard deviation was 6.29 with a minimum value of 90.0 and a maximum of 109.0. While the average value of diastolic blood pressure after the intervention is 85.0 mmHg and the standard deviation is 9.01 with a minimum value of 70.0 and a maximum of 100.0

Before a bivariate analysis test is performed, it must first be tested for data normality to find out whether the data is normally distributed or not, the data normality test used by researchers is the Shapiro-Wilk test. if this test produces several more than 0.05, then it is concluded that the data are normally distributed. The results of the Shapiro-Wilk test analysis can be seen in Table 4 below.

Table 4 Data Normality

Blood pressure	p-value	Information
Sistol pre	0.13	Normal
Sistol post	0.32	Normal
Diastol pre	0.45	Normal
Diastol post	0.08	Normal

Based on the table above, the results of the systolic blood pressure value before being given a progressive muscle relaxation exercise were 0.13 (<0.05) and after being given a progressive muscle relaxation exercise the systolic blood pressure was 0.32 (<0.05) so that the data were normally distributed. Tests conducted to see differences in blood pressure before and after given progressive muscle relaxation exercises are Paired Samples T-test.

Whereas the value of diastolic blood pressure before the progressive muscle relaxation exercise is 0.45 (<0.05) and after the muscle progressive relaxation exercise is given to 0.08 (<0.05) so that the data is normally distributed. Tests conducted to see the results of differences in blood pressure before and after given progressive muscle relaxation exercises are Paired Samples T-test.

The results of the difference in blood pressure in the elderly with hypertension before and after the progressive muscle relaxation intervention was given at Elderly Care Center in East Jakarta can be seen in the table below

Table 5. Value of Differences in Blood Pressure in the Elderly with Hypertension Before and After Intervention Progressive Muscle Relaxation Intervention in Elderly Care Center in East Jakarta

Variabel	Mean	t	p
Systolic Blood Pressure	25.52	8.57	0.00
Diastolic Blood Pressure	14.11	6.56	0.00

Based on the table above, the average value of systolic blood pressure is 25.52 mmHg and diastolic blood pressure is 14.11 mmHg. Calculation of research results using the Paired Samples T-test at a confidence level of 0.05, obtained a t-count value for systolic 8.57 and a diastolic t-value 6.56. the second value of the t arithmetic $>$ T table is significant. Value $8.57 > 6.56$ there is a significant effect after being given an intervention. The probability value (p-value) results are 0.00 (<0.05), so there is a difference between before and after an intervention is given with a 95% confidence level. In the provision of progressive muscle relaxation exercise interventions, there are significant results seen a decrease from before the intervention was given and after the intervention was given.

DISCUSSION

According to Mitchell (2016), an increase in age will cause some physiological changes, namely an increase in peripheral resistance and sympathetic nerve activity and a decrease in the sensitivity of blood pressure regulation (baroreceptor reflex) so that blood pressure tends to increase.

In the human nervous system, there are two nervous systems namely, the central nervous system and the autonomic nervous system. The central nervous system functions to control the desired movements (movements of the feet, hands, neck, and fingers). While the autonomic nervous system functions to control automatic movements such as cardiovascular processes, digestive functions. This autonomic nervous system consists of 2 sub-systems where the sympathetic nerves and parasympathetic nerves that work against each other for example if the sympathetic nerves increase stimulation or stimulate organs. Encourage increased heart rate and breathing, otherwise, the parasympathetic nerves stimulate the decline in all functions raised by the sympathetic nerves (Tyani et al., 2015).

In a state of relaxation, the ends of the actin filaments come from two plates overlapping each other at the same time, becoming closer to the myosin filaments that overlap each other extensively, these plates will be pulled by the filament until the end of the myosin. During strong contractions, the actin filaments can be pulled together tightly until the ends of the myosin filaments bend. Muscle contractions occur because of the mechanism of filament shift. The strength of the mechanism formed by the crossing bridge interaction of the actin filament. If an action potential runs throughout the membrane, then muscle fibers will

cause sarcoplasmic reticulum to release large amounts of calcium ions rapidly through myofibrils (Syafuddin, 2009).

This is following the opinion of (Black & Hawk, 2005), that people with hypertension should do relaxation exercises to reduce heart rate and total peripheral resistance by inhibiting the sympathetic nerve stress response. Relaxation also results in stretching of the arteries resulting in vasodilation in the arteries and veins facilitated by the vasomotor center, there are several types of vasomotor, one of which is a baroreceptor reflex. Baroreceptor reflexes during relaxation will reduce the activity of the sympathetic nerves and epinephrine and increase in parasympathetic nerves so that the speed of the heart rate decreases, the volume of the stroke is reduced, and vasodilation of the arterioles and venules occurs. Besides cardiac output, total peripheral resistance also decreases so that blood pressure drops.

This is supported by the theory of (Arthur C. Guyton & John E. Hall, 2006) which states that after the baroreceptor signal enters the medulla solitary tract, secondary signal inhibits vasoconstrictor in the medulla and stimulates the vagus parasympathetic center with the effect of venous and arteriolar vasodilation throughout the system peripheral circulation and reduced heart rate and strength of heart contractions.

When humans experience tension and anxiety that works is the sympathetic nervous system, while relaxing works is the parasympathetic nervous system, while when relaxed it can suppress tension and anxiety. Lifestyle modification and relaxation techniques can normalize blood pressure in patients with hypertension, relaxation techniques can reduce heart rate and total peripheral resistance by inhibiting the sympathetic nervous stress response (Rachmawati & Ekarini, 2015).

CONCLUSION & RECOMMENDATION

This study concludes that there is an effect of progressive muscle relaxation exercise intervention on reducing blood pressure in the elderly with hypertension in Elderly Care Center in East Jakarta

Based on the conclusions above, as stated, it can be suggested with the following suggestions: (1) The results of this study can be used as a reference for physiotherapy, especially in geriatric physiotherapy so that Progressive Muscle Relaxation Exercise research can be an exercise program and can be developed as an intervention for reducing blood pressure in the elderly with hypertension at Elderly Care Center in East Jakarta; (2) As a follow-up study with similar research, it is recommended that it be carried out with more samples in order to obtain a better level of validity.

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BABY MASSAGE CAN IMPROVE SLEEP QUALITY OF INFANTS AGED 3-4 MONTHS AT INTEGRATED HEALTH SERVICE POST IN NORTH JAKARTA

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ABSTRACT

Introduction: The golden period in human life occurs in infancy marked by the rapid process of growth and development. Infants aged 0-5 months spend 80-90% of their time with sleep which has an important role on health, both mentally, emotionally, physically, and the immune system in the body. Baby's sleep needs must be met both in terms of quantity and quality. Good sleep quality is closely related to the baby's growth hormone that is formed when the baby sleeps. Baby massage is one way to improve sleep quality in babies. **Method:** This research was conducted at the Integrated Health Service Post in the North Jakarta on 2019, using a pre-experimental design. The research subjects were 10 infants aged 3-4 months who were selected by purposive sampling. The baby massage intervention was given for 3 weeks, twice a day with a duration of 15 minutes. Data analysis included univariate and bivariate analysis using Paired Sample T-Test. **Results:** The average value of sleep quality before intervention was 19.30 while after intervention it became 21.90. The average difference in the quality of sleep before and after the intervention was 2.60 with a probability value of 0.0001. **Conclusion:** Giving baby massage could improve the sleep quality of infants aged 3-4 months. In order to improve sleep quality in infants, parents should massage the baby at least 15 minutes, twice a day so the baby can sleep optimally.

Keywords: massage, sleep quality, baby

INTRODUCTION

The golden period in humans occurs in the early life which is in infancy marked with a very rapid process of growth and development that cannot be repeated (Bellieni, 2016). This period is also a critical period, considering that several organs and body systems must reach maturity. At the same time, babies also make the process of adaptation to their environment both physically and socially. The process of adaptation makes babies very sensitive to their environment, Less supportive environmental stimuli will greatly affect the process of growth, development, health and cognitive function in the future. (Moore, Arefadib, Deery, Keyes, & West, 2017).

One factor that has a great effect on a baby's health is sleep. Babies spend most of their time in sleeping with different sleep patterns, depending on their age.(Amanda R. Tarullo, Balsam, & Fifer, 2011). As the baby's age increases, the quantity of sleep for 24 hours will decrease. In addition, there is also a change in sleep time, newborns are more often awake at night, and at the age of 3-6 months duration of sleep at night will increase (Tham, Schneider, & Broekman, 2017).

Sleep plays an important role in brain development, facilitating neural processes such as synapse formation and pruning by providing endogenous stimulation to the brain. Sleep also plays a role in the process of brain adaptation to external stimuli (Amanda R. Tarullo et al., 2011). Babies need adequate sleep so that the growth and development of cognition, psychomotor and behavior can be optimal (Dereymaeker & Vervisch, 2017; Pennestri et al., 2018). Sleep disorders in infants will affect physical growth, cognitive function and emotional development (Field, 2017). Besides sleep disorders are also associated with other diseases such as cardiovascular disease and metabolic syndrome (Byars, Yolton, Rausch, Lanphear, & Beebe, 2012).

Many babies who experience interference with sleep that results in lack of sleep in

infants. Research conducted by Byars, Yolton, Rausch, Lanphear, & Beebe (2012) in Cincinnati Ohio found 21% of infants and 3-year-old children had sleep disorders. According to research conducted by Sekartini & Adi (2016) in five major cities in Indonesia, around 51.3% of babies experience sleep disturbance, 42% of babies have trouble sleeping at night, but more than 72% of parents consider that sleep disturbance in the baby is not a problem.

Many methods are used to overcome sleep problems such as interventions that aim to change behavior in dealing with sleep disorders, both face-to-face with counseling and via the Internet. Another way that can be taken to overcome sleep disorders is baby massage (Field, 2017). For centuries infant massage therapy has been carried out in various countries, especially in Asia. Various studies have shown baby massage can improve the quality of sleep (Ratna, Berthiana & Aden, 2013; Dewi, Aminin, & Gunnara, 2014; Yates et al., 2014).

Infant massage is a form of touch stimulation with movements in the form of slow and gentle strokes performed on the baby's entire body starting from the feet, abdomen, chest, face, hands and back of the baby (Roesli 2001). Baby massage is one way to relieve tension and anxiety because it helps to stimulate the release of the hormone endorphins so that it reduces pain and helps relax muscles so that the baby calms down, the frequency of crying decreases, and sleep will be restful. (Walker 2003).

METHODS

This study used a pre-experimental design with a pretest-posttest one group design approach. The study was conducted at Integrated Health Service Post in the North Jakarta area, from February to May 2017, while data collection was carried out in May 2017. The study sample was 10 babies who participated in the Integrated Health Service Post program selected by purposive sampling. The sample was chosen based on inclusion criteria which included 3-4 months of age, experiencing changes in sleep quality, parents of babies willing to have their babies to be respondents and to conduct routine research programs. Before the study began, the baby's parents were asked for their written approval. This research proposal has been approved by the Ethics Commission of the Health Polytechnic of the Ministry of Health Jakarta III, with a letter number: KEPK PKKJ3/015/III/2017, on 27th March 2017

Sleep quality measurements were carried out twice, namely at the beginning of the data collection before being given an intervention and at the end of the study, after all interventions were completed. Measurement of sleep quality was done by interview using a questionnaire adapted from the Brief Infant Sleep Questionnaire (BISQ). This questionnaire consisted of 9 questions with 3 answer choices, no problem with a score of 3, mild problems with a score of 2, and severe problems with a score of 1. The final score was obtained by adding up the entire score, with the following interpretation: poor sleep quality 9-14, moderate 15-20, both 21-27.

The baby massage intervention was done with moderate pressure on the area of the legs, abdomen, chest, hands, face and back, after which relaxation and gentle stretching were given. Each movement was repeated six times so that the total duration was 15 minutes. Baby massage was done 2 times a day every morning and evening, for 3 weeks. Baby massage was done by parents of the baby, after receiving guidance from researchers at the beginning of the session. In addition, every week researchers assisted and monitor to ensure baby massage was done correctly, so that the total massage given was 42 times, consisting of 39 times carried out independently by parents, and 3 times under the guidance and assistance of researchers. Parents were equipped with the booklets that contain stages of baby massage, so that they can do it independently properly.

Processing and analyzing data using data processing software programs. In this study the data analysis carried out included univariate and bivariate. Univariate analysis includes mean, median, standard deviation and mean interval estimation with a 95% confidence level. Bivariate analysis using Paired Sample T-Test considering the results of normality test data using the Kolmogorov Smirnov test. showed the two variables were normally distributed.

RESULTS

Gender

In this study the proportion of male respondents was as large as female, each at 50%, as shown in Figure 1 below:

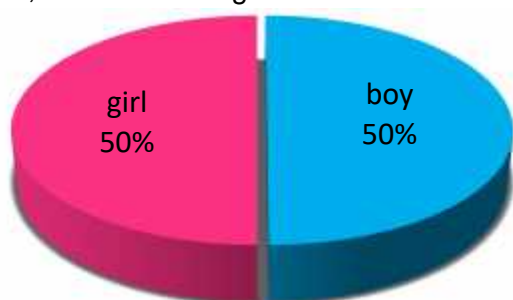


Figure 1. Gender Respondent Distribution

2. Sleeping Quality

Before being given baby massage, the sleep quality of all respondents was moderate as seen from a maximum value of 20 with a minimum value of 18, and an average value of 19.30. After being given a baby massage the respondent's sleep quality became good with values ranging between 21-23 and an average value of 21.90. For more details can be seen in table 1 below:

Table 1. Distribution of Respondents Sleep Quality

Variable Sleeping Quality	Mean±SD	Med	Min-Max	CI 95%
Before intervention	19.30±0.675	19	18-20	18.82-19.78
After intervention	21.90±0.738	22	21-23	21.37-22.43

2. The Changing of Sleeping Quality

The Changing in sleep quality of respondents before and after being given baby massage can be seen in the following table 2:

Table 4.4. Distribution of Changed in Sleep Quality Results of Respondents After Given Baby Massage

Variabel	Mean±SD	Med	Min-Max	CI 95%	P value
Changed in Sleep Quality After Intervention	2.60±0.966	2.5	1-4	1.91-3.29	0.0001

Based on the table above it can be seen, the quality of baby's sleep after being given a baby massage, shows a change in the range of value 1-4, and an average value of 2.60. Test results with Paired sample T test showed a p-value of 0,0001 ($p < 0.05$). Thus, it can be concluded that the provision of baby massage has a significant effect on improving sleep quality in infants aged 3-4 months.

DISCUSSION

This research was conducted in May 2017 for three weeks. Respondents in this study were infants aged 3-4 months who experienced changes in sleep quality. The sex distribution of the respondents showed the same proportion of men and women, each 50%. The results of this study were not much different from the national figures which show men were 50.2% and women were 49.8% (Kementerian Kesehatan RI, 2019).

This study aimed to determine the effect of baby massage on sleep quality in infants aged 3-4 months. Sleep is a period of resting characterized by reduced sensory activity and response to stimuli from the outside (Tham et al., 2017). Broadly speaking sleep consists of 2

phases, namely rapid eye movement (REM) and non-REM (NRM) phases which occur alternately in a cycardian cycle that lasts for 90 minutes. The cycardian sleep cycle begins with the NREM phase which consists of 4 stages based on increasing sleep depth. The third and fourth phases of NREM are called slow wave sleep, based on the prevalence of low frequency cortical oscillations on the electroencephalogram (EEG) (Walker & Stickgold, 2006). After stage IV, sleep will enter the REM stage which is characterized by rapid movements of the eyeball that occur suddenly, increased EEG wave activity, muscle paralysis and accelerated breathing patterns and heart rate. The completion of REM sleep has completed one cycle of sleep cycle, which can continue to the next cycle of sleep cycle or to the state of wakefulness (Sekartini, 2013). Infants can sleep immediately with REM and this pattern is not uncommon in adults (Soetjningsih & Ranuh, IG.N. Gde 2013).

Sleep has an important role for babies, especially in maturation of brain cells, cognitive development, psychomotor and behavior (Dereymaeker & Vervisch, 2017). In this study to improve sleep quality in infants who experience changed in sleep quality, baby massage was given with a duration of 15 minutes, 2 times a day for 3 weeks. Based on the analysis of the data, there was a change in the average value of sleep quality of 2.60 with a p value of 0.0001 which means that the provision of baby massage could statistically improve sleep quality in infants aged 3-4 months.

Baby massage is one way that can be used to improve sleep quality in infants (Field, 2017; Yates et al., 2014). According to Roesli (2001) baby massage can increase baby concentration and make babies sleep more soundly. Baby massage changes brain waves by decreasing alpha waves and increasing beta and tetha waves. Baby massage will also affect the activity of the vagus nerve in the mechanism of absorption of food from the baby so that breast milk absorption will be better, making the baby feel full and sleep will be more restful (Rosalina et. Al, 2007).

The results of this study were also in line with research by Ferber, et.al. (2002) in (Field, 2017) who found massage therapy can improve the adjustment of the cycardian rhythm of sleep at night in infants. This is related to the increased excretion of melatonin in infants who were given massage therapy. Melatonin is an enzyme that functions in the regulation of sleep and cycardian rhythm associated with changes in the periodic environment so that baby can adapt to the internal and external environment (Zhao et al., 2019; Tordjman et al., 2017)

Other results conducted by Ratna et. al (2011) also found the effect of massage for 10 days on sleep quality in infants. Other studies that support the results of this study were conducted by Kusumastuti, Tamtomo, & Salimo (2016) with the results as followed: baby massage interventions for six weeks affected sleep quality of infants aged 3-6 months. Other research conducted by Yates et.al (2014), and Field (2003) also found the influence of massage on sleep quality in infants.

In this study there were limitations, considering baby massage was done independently by parents, and only get guidance and assistance for 3 times without the supervision of researchers. In addition, other factors that influence sleep quality such as the pattern of breastfeeding/ feeding and milk production from the mother of the baby were not controlled.

CONCLUSIONS

Based on the description of the results of the study and discussion it can be concluded that the quality of sleep of infants aged 3-4 months can be improved by giving baby massages with a duration of 15 minutes, 2 times a day for 3 weeks. Parents should give regular baby massage twice a day to improve sleep quality.

Similar research in the future can be done by improving the research design by adding a control group that can be used as a comparison effect of the intervention. In addition, other dependent variables can also be added such as weight gain, emotional development of the baby, and depression in the mother.

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EFFECT OF GUIDEBOOK OF PREGNANT WOMAN WITH PREECLAMPSIA ON CADRE'S KNOWLEDGE AND ATTITUDE

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ABSTRACT

Hypertension during pregnancy may lead to a serious condition called preeclampsia. Health cadre should be provided with information concerning identification of such risk. This study aimed to identify the impact of guidebook of pregnant woman with preeclampsia on knowledge and attitude in health cadre. The study design was quasi-experimental with non-randomized pretest-posttest group control approach. This study involved 60 health cadres whom were assigned into two groups, intervention group (n= 30) and control group (n= 30) and recruited through purposive sampling technique. The results suggest that there was significant difference in health cadre's attitude between both groups (p= 0.000). Health promotion through guidebook of pregnant woman with preeclampsia was effective in improving health cadre's attitude. Authors recommend health cadres to use the guidebook of pregnant woman with preeclampsia when enacting their duties.

Key words: guidebook of pregnant woman with preeclampsia; cadre; knowledge; attitude

INTRODUCTION

WHO (2015) reported that mortality rate among pregnant women is still high. Approximately 830 expecting women lost their lives due to pregnancy-related complications or during childbirth every day. Kementerian Kesehatan (2015) claimed that maternal mortality rate (MMR) reached 305 deaths per 100.000 live births in Indonesia. Kemenkes also stated factors contributing to maternal deaths include postpartum hemorrhage, infection, and hypertension (eclampsia). Health Office of Central Java (2014) reported that maternal mortality rate due to preeclampsia/eclampsia in Central Java was 23,95%.

Pre-eclampsia is caused by gestational hypertension, a medical condition characterized by elevated blood pressure during pregnancy (Kee-hak Lim, 2016). Gestational hypertension affects 6-8% pregnant women population. Preeclampsia is a disorder associated with malfunction of vascular endothelial that develops after 20 weeks of pregnancy and may last up to 4-6 weeks following the labor. Preeclampsia may damage other organs including liver, kidney, heart, and brain, and even threaten life (Kee-hak Lim, 2016).

Government and society are responsible for ensuring access to a quality maternal care for every expecting mother, starting from early pregnancy, childbearing assisted by a qualified health care professional, and post-partum care for both mothers and their babies. Apart from healthcare facility and health care professional, health cadre plays essential role in enhancing health promotion for pregnant woman.

Mikrajab & Rahmawaty's study (2012) on roles of health cadre in program of childbearing plan and prevention of complication (P4K) in pregnant women in Mojokerto-East Java revealed that roles of health cadre in P4K activities had been enacted properly, though several aspects require improvement, including providing education for childbearing shamans, utilization of KIA book, and implementation of tiered-referral system in maternal service.

Kusuma (2010) revealed that majority of cadres had inadequate knowledge (38 participants or 61.3%) and under performance in early detection scope (45 participants or 72.6%). Their study concluded that majority of cadres had inadequate knowledge which contributed to under-performance in early screening scope for pregnant women. Therefore, midwives and nurses in public health center are required to cooperate in providing information about early detection of pregnancy risks to health cadres in order to complete early detection scope.

METHOD

The study design was quasi experimental with non-randomized pretest-posttest group control approach. The study involved 60 health cadres in public health centers of Cipayung and Cipinang Besar Utara through purposive sampling technique. They were assigned into two groups equally, 30 participants for control and intervention group. The study was conducted by providing guidebook of pregnant woman with preeclampsia for participants in the intervention group and comparing the result with control group.

The study instrument was developed by authors themselves based on theoretical framework. It measures health cadre's knowledge and attitude about preeclampsia. The study was conducted after ethical clearance was issued by Ethical Committee of Health Polytechnic of Ministry of Health Jakarta III.

RESULT AND DISCUSSION

Table 1. Participant's Characteristics Based on Education, Occupation, Age, and Duration of Being a Cadre (n= 60)

Variable	Intervention		Control Group		Total	
	N	%	N	%	N	%
Education						
Low-level education	10	33.3	5	16.7	15	25
Middle to high-level education	20	66.7	25	83.3	45	75
Occupation						
Housewife	30	100	16	86.7	46	93.3
Teacher	-	-	4	13.3	4	6.7
Age						
< 50 years	14	46.7	16	53.3	30	50
> 50 years	16	53.3	14	46.7	30	50
Duration of being a cadre						
< 15 years	14	46.7	22	73.3	36	60
> 15 years	16	53.3	8	26.7	24	40

The table indicates that majority of participants, both intervention and control group, were younger than 50 years, housewives, had middle-to-high level of education, and had been a cadre for less than 15 years. Younger age is associated with better memory capacity (Benson and Martin, 2009) and possibly contributes to better energy for enacting their duties as cadres. Cadre who is older than 60 years has passed his productive period which lowers his speed, flexibility, and strength (Arini, 2012). Being a housewife is associated with greater spare time as it is requirement to complete all cadre's responsibilities. Kemenkes (2006) requires cadre to have more spare time to assist all Posyandu's activities. Duration of being cadre is associated with experience in performing the role. Azwar (2011) described individual experience as a factor contributing to development and mold of individual's attitude which is the result of the differentiation during development.

Table 2. Difference in Cadre's Knowledge and Attitude Before and After the Intervention

Variable	Group	Mean	SD	95% CI	t	p value
Knowledge	Intervention					
	Before	46.77	3.224	0.207	- 1.725	0.060
	After	48	3.824	2.673		
	Difference	1.233				
	Control					
	Before	49.50	4.232	2.026	- 0.310	0.759
After	49.55	4.150	1.493			
Difference	0.267					
Attitude	Intervention					
	Before	45.10	3.960	13.449	- 13.99	0.000
	After	56.83	3.270	10.018		
	Difference	11.733				
	Control					
	Before	45.90	3.652	1.088	- 0.318	0.753
After	45.70	3.334	1.488			
Difference	0.200					

The result suggests that there was a significant difference in cadre's attitude in the intervention group between before and after the intervention (p value= 0,000) with difference in mean 11.733. However, there was no significant difference in cadre's knowledge (p value= 0,753). The result contradicts Notoatmodjo's theory (2012) describing that behavior is derived from knowledge and knowledge is derived from sensing an object. In this case, the guidebook was considered an object that was sensed to instill knowledge in cadre. However, there was no improvement in knowledge although their attitude was significantly changed.

The difference in cadre's attitude following education was also reported by Wahyuna's study (2008) describing that there was a significant difference in cadre's attitude toward providing care for elderly after health education. Retnawati, Widajanti, and Nugrahaeni (2014) also stated that there was a significant difference in health cadre's attitude toward supervision of family nutrition after training was provided. Purnomo (2018) reported that health promotion significantly affected cadre's knowledge, attitude, and behavioral tendency toward mental care in Sukoharjo. Linda (2019) also reported that there was a significant association between training and cadre's knowledge and attitude toward patient safety.

CONCLUSION

There was a significant difference in health cadre's attitude between intervention and control group following the intervention. However, there was no significant difference in health cadre's knowledge following the intervention. Authors recommend health cadres to use the guidebook of pregnant woman with preeclampsia when enacting their duties.

ACKNOWLEDGMENT

Authors would like to thank all parties involved in this study.

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THE IMPLEMENTATION OF EDUCATIONAL MODEL WITH BOOKLET-BASED APPROACH TO LOWERING SMOKING BEHAVIORAL OF STUDENTS IN JUNIOR HIGH SCHOOL IN PADANG

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ABSTRAK

Introduction: Indonesia is a developing country with the largest number of smokers in the world. West Sumatra became the fifth largest province in the number of smokers from 37 provinces in Indonesia. Smoking behavior in adolescents does not occur without the things that encourage them to take action. Many factors encourage teenagers to smoke. Booklet is an effective media for health education for school-age children in an effort to reduce smoking behavior. Research aims to determine the reduction in smoking behavior in adolescents through booklet-based education

Methods: The study used a quantitative research approach with "Quasi Experimental pre and posttest with control group. The location of the study was at Junior High School in Padang City. The data analysis uses Paired sample t-test and Independent t test.

Results: There was a significant decrease in smoking behavior in school-age children after being given a booklet-based education program.

Suggestion: It is recommended for schools to educate youth in the prevention of smoking behavior through booklet-based education. Input for the Department of Education, especially for junior high schools in the city of Padang in increasing prevention of smoking prevention in adolescents in the city of Padang with various efforts.

Keywords: Booklet based education, smoking behavior, adolescents

INTRODUCTION

Cigarettes are something that is dangerous for people who smoke, but smoking behavior never recedes and it seems that behavior can still be tolerated by society. It is very alarming that the age of starting smoking is getting younger day by day. And most start from childhood and adolescence. Santrock 2003, stated that teenagers who had smoked increased sharply after the age of 10 years and reached a peak of ages 13 and 14 years. Teenagers who start smoking at the age of 12 years or younger tend to be heavy smokers compared to teens who start smoking above the age of 15 years or older.

The World Health Organization (WHO) in 2016 stated that more than five million people died from diseases caused by smoking. This means that every minute approximately nine people die due to poison in cigarettes or in every six seconds in this world there will be one case of death due to smoking. In 2030 it is estimated that more than 80% of deaths due to smoking occur in developing countries. Indonesia is one of the developing countries with the largest number of smokers in the world. World Health Organization (WHO) data in 2016 Indonesia ranks third after China and India in the world's ten largest smoker countries. The number of Indonesian smokers reaches 65 million.

Basic Health Research in 2018 reported the prevalence of smoking in school-age adolescents or those aged 10-18 years has increased. The percentage of teenage smoking behavior was recorded at 9.1 percent, an increase from Basic Health Research 2013 which was 7.2 percent. The results of the study also showed that more than 1.2 million West Sumatra residents were smokers. West Sumatra became the fifth largest province in Indonesia in the number of smokers from 37 provinces in Indonesia.

Smoking behavior in adolescents does not occur without the things that encourage them to take action. Many factors encourage teenagers to smoke. Broadly speaking, the factors that influence smoking behavior in adolescents are environmental factors consisting of family and peer environment, psychological satisfaction and the influence of information (Komalasari, D, 2000).

Adequate knowledge about the dangers of smoking to health is expected to make people who don't smoke still not smoke and smokers who are already able to stop this very dangerous habit (Putri, 2010). One of the media that is often used because it is interesting and simple is the booklet media (Notoadmojo, 2012). Booklet is an effective media for health education for children (Zulaikha, 2012; Paramastri, I., et al., 2011). The booklet media itself can give rise to the responsibility of each respondent independently of knowledge based on information received through the media because of the booklet. Booklets are given to each individual, so they can be studied at any time (Aini, 2010).

Based on research by Ridha & Hernawan (2016) the use of booklet media, it is known to be able to predict the probability of adolescent behavior to smoke up to 99.3%. In this study the increase in knowledge is influenced by providing information in the use of booklet media. Increasing the number of smokers among adolescents despite knowing the effects of smoking on health, causes the problem of smoking to be more serious and smoking habits continue to be done in the community, including among adolescents themselves. Even the phenomenon of smoking does not only occur in adults but has penetrated into school children. Not only high school students but have penetrated junior high school and elementary school students.

The Global Youth Tobacco Survey conducted a survey in 2016, of 240 students from 3 junior high schools selected at random in the city of Padang, found that 27.7% of students had smoked, and all were male. 29% tried cigarettes at the age of less than 10 years. 37% of students still smoke until now, 46% of them are addicted to cigarettes. As many as 77.1% of students who have smoked have smokers' parents.

This is the background of research needs to be done about research conducted on the Implementation of Booklet-Based Education Model in Reducing Adolescent Smoking Behavior in Padang City Middle School. SMPN 27 Padang is a Junior High School located in Sungai Sapih, Kuranji District, Padang City, West Sumatra. This school is located in a vulnerable area in 2018 with 707 students enrolled with 343 male students and 364 female students with 43 teachers with school-style learning allocations 5 days per week with accredited school status C.

There has not been a specific effort made by the school to deal with smoking behavior in schools, the school only reprimands or raids if students are found smoking in the school environment. Based on the above phenomenon, researchers are interested in conducting research on "Application of the Booklet-Based Education Model in Reducing Adolescent Smoking Behavior in Padang City Middle School. It is hoped that the provision of this Booklet Based Education can improve smoking prevention prevention among adolescents in the city of Padang

METHOD

The study design used a "Quasi Experimental pre and post test with control group" with a booklet model to see changes in smoking behavior among junior high school adolescents before and after Booklet Based Education. The study compared changes in adolescent smoking behavior between the intervention group and the control group that were only given the dangers of smoking posters. The study was conducted at Junior High School No 27 Padang City from April to November 2018

The population in the study was all students of class VII of JHS 27 Padang, totaling 315 people in 2018/2019. Purposive sampling technique in which the sampling is done in such a way that the authorship is determined by the experience of various parties (Lemeshow, Hosmer, Klar & Lwanga, 1997). Calculation of sample size needed for accuracy (accuracy) of research is based on the 5% significance level and 95% strength of the test with a sample size of 62 people. To anticipate the drop out in experimental research it is anticipated by increasing the estimated sample size so that research precision is maintained by 10% so that the overall size of the study sample is 68 consisting of 34 intervention groups and 34 for the control group. Samples for the intervention and control groups were taken from different classes. A respondent can only be a member of a group. The intervention group was given a booklet model and the control group was given a cigarette hazard poster.

Research instruments are aids for researchers in collecting data (Nursalam, 2009). Measuring instrument / research instrument used to measure adolescent smoking behavior, level of knowledge, attitudes, role of parents and the influence of media information. In order to maintain the validity and reliability of the research instrument, an instrument trial was conducted on 8 students of Padang 27 Junior High School who had characteristics similar to those of respondents. The validity test uses the Pearson product moment with the results if the value of r between each statement item is greater or equal to 0.5. Reliability tests were carried out using Internal Consistency seen in the Cronbach Alpha value. If the reliability coefficient r is close to 1, then each respondent's score can be trusted or reliable (Hastono 2007).

Before the study was conducted the researchers first conducted an Ethics Review through the Research Ethics Commission to fulfill ethics and obtain approval to conduct research from the Padang City Education Office and Padang 27 Middle School. The stages of the implementation of this study go through three stages: Pre-test measures adolescent behavior about smoking Knowledge, attitudes, the role of parents and the influence of media information on the intervention group and the control group. In the intervention group the booklet model was given 4 visits. Each visit was carried out for 60-90 minutes. For the control group, only the poster was given the danger of smoking for adolescents. Post tests were carried out to measure behavior, knowledge, attitude, role of parents and the influence of media information immediately after treatment and one month after treatment.

Data analysis is univariate and bivariate analysis. Numerical data analysis of the respondent's characteristics, namely the age of the respondent was carried out to find out the mean value, standard deviation, minimum and maximum values, and confident interval (95% CI). Gender categorical data were analyzed using Chi-Square analysis to determine the frequency distribution.

RESEARCH RESULT

1. Characteristics of Respondents by Gender

Table 1. Characteristics of Respondents in Middle Schools in Padang City 2018

Characteristics	Group Intervention		Group Control		Total		P. Value
	f	%	f	%	f	%	
Gender							
Male	30	88,2	22	64.7	5		0,54
Female	4	11.8	12	35.3			
Class							
VII	10	29.4	4	11.8	4		
VIII	13	38.2	20	58.8	3		
IX	11	32.4	10	29.4	1		
Smoking Behavior							
Smoke	19	55.9	21	61.8	0		0,14
Do not smoke	15	44.1	13	38.2	2		
First smoke							
Do not smoke	15	44.1	13	38.2	8		0.24
Elementary school	8	23.5	9	26.5	7		
Early Middle School	11	32.4	12	35.3	3		

Based on table 1, most (88.2%) were male respondents in the intervention group and almost half were 38.2% of class VIII respondents. More than half (55.9%) of respondents smoke and 32.4% of respondents start smoking early in junior high school. In the Control Group the majority (88.2%) were male respondents in the intervention group and almost half were 38.2% of class VIII respondents. More than half (55.9%) of respondents smoke and 32.4% of respondents start smoking early in junior high school.

1. Characteristics of Respondents by Age

Table 2. Characteristics of Respondents by Age in Middle School in Padang City in 2018

Characteristics	Group Type	F	Mean	SD	Min- Maks	Pvalue
Age	Intervention	34	13.65	1.252	12-18	0.031
	Control	34	14.15	1.048	12-16	

Based on Table 2, it is known that the average age of respondents in the intervention group is 13.65 years with a standard deviation of 1252 with the youngest age being 12 years and the oldest being 18 years. The average age of the control group respondents was 14.15 years with a standard deviation of 1048. with the youngest age being 12 years and the oldest being 16 years.

Table 3. Analysis of the Behavior Scores (Knowledge, Attitudes and Actions) of Respondents Before Actions at SMPN Padang City in 2018

Characteristics	Group Type	F	Mean	SD	Min- Maks	Pvalue
Knowledge	Intervention	34	5.56	1.160	4-9	0.21
	Control	34				
Attitudes	Intervention	34	16.12	3.160	8-20	0.031
	Control	34				
Actions	Intervention	34	16.91	5.814	2-34	0.4
	Control	34				

Based on Table 3, it is known that the average score of respondents' knowledge in the intervention group is 5.56 with a standard definition of 1,160. The average attitude score is 16.12 with a standard deflation of 3.160 with the lowest value of 8 and the highest 20. The average respondent's actions are 16.91 with a standard defiation of 5.814 with the lowest value of 2 and the highest value of 34. The average score of respondents' knowledge in the control group is 5.56 with defiation standard 1,160, lowest value 4 and highest 9. Average attitude score 16,12 with defiation standard 3,160 with lowest value 8 and highest 20. Average respondent's action 16.91 with defiation standard 5,814 with lowest value 2 and highest value 34.

The Role of Parents in Adolescent Smoking Behavior

Table 4. Analysis of the Role of Parents' Roles in Adolescent Smoking Behavior Before Intervention in the Intervention and Control Groups at SMPN in Padang in 2018

Variable	Group Type	Mean	SD	Min	f	Pv
The role of parents	Intervention	8.09	3.949	5-20	34	0,31
	Control	9.09	4.003	4-14	34	

Based on Table 4. it is known that the average score of parental roles is 8.09 with a standardized standard of 3,949 with the lowest score of 5 and the highest value of 20 in the

intervention group. In the control group the average role score of the parents was 9.09 with a standard deviation of 4.003 with the lowest value of 4 and the highest value of 14

Effects of Media Information on Teenage Smoking Behavior

Table 5. Analysis of the Influence Score of Media Information on Adolescent Smoking Behavior Before Intervention in the Intervention and Control Groups at SMPN Padang in 2018

Variable	Group Type	Mean	SD	Min- Maks	f	Pv
Influence of Media Information	Intervention	9.97	4.071	5-20	34	0,2
	Control	8.99	3.56	6-12	34	

The Effect of Booklet Based Education Models on Adolescent Smoking Behavior

Table 6. Behavior (Knowledge, Attitudes and Actions) of Respondents Before and After Getting Booklet-Based Education Model Interventions in Padang City Middle School 2018

Behavioral Variable	Intervention Group	F	Mean	SD	SE	Pvalue
Knowledge,	Before	34	5.56	1.160	0.199	0,15
	After	34	7.47	0.861	0.148	
	Difference		1.91			
Attitudes	Before	34	16,12	3,160	0,542	0,000
	After	34	17.35	3.256	0.558	
	Difference		1,23		0.016	
Actions	Before	34	13,39	15.814	2.712	0,005
	After	34	16,91	13.263	2.275	
	Difference		3.52			

Based on the analysis it can be seen that there are differences in the score of knowledge, attitudes and actions of the respondents before and after the intervention with (P value <0.05).

Table 7. Differences in Behavior (Knowledge, Attitudes and Actions) of Respondents After Intervention in the Intervention and Control Groups in 2018

Variabel	Groups	N	Mean	SD	SE	P Value
Knowledge	Groups	34	7.47	.861	.148	.000
	Control	34	7.26	1.238	.212	
Attitudes	Groups	34	16.12	3.131	.537	.003
	Control	34	14.68	3.418	.586	
Actions	Groups	34	17.82	14.813	2.540	.413
	Control	34	20.09	15.619	2.679	

The analysis shows that there is a difference in knowledge with smoking behavior between the intervention group and the control group with a P value of 0.005. There were differences in attitudes with smoking behavior of the intervention group and the control group and there

were no differences in the actions with smoking behavior between the intervention group and the control group with P value 0.413

Relationship between the role of parents with adolescent smoking behavior

Table 8. Relationship Between the Role of Parents with SMPN Padang Students Smoking Behavior In 2018

	Mean	Std. Deviation	f	Pvalue
The Role of Parents	8,59	3,978	68	0.001
Behavior Score After Intervention	18.96	15.150	68	

Based on the analysis explained that the average role of parents is 8.59 with a standard standard of 3,978. The average behavioral score was 18.96 with a standard defiation of 15,150. The analysis shows that there is a relationship between the role of parents and the respondents' smoking behavior with (P value <0.05).

Relationship of Media Information with Teenage Smoking Behavior

Table 9. Relationship between Media Information Influence with SMP Padang students Smoking Behavior from In 2018

	Mean	Std. Deviation	f	Pvalue
Influence of Media Information	9.60	4.067	68	0.034
Behavior Score After Intervention	18.96	15.150	68	

Based on the analysis, it is explained that the average influence of media information is 9.60 with a defiation standard of 4.067. The average behavioral score was 18.96 with a standard defiation of 15,150. The analysis showed that there was no relationship between the influence of media information and smoking behavior of respondents with (P value> 0.05).

DISCUSSION

The results of the analysis showed a decrease in adolescent smoking behavior after attending booklet-based education. The results of the analysis of adolescents who took part in the booklet-based education increased significantly (P value <0.05). Smoking behavior as a person's activity related to smoking behavior, as measured by smoking intensity, smoking time, and smoking function in daily life (Komalasari & Helmi, 2000: 4) A person starts smoking when they are still teenagers. A number of studies confirm that most smokers start smoking between the ages of 11 and 13 years and 85% to 95% before age 18 (Sitepoe, M, 2000)

Smoking behavior usually begins in childhood and adolescence. Santrock 2003, stated that teenagers who had smoked increased sharply after the age of 10 years and reached a peak of ages 13 and 14 years. Teenagers who start smoking at age. Smoking behavior usually begins in childhood and adolescence. Santrock 2003, stated that teenagers who had smoked increased sharply after the age of 10 years and reached a peak of ages 13 and 14 years. Teenagers who start smoking at the age of 12 years or younger tend to be heavy smokers compared to teens who start smoking above the age of 15 years or older.

The results showed that more than half of adolescents of junior high school age had smoked on average in the age range of 12-14 years. Starting from the very beginning you started smoking while in elementary school and at the beginning of entering junior high school (SMP). Many factors encourage teenagers to smoke. Broadly speaking, the factors

that influence smoking behavior in adolescents are environmental factors consisting of family and peer environment, psychological satisfaction and the influence of information (Komalasari, D, 2000).

The results of research that have been carried out that behavioral factors which include knowledge, attitudes and actions affect the smoking behavior of students. There is a relationship between adolescent smoking behavior with parental war. This is different from the results of research conducted by Komalasari (2009) on Factors Affecting Teenage Smoking found that 34% of adolescent smoking is influenced by parental attitudes.

Prayitno (2009) said that parents are very influential in the development of adolescent social behavior. Teenagers have been introduced to the attitudes or moral values that are held in high esteem by parents. Aside from being driven by one's own desires, it turns out that the environment is also a driving force for teens to smoke, this shows that the environment in which teenagers live is very possible for them to smoke. These environmental factors include the family environment, residence or even social environment.

The results of the study are supported by Mu'tadin's research (2002) the factors that influence adolescent smoking behavior are the role of parents, adolescent knowledge, environment, peers, for appearance, maintaining confidence, due to stress, seeking attention, media, learning achievement and nutritional status.

Adequate knowledge, attitudes and actions about the dangers of smoking to health are expected to make people who have not smoked remain not smoking and smokers who have already been able to stop this very dangerous habit (Putri, 2010). One of the media that is often used because it is interesting and simple is the booklet media (Notoadmojo, 2012). Booklets are an effective media for health education for children (Zulaikha, 2012). The results of the study carried out there is an increase in knowledge of adolescent attitudes and actions in smoking behavior. Provision of education through the media booklet has an effect on reducing the smoking behavior of students

The results of research that has been done and supported by the results of previous studies prove the provision of education through the media booklet has an effect on decreasing the smoking behavior of students compared to adolescents who are only given posters only.

CONCLUSIONS AND RECOMMENDATIONS

The conclusion of the research is there is a decrease in adolescent smoking behavior after being given a booklet-based education program. There is an increase in the knowledge, attitudes and actions of adolescents who are given bookleat-based education compared to adolescents who are only given posters. It is expected to be used as an educational model in efforts to prevent smoking behavior among junior high school adolescents in Padang City. Input for the Education Office, especially for junior high schools in the city of Padang in improving smoking prevention prevention in adolescents in the city of Padang.

THANK-YOU NOTE

The researcher expressed his highest respect, thanks and appreciation to: Mr. Dr. Burhan Muslim, SKM, M.Sc, Director of Health Polytechnic of the Ministry of Health of Padang, Ns Sila Dewi Angraini, S.Kep.M.Kep.Sp.KMB, Chair Padang Department of Health Poltekkes Nursing Department, Head of Puskidnakes RI Ministry of Health in Jakarta, which has been pleased to select this research proposal so that it can be funded in Research Research Development of the Ministry of Health Poltekkes Padang. especially to all Ananda Students of SMPN 27 Padang City who have agreed to be respondents, without them, this research activity will never exist.

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