

# CONFERENCE PROCEEDING

1<sup>st</sup> International Seminar of Gender Equity,  
Maternal and Child Health

**Empowerment  
of Women in  
Family Health  
During  
Pandemic  
Covid-19**



*International Seminar of Gender  
Equity, Maternal and Child Health*

It'S GeMICH



Kuningan, Indonesia  
3<sup>rd</sup> June 2021

Assalamualaikum wr wb  
We are proud all of you,

We are happy to welcome you to the 1<sup>st</sup> International Seminar of Gender Equity, Maternal And Child Health (It'S GeMICH) 2021. We are very pleased to be hosting this seminar. We would like to thank all of the attendees, especially the keynote speakers, invited speakers and presenters who have prepared papers, and the attendees who have participated in the seminar. We believe that your contribution will be very beneficial for the community in improving gender equity, especially family health through empowering women.

Improving the quality of women is the basis for creating sustainable development for a nation. Therefore, it is necessary to empower women to have an awareness of themselves as complete human beings and their position in their culture. This empowerment is carried out by providing health promotion through health education or health education, one of which is through seminars. Health development is essentially directed at achieving awareness, willingness, and ability to live healthy for everyone, concerning physical, mental, as well as socio-cultural and economic. To achieve optimal health status, various comprehensive, targeted, and sustainable health service efforts are carried out. Maternal and child health problems are optimized by empowering women in the family. One form of cross-sectoral collaboration from the education and health sectors is to become a facilitator who is expected to increase women's knowledge as family educators, especially in efforts to improve maternally, child, and family health.

How to be an inspirational woman, we will get from the explanation of Atalia Praratya Ridwan Kamil, S.I.P, MI.Kom as the Chair of the TP-PKK West Java Province and the Chair of the Regional Kwartir / West Java Kwarda. We will also learn about Maternal Health and Gender Issue in Pandemic Covid-19: Global Perspective which will be presented by Prof. Datuk Dr. Hjh. Bibi Florina from Lincoln University Malaysia. In addition, The Role of Midwives in Empowering Women in Families will be presented by Dr. Emi Nurjasm, M.Kes as President of the Indonesian Midwife Association. The last material we will get is related to Equity and Inequality in MCH Indo: Pandemic Situation by Prof. Dr. dr. Sabarinah Prasetyo, M.Sc as Dean of the Faculty of Public Health Indonesia University.

We hope that all participants can meet their expectations and gain good knowledge from experts as evidenced by the research presented. Our highest appreciation goes to the head of the Kuningan Health Sciences High School and the Kuningan Bhakti Husada Education Foundation, who have supported the implementation of this seminar. Besides that, this seminar would not run smoothly without the hard work of the committee, I am proud of all of them.

Finally, thank you all for the success of this seminar,  
Wassalamualaikum Wr Wb.



Fera Riswida Utami H, S.ST., M.Kes  
The Chief Committee

# ***1<sup>st</sup> International Seminar of Gender Equity, Maternal And Child Health (It'S GeMICH)***

It's GeMICH Proceedings are published once a year in July containing the research results and literature review. Focus and scope It's Gemich Proceeding is maternal and child health, mental health, empowerment of women and family health.

---

**Editor in Chief** : Ns. Aditiya Puspanegara, S.Kep., M.Kep

**Section Editor** : A Asrina, S.ST., M.Keb  
: Nita Ike Dwi Kurniasih, S.SiT., M.Keb  
: Anggit Kartikasari, S.ST., M.Kes

**Reviewer** : Prof. Datuk Dr. Hjh. Bibi Florina  
(Lincoln University Malaysia)  
: Dr. Emi Nurjasmi, M.Kes  
(Indonesian Midwife Association)  
: Prof. Dr. dr. Sabarinah Prasetyo, M.Sc  
(Indonesia University)

**Publish** : July

---

**Editorial Address** : Institute of Health Science Kuningan: *Sekolah Tinggi Ilmu  
Kesehatan Kuningan*

Jalan Lingkar Kadugede No. 2 Kuningan – Jawa Barat 45561

Telp/Fax : (0232) 875847, 875123

E-mail : lemlit@stikeskuningan.ac.id

Website : <https://ejournal.stikku.ac.id>

***1<sup>st</sup> International Seminar of Gender Equity, Maternal And Child Health  
(It'S GeMICH) indexed by:***



***Proceeding It's GeMICH***

***VOL 1 No 1 (2021)***



## DAFTAR ISI

<p><b>PERCEPTION OF WOMEN OF CHILDBEARING AGE ON EARLY DETECTION OF CERVICAL CANCER WITH IVA TEST IN THE BASIC ESSENTIAL NEONATAL OBSTETRICS SERVICES CIPEUNDEUY COMMUNITY HEALTH CENTER SUBANG REGENCY</b> <i>Wiwin Elis Sumarni, Lia Nurcahyani</i></p>	1-11
<p><b>ANALYSIS OF CHARACTERISTICS OF INFANT DEATH RATE (2015-2019) IN UPTD PUSKESMAS JAPARA KUNINGAN DISTRICT, 2020</b> <i>Yona Septina, Luthfiah Zakiyah</i></p>	12-22
<p><b>THE EFFECT OF MOTHER'S KNOWLEDGE AND PROFESSION ON THE SUCCESS OF EXCLUSIVE BREASTFEEDING IN THE WORKING AREA OF PUSKESMAS SURANENGGALA, CIREBON DISTRICT, YEAR 2021</b> <i>Lisnawati, Siti Soleha</i></p>	23-31
<p><b>THE EFFECT OF PRENATAL GENTLE YOGA AND HYPNOTHERAPY ON ANXIETY LEVEL AND SLEEP QUALITY IN THE THIRD TRIMESTER PREGNANT WOMAN AT PUSKESMAS SUMBER CIREBON REGENCY IN 2019</b> <i>Nurlaela Kurnia Rahayu, Pepi Hapitria, Rani Widiyanti</i></p>	32-38
<p><b>THE CORRELATION BETWEEN LEVEL OF ANXIETY DURING COVID-19 PANDEMIC AND THE INCIDENCE OF PRIMARY DYSMENORRHOEA IN FEMALE ADOLESCENTS AT SMAN 1 SINDANG INDRAMAYU IN 2020</b> <i>Deysi Rizky Al Fharizy, Nurasih, Nina Nirmaya Mariani</i></p>	39-51
<p><b>NUTRITIONAL STATUS OF TODDLERS IN NAGARAKEMBANG VILLAGE, CINGAMBUL DISTRICT, MAJALENGKA REGENCY</b> <i>Ai Nurasiah, Merisa Laora Heryanto, Ila Ayatilah</i></p>	52-60
<p><b>THE EFFECT OF HEALTH EDUCATION ON PREGNANT WOMEN'S KNOWLEDGE LEVEL ABOUT COVID-19 IN MAIN CLINIC CIDENG MEDICAL CENTER REGENCY OF CIREBON IN 2020</b> <i>Fadillah Mawaddah, Dyah Widiyastuti</i></p>	61-79
<p><b>THE EFFECT OF AUDIO VISUAL AND WEBTOON EXPLANATION TO KNOWLEDGE AND ATTITUDE ABOUT THE THREE BASIC THREATS OF ADOLESCENT REPRODUCTIVE HEALTH (TRIAD KRR) ON STUDENTS OF SMAN 8 CIREBON CITY, 2021</b> <i>Diyah Sri Yuhandini, Nadhifatun Khulaidah</i></p>	80-91
<p><b>AUDIOVISUAL MEDIA INCREASES PREGNANT MOTHERS' KNOWLEDGE AND ATTITUDE OF HEPATITIS B DURING COVID-19 PANDEMIC</b> <i>Indah Permadani, Rani Widiyanti Surya Atmaja, Diyah Sri Yuhandini</i></p>	92-100
<p><b>DESCRIPTION OF MIDWIFERY STUDENT KNOWLEDGE ABOUT 1000 HARI PERTAMA KEHIDUPAN (HPK) BASED ON MEDIA INSTITUTE OF</b></p>	101-108

**HEALTH SCIENCES KUNINGAN 2020**

*Evi Soviyati, Toto Sutarto Gani Utari, Tri Hardini*

**THE EFFECT OF HYDROTHERAPY ON THE REDUCTION OF BLOOD PRESSURE IN PREGNANT WOMEN WITH HYPERTENSION AT THE PRIMARY HEALTH CARE ASTANAJAPURA CIREBON DISTRICT IN 2019** 109-121

*Larasyati Sholekha, Entin Jubaedah, Lia Nurcahyani*

**THE OUTCOME OF PMTCT GUIDELINE IMPLEMENTATION TOWARDS THE PROGRAM PERFORMANCE FOR THE ELIMINATION OF HIV TRANSMISSION FROM MOTHER TO CHILD IN DENPASAR CITY** 122-143

*Lely Wahyuniar*

**THE EFFECT OF PROVIDING EDUCATION USING ONLINE MEDIA FOR PREGNANT WOMEN ON MOTHER'S KNOWLEDGE, SUCCESS OF BREASTFEEDING ONLY FOR ONE MONTH AND MOTHER'S SELF EFFICACY** 144-153

*Ririn Riyadussolihat, Neli Nurlina*

**PERCEPTION OF WOMEN OF CHILDBEARING AGE ON EARLY  
DETECTION OF CERVICAL CANCER WITH IVA TEST IN THE  
BASIC ESSENTIAL NEONATAL OBSTETRICS SERVICES  
CIPEUNDEUY COMMUNITY HEALTH  
CENTER SUBANG REGENCY**

Wiwini Elis Sumarni, Lia Nurcahyani

Poltekkes Kemenkes Tasikmalaya

*lianurcahyani17@gmail.com*

**Abstract**

Cervical cancer is the most common cancer in women with an estimated 570,000 new cases in 2018 and represents 6.6% of all cancers in women. The behavior of women of childbearing age in preventing cervical cancer with early detection is still low. Nationally, it is still less than 5%, while the target to be achieved in 2019 is 50%. In Subang Regency in 2019, of the target of 7500, only 20 people (0.27%) did IVA tests (Subang District Health Office, 2019). This study aims to determine the perception of women of childbearing age on early detection of cervical cancer with IVA test in the Basic Essential Neonatal Obstetrics Services Cipeundeuy Community Health Center, Subang Regency In 2020. This research is qualitative with a case study approach, the research subjects are 5 women of reproductive age. Measurement and observation of these variables using in-depth interviews. Data analysis through transcription, reduction, categorization, presentation of data in narrative form. The behavior of women of childbearing age in preventing cervical cancer with early detection is based on the perception of vulnerability of women of childbearing age to feel vulnerable to cervical cancer, because women of childbearing age is already active in sexual intercourse, based on the perception of severity seriousness. Women of childbearing age considers cervical cancer a serious disease, based on the perceived advantage that this examination is to determine the health condition of the presence of signs and symptoms, based on the perception of obstacles due to shame, fear, lack of knowledge and costs. Women of childbearing age perception of cervical cancer early detection includes perception of vulnerability, perception of severity/ seriousness, perception of benefits and perception of barriers.

*Keywords : Perception of women of childbearing age; IVA test; and Cervical Cancer*

---

## Introduction

Cervical cancer is the most common cancer in women with an estimated 570,000 new cases in 2018 and represents 6.6% of all cancers in women. About 90% of deaths from cervical cancer occur in low and middle income countries (World Health Organization (WHO), 2018).

Globocan data states that in 2018 there were 18.1 million new cases with a death rate of 9.6 million deaths, where 1 in 5 men and 1 in 6 women in the world experienced cancer. The data also states that 1 in 8 men and 1 in 11 women die from cancer. The incidence of cancer in Indonesia (136.2 / 100,000 population) ranks 8th in Southeast Asia, while in Asia it is 23rd (RI Ministry of Health, 2015b).

The government has attempted cervical cancer screening through the 2015 National Program for the Prevention and Detection of Cervical Cancer and Breast Cancer. That women must be well aware of the importance of cervical cancer prevention. Prevention itself can be done either primary or secondary. Primary prevention of cervical cancer is by HPV vaccination and secondary prevention is examination and IVA tests *PAP smear* (RI Ministry of Health, 2015b).

Research conducted by the Division of Gynecological Oncology, Department of Obstetrics and Gynecology, FKUI at Dr. Cipto Mangunkusumo from January 2006 to December 2010, it was found that the age range of patients with cervical cancer was 51.42 years (21 - 85 years). Most of the incidence occurred in the age group 35 - 64 years (87.3%), with a peak in the age group 40 - 59 years (71.3%), while the age group 65 - 69 years (5.4%), age 70 - 74 years (2.5%).

Based on this, screening can be carried out at the age of 20 - 74 years, however the priority of the screening program in Indonesia is for women aged 30-50 years (RI Ministry of Health, 2015a)

The behavior of women of childbearing age in preventing cervical cancer with early detection is still low. This behavior is influenced by the perception and belief factors of women with low cervical cancer (Oktaviana, 2015).

Perception is the process of receiving stimuli through the five senses which is preceded by attention so that individuals are able to know, interpret and appreciate things that are in the neighborhood around (Saudah & Yuniarti, 2019).

This is in accordance with the theory of the Health belief model which was first developed in the 1950s by social psychologists Hochbaum, Rosenstock, and Kegels who worked at Service HealthUnited States society. Health belief model is a concept that reveals the reasons for individuals to want or not to do behaviorhealthy (Pratiwi, 2018).

Based on research in Kediri, research on the perception of women of childbearing age on early detection using IVA in the work area of the Sukorame Kediri Community Health Center on 120 respondents in 2016. The research describes 5 domains including perceived susceptibility, perceived severity, perceived benefits, perceived barriers, and cues to action. The results of the research on the domain of perceived susceptibility show that the perception of women of childbearing age in that area is low as much as 61.2%, low perceived severity is 66.7%, low perceived benefits are 60%, high perceived barrier is 52.5% and cues to action with a high yield of 53.3% (Purwati & Janes, 2017).

Other research in Banyuwangi, East Java on 140 women of childbearing age in 2015 also shows the same thing. Perceived susceptibility of women of childbearing age

is low with 21.2% results, 19.4% perceived severity, 20.09% perceived benefits and 79.68% perceived barrier (Wigati, 2016).

One of the health centers with a decreased interest in women of childbearing age participation in conducting the IVA test was the PONEC Cipeundeuy Health Center. In 2018 the number of women aged 30-50 years as the target was 7,060 people and 31 people who carried out the IVA test (0.44%) (Subang District Health Office, 2018). Furthermore, in 2019 the target number of women aged 30- 50 years is 7,500 people and 20 people who carry out IVA tests (0.27%) (Subang District Health Office, 2019).

Based on the data above, the majority of women of childbearing age in the work area of the PONEC Cipeundeuy Community Health Center did not perform IVA tests, so the researcher felt the need to conduct a study entitled Perceptions of women of childbearing age about early detection of cervical cancer with IVA tests in the Puskesmas working area. PONEC Cipeundeuy, Subang Regency.

The formulation of the problem in this study is what is the perception of women of childbearing age about early detection of cervical cancer with IVA tests



in the PONED Cipeundeuy District Health Center Work Area in 2020.

**Method**

This research is qualitative with a case study approach that can determine the perceptions of women of childbearing age on the IVA test. In case study research, researchers carefully investigate a program, event, activity, process or group of individuals (Cresswell, 2019).

This research was conducted in the working area of the PONED Cipeundeuy Health Center, Subang Regency, because the majority of women of childbearing age did not participate in the IVA examination in the area. The research was conducted in May 2020 to July 2020. During the pandemic, initially the researcher wanted to do research online via WhatsApp, the results of the interview were recorded and recorded, but because of something, the researcher conducted door-to-door research delivered by cadres, the results of the interview were written and recorded. Prior to that the researcher had received

permission from the health center to conduct door-to-door research because at that time it was supported by the results of Covid-19 monitoring that Subang Regency was in a low risk zone for Covid-19, therefore the researcher conducted door-to-door research and remained using health protocols (Saefullah, 2020).

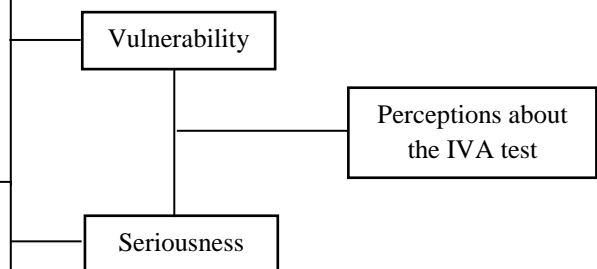
The sampling technique used snowball sampling. The research subjects were 5 women of childbearing age people. Measurement and observation of this variable using in-depth interviews. Data analysis through transcription, reduction, categorization, presentation of data in narrative form.

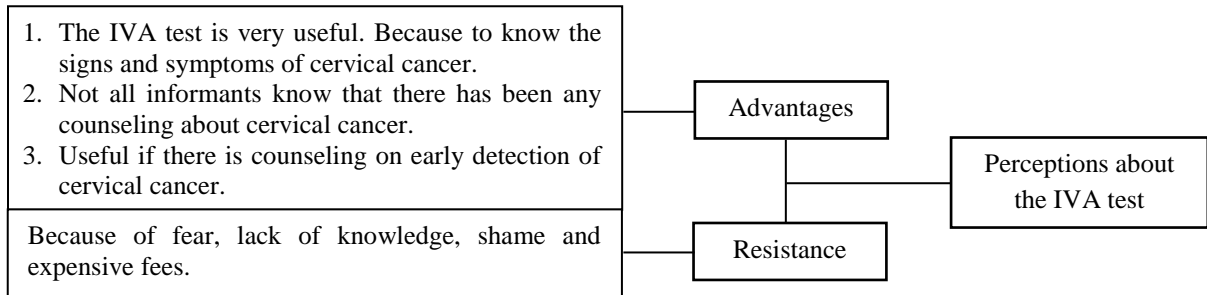
**Result**

The subjects in this study were women of childbearing age who are married 30-50 years old who have sexually active sex and who have not done IVA tests in their work area Puskesmas PONED Cipeundeuy.

**Evaluation result**

- |  |
|--|
| <ol style="list-style-type: none"> <li>1. Cervical cancer in the area of the female organs.</li> <li>2. Signs and symptoms: pain during intercourse, unusual, smelly, or abnormal mucus.</li> <li>3. Cervical cancer is dangerous until death</li> <li>4. Cervical cancer is very vulnerable to all women.</li> <li>5. The causes of cervical cancer are less than 20 years of age and multiple partners.</li> </ol> |
| <ol style="list-style-type: none"> <li>1. Cervical cancer is a serious disease.</li> <li>2. The IVA test is mandatory for women who have had sexual intercourse.</li> </ol>  |





## Discussion

### 1. Perceived of Vulnerability

Women of childbearing age said that cervical cancer is dangerous until death. This can be seen from the following statement:

*"... It's dangerous to die, if you don't get caught, you know it's the final stage. Sometimes people don't realize that he's sick .. "(S1)*

*"... Danger of causing death .." (S2)*

*"... In having a relationship, it often hurts to the point of death ...." (S3)*

*"... .. Danger, can cause death, like Jwho was caught in the final stage and died. " (S4) & (S5)*

The results of this study women of childbearing age have less knowledge of cervical cancer. They know that cervical cancer is cancer in the female organs and just know that in the news there are artists who have cervical cancer and have died. Because of this, women of childbearing age

realizes that cervical cancer is dangerous and can cause death. As well as realizing that cervical cancer is vulnerable to all women who have had sexual intercourse. This can be seen from the following questions:

*... "It could be, especially if the woman works in shifts, or works at night ..." (S4)*

*"... ..Yes are very vulnerable ..." (S5)*

The information obtained at the informant's level of understanding is as follows:

*"..... Change partner...." (S4)*

*"... maybe having sex at the age of less than 20 years and changing partners ..." (S5)*

Based on the results of this study, women of childbearing age felt vulnerable to cervical cancer, because women of childbearing age was already active in sexual intercourse and an unhealthy lifestyle. women of childbearing age who feel vulnerable do not necessarily want to do the test, so there are supporting factors

for women of childbearing age willingness to be tested.

This research is not in line with the results of research conducted by Sahr & Kusumaningrum (2018) showing that most women women feel that they are not susceptible to cervical cancer because according to them they have never performed risky behavior that triggers cervical cancer (Sahr & Kusumaningrum, 2018).

## 2. Perception of seriousness / severity

Based on the results of in-depth interviews, information was obtained that cervical cancer is a serious disease. This is obtained from the following statement:

*"... cervical cancer. Serious disease .."*  
 (S1, S2, S3, S4, & S5)

Based on the above, cervical cancer is serious, therefore, women of childbearing age said that the IVA test is very important to do because of the following:

*"..... Actually it's important, it just depends on the individual, there are those who are brave and some are afraid, mostly afraid, what will I do later, because I don't know because I also lack knowledge. Even though it's good because we know ohh Alhamdulillah we are healthy. Can continue*

*to the next stage which is PAP Smear. .."*  
 (S1)

*"..... Important, let us know, knowing we have symptoms of cervical cancer ...."*  
 (S2)

*"... Important, in order to know the health condition of women who have had intercourse ...."* (S3)

*"... .. It's very important, to know more about cervical cancer in all women, to know more clearly, to know more about the dangers of cervical cancer in women...."*  
 (S4)

*"... It is important, so that the disease is caught ..."* (S5)

Perceived severity is the level of one's belief that the consequences of the problem health which will get worse (Manuntung & Kep, 2018). Perception of severity is a consideration of the level of seriousness of a threat, the more serious the threat of disease is the more strong urge for someone to act to avoid it (Wigati, 2016). According to the results of this study, women of childbearing age considers that cervical cancer is a serious disease, so that the IVA test is important because it can

identify the signs of symptoms that are present in the female reproductive organs.

### 3. Perception of benefits

Perception of advantages according to the informant, the results of the IVA test were useful, to determine the condition health the presence of signs and symptoms of cervical cancer.

This study is in line with the results of research by Sahr & Kusumaningrum (2018), namely that most women of childbearing age think that it is the advantage of doing so IVA test is in order to immediately know the condition health potentially cervical cancer or not so that it can immediately take further action or take precautions. This research is in line with that theory Perceived benefits are positive outcomes that someone believes are results and actions (Manuntung & Kep, 2018).

### 4. Perception of Barriers

Based on the results of the interview, the following obstacles were found:

*"... Afraid, don't know the same place, embarrassed too. If For example, if someone has scheduled it, I'm ready Insha Allah want...."* (S1)

*"..... Shame..heheee just scared..."* (S2)

*"..... Because it's not ready to do the IVA test yet. Yesterday, he called him to hurry home ...."* (S3)

*"..... First, I don't know much more, continue to pay for the obstacles expensive or pay it myself, especially those who don't have BPJS like to pay more, shame, fear. If you have tested you, you will find the symptom detection, I'm afraid when you do the test you know I got it so I'm depressed."* (S4)

*"..... Afraid of getting caught...."* (S5)

Women of childbearing age said the response of her husband and other members to the IVA test was as follows:

*"... The response of husband and family: just pretentious as long as it's good, or good for his health, it's up to you, if you want to be pretentious if not it's fine ..."* (S1)

*"... The response of husband and family: good ...."* (S2)

*"... Suggesting .."* (S3)

*"... If maybe it's good for me why not ..."* (S4)

*"... .Yes well .."* (S5)

“... ..Supports...” (S1, S2, S3, S4, S5)

Based on the results of the interview, it was concluded that women of reproductive age did not want to do the IVA test because of fear and lack of knowledge, embarrassment and high costs. The point of one of the informants' statements that only having a BPJS is already expensive, let alone the public paying. Then the response of the husband and other family members was good and supportive of positive activities, namely the IVA test.

Therefore, the majority of women in the working area of the PONED Cipeundeuy Community Health Center do not want to do IVA tests even though their husbands and other family members are very supportive of early detection of cervical cancer. If from the heart there is no will, even though outsiders support it, there will still be no willingness to do it.

The results of this study are in accordance with the theory of perceived barriers (Perceived barrier), which is the perceived barrier in the form of perceptions of unavailability, inconvenience, cost, difficulty, or time spent from an activity (Malehere, 2019).

This is in line with the research stated by Yuliwati (2012), the results of the study showed that some women of

childbearing age in the Prambon Health Center area had less behavior in early detection of cervical cancer using the IVA test method, namely 58.5% (Jannah & Astuti, 2017).

This is in line with research conducted by Oktaviana (2015). The results obtained in 4 perception domains are low. Perceived susceptibility is low with a mean result of 21.2%. Low perceived severity with a mean yield of 19.41%. Perceived benefit is low with an average yield of 20.09%. High perceived barrier with a result of 79.66% (Oktaviana, 2015).

Perceived barrier is a negative result that is believed to be the result of an action (Manuntung, 2018). This theory is supported by the results of Crystianty's (2018) research, namely the perception of women of reproductive age couples about IVA in the Pulorejo Health Center, Jombang Regency, mostly having negative perceptions (Crystianty, 2018).

The perception of obstacles obtained from this study are costs that are not in accordance with the economic conditions of the community, the inconvenience of having to do an examination because they have to open their pants and a person's low knowledge of the factors that can increase

the risk of developing cervical cancer can be caused by the low information someone gets about cervical cancer risk. For this reason, increasing the provision of information about cervical cancer needs to be developed by implementing several programs in each government agency.

### Conclusion

1. Based on the perception of seriousness / severity, women of childbearing age considers that cervical cancer is a serious disease, so the presence of an IVA test is important because it can identify the signs of symptoms that occur. in the female reproductive organs.
2. Based on the perception of vulnerability, women women feel vulnerable to cervical cancer, because women are already active in having sexual intercourse and a lifestyle that is not healthy. Women of childbearing age who feel vulnerable do not necessarily want to do the test, so there are supporting factors for women of childbearing age willingness to be tested.
3. Based on the perception of benefits, women of childbearing age performed an IVA test, which was to determine

the condition health the presence of signs and symptoms of cervical cancer.

4. Based on the perception of obstacles, women of childbearing age do not want to do the IVA test obtained because of fear and lack of knowledge, embarrassment and expensive costs.

### Suggestion

1. For puskesmas
  - a. Policy Determinants  
 It is hoped that policy makers at the PONEC Cipeundeuy Puskesmas will consider the cost of conducting early detection of cervical cancer by IVA tests because there are still many women of childbearing age who complain of the cost of the examination.
  - b. For midwives  
 It is hoped that the executive officer in the field to increase the socialization of the early cervical cancer detection program with the IVA test method with counseling, because seen from the results of this study, many women of childbearing age still do not understand about IVA tests and health workers can invite women of childbearing age to want to do an examination.

2. For further researchers It is expected to be able to research with different methods with a larger number of samples.

*Journal of Chemical Information and Modeling.*

## Reference

### Journal:

Crystianty, N. (2018). *The Relationship between Perceptions of Women in Fertile Age Couples about Visual Inspection of Acetic Acid and the motivation for IVA examination.* STIKes Insan Cendekia Medika Jombang.

Jannah, M., & Astuti, M. D. P. (2017). Behavior of women of childbearing age in conducting IVA tests at UPTD Puskesmas Pondok Gede, Bekasi City in 2017. *Journal of Health Science*, 11(9), 1689–1699.

Purwati, H., & Janes, C. (2017). *The Perception Of Fertile Age Women, On Early Detection Of Ca. Cervical With Visual Inspection With Acetic Acid Method At Bpm Hj. Dyah Indrawati, Sst, Tangjaron Village, District Ngoro, Mojokerto.* 15.

Sahr, L. A., & Kusumaningrum, T. A. I. (2018). Perception and Behavior of Fertile Age Women in Conducting a Visual Inspection Test for Acetic Acid. *Indonesian Journal of Health Promotion*, 13(2), 114–128.

Saudah, N., & Yuniarti, E. V. (2019). Relationship between Family Social Support and Perceptions of Fertile Age Women in Iva Examination (Visual Inspection of Acetic Acid) and Cervical Cancer Incidence.

Wigati, P. W. (2016). *Pathway Analysis with the Health Belief Model on the Use of Acetic Acid Visual Inspection Screening for Early Detection of Cervical Cancer in Women of Fertile Age in Kota Kediri.* 19(8).

### Text Book:

Cresswell, J. W. (2019). *Research Design Approaches to qualitative, quantitative and mixed methods.* Yogyakarta: Pustaka Belajar.

Manuntung, N. A., & Kep, M. (2018). *Cognitive Behavior Therapy in Hypertensive Patients.* Wineka Media.

RI Ministry of Health. (2015a). *Cancer Bulletin Data and Information Center.* RI Ministry of Health.

RI Ministry of Health. (2015b). *Permenkes RI Number 34 Handling Breast and Cervical Cancer.* RI Ministry of Health.

Subang District Health Office. (2018). *Profile of the Subang District Health Office in 2018.* Subang District Health Office.

Subang District Health Office. (2019). *Profile of the Subang District Health Office in 2019.* Subang District Health Office.

### Thesis / Disertation:

Malehere, J. (2019). *Analysis of Cervical Cancer Prevention Behavior in Women in Fertile Age Couples based on Health Promotion Theory.*

Airlangga University.

Oktaviana, M. (2015). *Relationship Between Perceptions of Individual Vulnerability, Severity of Disease, Benefits and Barriers with Use of Visual Inspection Screening for Acetic Acid in Women of Fertile Age*. Sebelas Maret University.

Pratiwi, K. N. (2018). *Determinants of Fertile Age Women's Participation in Visual Inspection of Acetic Acid (IVA) for Early Detection of Cervical Cancer Using the Health Belief Model (HBM) (Study in the Work Area of Kertosari Health Center)*. University of Jember.

**Website:**

Saefullah, R. (2020). *Subang Enter the Covid-19 Low Risk Zone: Economic News Portal*.  
<https://www.wartaekonomi.co.id/read/295894/alhamdulillah-subang-masuk-zona-risiko-rendah-covid-19>

World Health Organization (WHO). (2018). *Cervical Cancer*.  
<http://www.who.int/cancer/prevention/diagnosisscreening/cervicalcancer/en//>



**ANALYSIS OF CHARACTERISTICS OF INFANT DEATH RATE (2015-2019) IN  
UPTD PUSKESMAS JAPARA KUNINGAN DISTRICT, 2020**

Yona Septina, Luthfiah Zakiyah

STIKes Kuningan

*yonaseptina@stikku.ac.id*

**Abstract**

Infant mortality is a death incident that occurs in newborns up to <1 year of age. Infant mortality is measured as the infant mortality rate, which is the number of deaths for children under 1 year of age per 1000 births. According to WHO, the infant mortality rate in Indonesia reaches 27/1000 live births. Based on the health profile of West Java, the number of infant deaths in 2017 reached 3.4 / 1000 live births. In the UPTD Puskesmas Japara there are 34 cases of infant mortality. Infant mortality is caused by several factors, including maternal age, education, birth attendants, and parity. The research objective was to determine the analysis of the characteristics of the incidence of infant mortality in 2015-2019 at the UPTD Puskesmas Japara, Kuningan Regency.

The research method used was quantitative with a retrospective design, taken from secondary data 2015-2019, the population in the study was all infant deaths in the UPTD Puskesmas Japara, amounting to 34 people. Selection of a sample of 34 people using the total sampling technique. The statistical test technique uses the Chi Square test.

The results showed that there was a relationship between parity (p-value = 0.006) and there was no relationship between maternal age (p-value = 0.129), education (p-value = 0.156), birth attendants (p-value = 0.781) and death. babies in 2015-2019 at UPTD Puskesmas Japara, Kuningan Regency.

It can be concluded that the incidence of infant mortality occurs in some mothers with no risk age, some mothers with primary education, some mothers with multiparity parity. Suggestions for health centers are expected to increase the priority of health programs in an effort to reduce the incidence of infant mortality.

Key words: Infant mortality, age, parity, education, birth attendant.

---

## Introduction

Population development both in quality and quantity is influenced by many factors, one of which affects population development is the level of mortality. Infant mortality is one of the three demographic components in addition to fertility and migration which affects the number, structure and composition of the population of an area. Apart from influencing the total population structure and composition, the mortality rate is also used as an indicator related to the degree of health and human development. Increasing the degree of health is carried out by reducing the mortality rate, especially infant mortality, maternal mortality and under-five mortality rates (Wijayanti, 2017)

Public health status indicators in general can be seen from (Siti Malati. Umah, 2014):

1. Life expectation.
2. Infant and under-five mortality rates are decreasing.
3. Low birth babies: babies born to mothers weighing 2500 grams or less are around 14% are expected to decrease to a maximum of 7% in the future
4. Morbidity.

Infant mortality is death that occurs in infants either in the womb or outside the womb or after the baby is born. Infant Mortality Rate (IMR) is the number of infant deaths within the first 28 days of life per 1000 live births. The infant mortality rate according to WHO (World Health Organization) in ASEAN (Association of South East Asia Nations) countries such as in Singapore 3 per 1000 live births, Malaysia 5.5 per 1000 live births, Vietnam 18 per 1000 live births, and Indonesia 27 per 1000 live births. 1000 live births (Kemeskes RI, 2016). According to the SDGs

(Sustainable Development Goals) 2015 to 2030, the number of neonatal deaths will be reduced to 12 per 1,000 live births (Kementrian Kesehatan RI, 2014).

Until now, IMR is still the highest cause of the total number of children under five who died in the first 5 years of life and from the last report, IMR is still 32 deaths per 1000 live births (UNICEF, 2001). Through the Decree of the Minister of Health of the Republic of Indonesia Number HK.02.02/MENKES/52/201 concerning the Strategic Plan of the Ministry of Health for 2015-2019, one of the goals of health indicators is to reduce infant mortality from 32 to 24 per 1000 live births (Kemenkes, 2015).

Based on the health profile of West Java, the number of infant deaths in 2017 reached 3.4 / 1000 live births (Dinas Kesehatan Provinsi Jawa Barat, 2017).

Some of the results of research related to neonatal mortality are Mahampang, 2010, which states that the risk factors associated with the incidence of perinatal mortality in Batang Regency are maternal education, maternal knowledge, parity, LBW, asphyxia, and congenital abnormalities (Mahampang, 2011).

According to (Kurniawan, 2018) states that maternal factors (age, parity, complications in pregnancy and childbirth), midwife factors (midwife knowledge and skills of midwives), and infant factors (gestational age, birth weight, and other complications) in infants are all related significant towards neonatal mortality.

In research (Tjahjowati, 2019) education of mothers, some who experience neonatal mortality are elementary and junior high school education by 68 (75.6%) compared to

mothers who have high school and academy education by 22 (24.4%). The behavior and knowledge of better health among highly educated mothers. The higher the level of education, the easier it is to receive the information received.

Based on research (Tjahjowati, 2019) stated that neonatal mortality occurred mostly in primigravida and grandemultipara at 37 (41.1%) compared to neonatal mortality that occurred in multigravida 53 (58.9%). The optimal pregnancy is the second to the fourth pregnancy.

Primiparous and grandemultipara mothers have many risk factors for neonatal death. This will be even worse in cases with short gestation intervals.

Based on the data that the researchers obtained from the Japara Health Center regarding the incidence of IMR during a period of 5 years, namely from 2015-2019. In 2015 there were 7 cases of infant mortality, in 2016 as many as 6 cases, in 2017 as many as 4 cases, in 2018 as many as 7 cases, while in 2019 there were 11 cases with various causes of death and the highest incidence of infant mortality occurred in 2019, namely As many as 11 cases, some of the factors that will be analyzed by researchers include maternal age mother's education, parity and birth

level of education is closely related to the level of health. This is due to the attendants. The purpose of this study was to analyze the characteristics of the incidence of infant mortality rates in 2015-2019 at Japara Health Center.

**Method**

This type of research is analytic research, analytical survey is a survey or research that tries to explore how and why health phenomena occur according to (Notoatmodjo, 2012)

The research design in this study is retrospective, which means it is a study that concerns how risk factors are studied using a retrospective approach (Badriah, 2012).

The sample in this study is all cases of AKB incidence from 2015-2019 in UPTD Puskesmas Japara Kuningan Regency as many as 34 people. Sampling in this study used the total sampling technique, the independent variable in this study were characteristics (maternal age, education, parity, birth attendant), while the dependent variable in this study was the incidence of infant mortality.

The instrument in this study was a check list sheet by means of measuring to see reports of infant mortality

**Results**

Univariate Analysis

1. Description of maternal age in 2015-2019 at Japara Public Health Center, Kuningan District in 2020

**Table 1. Distribution of Maternal Age Frequency 2015-2019 at UPTD Puskesmas Japara Kuningan Regency in 2020**

Usia Ibu	Frekuensi (F)	Persentase (%)
Tidak Beresiko	19	55,9
Beresiko	15	44,1
Total	34	100

Source: 2020 research results

Based on the table above, it can be seen that 34 people mostly have no risk category as many as 19 people (55.9%)

- of education 2015-2019 at the Japara Public Health Center, Kuningan Regency in 2020.

**Table 2. Distribution of Education Frequency in 2015-2019 at UPTD Puskesmas Japara Kuningan Regency in 2020**

Education	Frequency (F)	Percentage (%)
primary school	23	67,6
Junior high school	5	14,7
Senior High School	5	14,7
College	1	2,9
Total	34	100

Source: 2020 research results

Based on the table above, it can be seen that 34 people mostly have education in the SD category as many as 23 people (67.6%).

- Descriptions of childbirth assistants in 2015-2019 at Japara Public Health Center, Kuningan Regency in 2020

**Table 3. Distribution of Delivery Assistance Frequency in 2015-2019 at UPTD Puskesmas Japara Kuningan Regency in 2020**

Childbirth Helper	Frequency (F)	Percentage (%)
health workers	33	97,1
not a health worker	1	2,9
Total	34	100

Source: 2020 research results

Based on the table above, it can be seen that almost all deliveries were assisted by health workers, as many as 33 people (97.1%).

4. Portrait of Parity in 2015-2019 at the Japara Health Center, Kuningan Regency in 2020

**Table 4. Distribution of Parity Frequency in 2015-2019 at UPTD Japara Health Center, Kuningan Regency in 2020**

Parity	Frequency (F)	Percentage (%)
Primipara	12	35,3
Ultiparous	22	64,7
Total	34	100

Source: 2020 research results

Based on the table above, it can be seen that 34 people were mostly parity in the multiparous category of 22 people (64.7%).

5. Description of the incidence of infant mortality in 2015-2019 at Japara Public Health Center, Kuningan District in 2020

**Table 5. Distribution of Frequency of Infant Mortality in 2015-2019 at Puskesmas Japara, Kuningan Regency in 2020**

Infant Death	Frequency (F)	Percentage (%)
IUFD	12	35,3
low newborn	8	23,5
congenital abnormalities	2	5,9
Premature	1	2,9
Asphyxia	1	2,9
Etc	10	29,4
Total	34	100

Source: 2020 research results

Based on the table above, it can be seen that most of the 34 people who died were caused by IUFD as many as 12 people (35.3%).

#### Bivariate Analysis

1. The relationship between maternal age and the incidence of infant mortality in 2015-2019 at UPTD Puskesmas Japara, Kuningan Regency in 2020

**Table 6. The relationship between maternal age and the incidence of infant mortality in 2015-2019 at UPTD Puskesmas Japara, Kuningan Regency in 2020**

Age	Infant Death												Total	P value	
	IUFD		low newborn		congenital abnormalities		Premature		Asphyxia		Lain-lain				
	F	%	F	%	F	%	F	%	F	%	F	%	F	%	
Risk	6	31,6	7	36,8	0	0	0	0	0	0	6	31,6	19	100	0,129
Not risk	6	40	1	6,7	2	13,3	1	6,7	1	6,7	4	26,7	15	100	

Source: 2020 research results

Based on the table above, it is known that the age of the mother is not at risk of experiencing the incidence of infant death caused by IUFD as many as 6 people (31.6%), LBW by 7 people (36.8%), and other causes as many as 6 people (31, 6%).

The results of statistical tests using the Chi Square test on a computer program obtained an insignificant value, namely  $0.129 > P \text{ value } 0.05$ , it can be concluded that there is no relationship between maternal age and the incidence of infant mortality in 2015-2019 at UPTD Puskesmas Japara, Kuningan Regency.

2. The relationship between education and the incidence of infant mortality in 2015-2019 at UPTD Puskesmas Japara, Kuningan Regency in 2020.

**Table 7. The relationship between education and the incidence of infant mortality in 2015-2019 at UPTD Puskesmas Japara, Kuningan Regency in 2020**

Education	Infant Death												Total	P Value	
	IUFD		BBLR		congenital abnormalities		Premature		Asfiksia		Etc				
	F	%	F	%	F	%	F	%	F	%	F	%	F	%	
primary school	10	43,5	4	17,4	0	0	1	4,3	0	0	8	34,8	23	100	0,156
Junior high school	0	0	3	60	1	20	0	0	1	20	0	0	5	100	
Senior high school	1	20	1	20	1	20	0	0	0	0	2	40	3	100	
College	1	100	0	0	0	0	0	0	0	0	0	0	1	100	

Source: 2020 research results

Based on the table above, it is known that mothers who experience infant mortality with primary school education caused by IUFD are 10 people (43.5%), LBW is 4 people (17.4%), premature 1 person (4.3%) and causes others as many as 8 people (34.8%).

The results of statistical tests using the Chi Square test on a computer program obtained an insignificant value, namely  $0.156 > P$  value  $0.05$ , it can be concluded that there is no relationship between maternal education and the incidence of infant mortality in 2015-2019 at UPTD Puskesmas Japara, Kuningan Regency.

3. The relationship between birth attendants and the incidence of infant mortality in 2015-2019 at UPTD Puskesmas Japara, Kuningan Regency in 2020

**Table 7. The relationship between birth attendants and the incidence of infant mortality in 2015-2019 at UPTD Puskesmas Japara, Kuningan Regency in 2020**

health workers	Infant Death												Total	P value	
	IUFD		BBLR		congenital abnormalities		Prematur		Asphyxia		Lain-lain				
	F	%	F	%	F	%	F	%	F	%	F	%			
health workers	12	36,4	8	24,2	2	6,1	1	3,0	1	3,0	10	27,3	33	100	0,781
not health worker <sup>a</sup>	0	0	0	0	0	0	0	0	0	0	1	100	1	100	

Source: 2020 research results

Based on the table above, it is known that the birth attendants by health workers were 33 people with the cause of death of IUFD as many as 12 people (36.4%), BBLR as many as 8 people (24.2%), congenital abnormalities as many as 2 people (6.1%), premature 1 person (3.0%), 1 person asphyxia (3.0%), and other causes as many as 10 people (27.3%).

The results of statistical tests using the Chi Square test on a computer program obtained a P value of  $0.781 > P$  value of  $0.05$  so that there is no relationship between birth attendants and the incidence of infant mortality in 2015-2019 at UPTD Puskesmas Japara, Kuningan Regency.

4. The relationship between parity and the incidence of infant mortality in 2015-2019 at UPTD Puskesmas Japara, Kuningan Regency in 2020.

**Table 9. The relationship between parity and the incidence of mortality babies in 2015-2019 at UPTD Puskesmas Japara Kuningan Regency in 2020**

Parity	Infant Death												Total		P value
	IUFD		BBLR		Kel.kong enital		Prematur		Asfiksia		Lain-lain				
	F	%	F	%	F	%	F	%	F	%	F	%	F	%	
Primi para	8	66,7	0	0	1	8,3	1	8,3	1	8,3	1	8,3	12	100	0,006
Multiparous	4	18,2	8	36,4	1	4,5	0	0	0	0	9	40,9	22	100	
Grande multiparous	0	0	0	0	0	0	0	0	0	0	0	0	0	100	

Source: 2020 research results

Based on the table above, it is known that Multipara mothers who experienced infant mortality incidence caused by IUFD were 4 people (18.2%), LBW was 8 people (36.4%), 1 person (4.5%) congenital abnormalities, and causes others as many as 9 people (40.9%).

The results of statistical tests using the Chi Square test on a computer program obtained a significant value, namely  $0.006 > P \text{ value } 0.05$ , it can be concluded that there is a relationship between parity and the incidence of infant mortality in 2015-2019 at UPTD Puskesmas Japara, Kuningan Regency.

### Discussion

1. The relationship between maternal age and the incidence of infant mortality in 2015-2019 at UPTD Puskesmas Japara Kuningan Regency in 2020

The results of statistical tests using Chi square obtained  $P \text{ value } 0.129 > 0.05$  P value, it can be concluded that there is no relationship between maternal age and the incidence of infant mortality in 2015-2019 at UPTD Puskesmas Japara Kuningan Regency in 2020, the results of this study are not In line with research conducted by Budiati (2016), it shows a relationship between

maternal age and infant mortality.

According to (Mahampang, 2011), Maternal age that is not related to infant mortality is because pregnant women at the age of  $<20$  years or  $> 35$  years routinely check their pregnancies at health facilities and are diligent in seeking information, either consulting village midwives or reading books about pregnancy, so the risks associated with the incident infant mortality between  $<20$  years or  $> 35$  years with the same age group 20-35 years.

The difference in this study is due to differences in the characteristics



of respondents as well as geographic location, socio-culture around which can affect the incidence of infant mortality in UPTD Puskesmas Japara, Kuningan Regency.

2. The relationship between education and the incidence of infant mortality in

2015-2019 at UPTD Puskesmas Japara, Kuningan Regency in 2020

The results of statistical tests using Chi square obtained a P value of 0.156 > a P value of 0.05, it can be concluded that there is no relationship between education and the incidence of infant mortality in 2015-2019 at UPTD Puskesmas Japara Kuningan Regency in 2020.

The results of this study are different from the results of research conducted by Mahampang (2011) which shows a P value of 0.006 < 0.05 where  $H_a$  is accepted, meaning that there is a relationship between education and the incidence of infant mortality.

According to (Umah, 2014), said that although the results of the statistical analysis of his research did not find any relationship between maternal education and infant mortality, in his research it was found that the number of neonatal deaths was higher in mothers with low education.

In another study, it was found that mothers who did not experience education tended to live more in areas with a travel time of more than 1.5 hours to health service facilities compared to mothers with education. (Umah, 2014) This will be exacerbated by the problem of travel time to low-educated maternal health services.

This is not in accordance with the theory which states that mothers with low education have a high risk of infant

mortality, due to other factors such as the limitations of researchers in collecting secondary data for research.

3. The relationship between birth attendants and the incidence of infant mortality in 2015-2019 at UPTD Puskesmas Japara, Kuningan Regency in 2020.

The results of statistical tests using Chi Square obtained a P value of

0.781 > a P value of 0.05, it can be concluded that there is no relationship between birth attendants and the incidence of infant mortality in 2015-2019 at UPTD Puskesmas Japara Kuningan Regency in 2020.

The results of this study are supported by (Kurniawan, 2018) that research conducted on 75 respondents who gave birth at the Boyolali Health Center showed a P value of 1,000 > 0.05 where  $H_a$  was rejected, meaning that there was no relationship between birth attendants and the incidence of infant mortality.

Birth attendants need special skills in obstetric care. Delivery will take place safely and smoothly if it is carried out by a professional health worker. Deliveries that are assisted or accompanied by health personnel are considered to meet the requirements of sterilization and are safe, because if the mother experiences complications of childbirth, then first aid or treatment at referral can be immediately carried out (Mahampang, 2011).

4. The relationship between parity and the incidence of infant mortality in 2015-2019 at the UPTD Puskesmas Japara, Kuningan Regency in 2020.

The results of statistical tests using Chi Square obtained a P value of

0.006 <P value 0.05, it can be concluded that there is a relationship between parity and the incidence of infant mortality in 2015-2019 at UPTD Puskesmas Japara Kuningan Regency in 2020.

Parity is the number of live births a woman has (BKKBN, 2016). According to (Kurniawan, 2018) parity can be divided into primiparous, multiparous, and grandemultipara.

The results of this study are in accordance with the research conducted (Kurniawan, 2018) shows that there is a relationship between parity and infant mortality.

The results of this study indicate that mothers with parity of more than 1 have a risk of incidence of the same infant mortality rate as mothers who have parity of 1 child because according to (Kementrian Kesehatan, 2012) quoted by (Umah, 2014) High parity is related to the weakening of the mother's uterus due to stretching of the uterus due to the presence of the fetus.

### Conclusion

The results of the research that have been carried out are some mothers

### Reference

Badriah, D. L. (2012). *Research Methodology Science - Health Sciences*. Multazam.

BKKBN. (2016). Total Coverage of Family Planning Participants. *2015 Government Agencies Performance Report National Population and Family Planning Agency*, 1(2015), 75.

Dinas Kesehatan Provinsi Jawa Barat. (2017). *Health Profile of West Java Provincial Health Office 2017*. Diskes Jabarprov.

who are not at risk, some of the mothers' education is elementary school, almost all deliveries are assisted by health personnel, and some mothers have multiparity parity, and there is no relationship between maternal age and the incidence of infant mortality in 2015-2019. At UPTD Puskesmas Japara, Kuningan Regency in 2020 there is also no relationship between education and the incidence of infant mortality in 2015-2019 at UPTD Puskesmas Japara, there is no relationship between birth attendants and the incidence of infant mortality in 2015-2019 at UPTD Puskesmas Japara.

There is a relationship between parity and the incidence of infant mortality in 2015-2019 at the UPTD Puskesmas Japara, Kuningan Regency in 2020.

### Suggestion

This research is expected to be used as input for health centers to increase the priority of health programs in an effort to reduce the incidence of infant mortality.

Kemenkes. (2015). Decree of the Minister of Health of the Republic of Indonesia Number HK. 02.02 / MENKES / 52/201, 02.02.

Kementrian Kesehatan RI. (2014). Basic Health Research 2013. *Ministry of Health, Republic of Indonesia*.

Kemeskes RI. (2016). *Indonesia's Health profile. In Health. Vol. 70, I*.

<https://doi.org/10.1111/evo.12990>

June 8, 2020 at 115.25 WIB. <http://journal.ummgl.ac.id/index.php/urecol/article/view/983>

Kesehatan, K. (2012). *Indonesian Health Demography*. Ri Health Department.

Kurniawan, R. S. (2018). *Relationship between Parity, Childbirth Assistance and Pregnancy Distance with Infant Mortality Rate in East Java*.

Mahampang, U. (2011). *Maternal and infant factors associated with the incidence of perinatal mortality*. on 8 June 2020 at 12.20 WIB. <https://journal.unnes.ac.id/nju/index.php/kemas/article/view/1792>

Notoatmodjo, S. (2012). *Health Research Methodology*. PT Rineka Cipta.

Tjahjowati. (2019a). *Analysis of Asphyxia Cases in Neonatal Mortality at Tugurejo Hospital, Semarang*. on May 2020 at 15.00. <https://jurnal.stikesmus.ac.id/index.php/JKebln/article/view/245>

Umah, S. M. (2014). *Determinants of Neonatal Mortality in Rural Areas of Indonesia, 2008-2012*. on June 9, 2020 at 13.40 WIB. <http://repository.uinjkt.ac.id/dspace/handle/123456789/25792> %0A%0A

UNICEF. (2001). *Early Marriage: Child Spouses Innocenti Digest*. 7, 2–29.

Wijayanti. (2017). *Determinants of Infant Mortality in the Region of Magelang Regency in 2017*. on

**THE EFFECT OF MOTHER'S KNOWLEDGE AND PROFESSION ON THE  
SUCCESS OF EXCLUSIVE BREASTFEEDING IN THE WORKING AREA OF  
PUSKESMAS SURANENGALA, CIREBON DISTRICT, YEAR 2021**

Lisnawati, Siti Soleha

Poltekkes Kemenkes Tasikmalaya

*bidan\_lisna85@yahoo.com*

**Abstract**

**Introduction :** According to the coverage of exclusive breastfeeding in regencies and cities in West Java, the lowest coverage of exclusive breastfeeding for infants 0-6 months is 20.34% in Bandung Regency, while the highest coverage is exclusive breastfeeding in Tasikmalaya Regency 113.11%. Meanwhile, the coverage of exclusive breastfeeding in Cirebon Regency is 32.79%, with the fifth lowest in regencies and cities in West Java.

**Methods:** Analytical research with 1: 1 case control technique, the population in this study were mothers who had babies aged 6-12 months with a population of 269 people. The samples used in this study were 30 in the case group and 30 in the control group. Collecting data by dividing the case group and the control group, namely the proportional random sampling technique in the control group and the total sampling in the case group. The instrument used was a questionnaire. The data analysis of this research used univariate and bivariate.

**Results:** In the univariate test results on the knowledge variable, it was found that mothers in the majority of cases group had good knowledge, namely 25 mothers (83.4%) and mothers in the control group, the majority had good knowledge, namely 13 mothers (43.3%). While for the variable of maternal occupation the case group did not work as much as 26 (86.7%) and the control group did not work as much as 27 (90%). For bivariate analysis, the results of statistical tests using the chi-square test between the variables of maternal knowledge about breastfeeding and the exclusive breastfeeding variable obtained a p value value of 0.003 (<0.05), the OR value in the comparator was good against 0.260 (0.66-1.028), whereas in the comparison group it was good to less 4,500 (0.418-49.077). In the work variable, the p value is 1.00 (> 0.05) with an OR value of 0.722 (0.147 - 3.545). Mother's knowledge has a 4.5-fold effect on the success of exclusive breastfeeding, while for work there is no effect on the success of exclusive breastfeeding.

**Keywords:** knowledge, work and exclusive breastfeeding.

## Introduction

Infant and neonatal mortality rates in 2018 were mostly caused by, 28% asphyxia, 3% sepsis, 40% LBW, 12% abnormalities, 17% others, in which there was jaundice and in post neonatal the cause of death was diarrhea, 13%. , pneumonia 21%, gastrointestinal infections 4%, malaria 1%, neurological disorders 2%, and others 59%. One of the SDGs targets that will be achieved is to reduce the mortality rate for children by reducing the IMR to 12/1000 live births in 2030. The infant mortality rate due to gastrointestinal infections and diarrhea is also quite high. Breast milk contains immunological substances to protect babies from infection. Breastfed babies are also at lower risk of developing infections or digestive disorders, allergies, asthma, diabetes, obesity and cancer in childhood. (Anggraeni, 2016).

Exclusive breastfeeding has benefits according to the needs of babies that have never been found in formula milk, nutritional content, among others, protein 8.5%, fat 2.5%, carbohydrates 3.5%, salt and minerals 0.4%, water 85 , 1%. Meanwhile, the increasing the age of the

baby, the higher the protein content and the lower the fat content and the higher the carbohydrate content. The content in breast milk that has been adjusted to the needs of the baby is not like the content of formula milk, which is the same for any age and the amount is the same and is difficult for the baby's body to absorb (Mufdlilah, 2017).

According to the West Java Provincial Health Office, in 2017, there were 3077 babies who died. Meanwhile, based on recording and reporting in the profile of West Java in 2018, there were 3,083 cases of infants dying, increasing from 2017. The proportion of infant deaths in 2017 was 3.4 / 1000 live births, decreased by 0.53 points compared to 2016 of 3, 93/1000 live births. The proportion of infant mortality in 2018 was 3.4 / 1000 live births or 3.083 cases. The proportion of infant mortality from 0-28 days (neonatal) was 84.63% or 3.32/1000 live births.

According to the coverage of exclusive breastfeeding in regencies and cities in West Java, the lowest coverage of exclusive breastfeeding for babies 0-6 months is 20.34% in Bandung Regency, while the highest coverage is exclusive breastfeeding in Tasikmalaya Regency 113.11%. While the coverage of exclusive breastfeeding in Cirebon Regency is

32.79% with the fifth lowest in regencies and cities in West Java. Various factors behind the low coverage of exclusive breast feeding, several studies have found that predisposing factors including age, education level, occupation, and knowledge have a relationship to exclusive breastfeeding (Hilala, 2013). Exclusive breast feeding is related to maternal knowledge. Sufficient knowledge of mothers about exclusive breastfeeding which motivates mothers to provide exclusive breastfeeding. The results of other studies show that mothers who work and do not provide exclusive breastfeeding are 66.7% and mothers with less knowledge do not exclusively breastfeed at 94.4%. (Astuti, 2013).

According to research Bahriyah, Putri & Jaelani, (2017) the results of this study prove that the knowledge of mothers who have high knowledge about exclusive breastfeeding and about the benefits of exclusive breastfeeding so that they end up trying to provide exclusive breastfeeding, most working mothers object to exclusive breastfeeding because of difficulties in dividing their time for providing exclusive breastfeeding and lack of knowledge about how to express and store exclusive breastfeeding.

According to research Triseptinora, (2018) The results of the analysis of the relationship between mother's work and exclusive breast feeding show that of the 29 respondents who did not work there were 14 (30.4%) mothers who did not provide exclusive breastfeeding. Meanwhile, there are 15 (75%) mothers who work exclusively breastfeeding who do not provide exclusive breastfeeding. The results of statistical tests obtained  $p\text{-value} = 0.002$  ( $p\text{-value} < 0.05$ ), it can be concluded that there is a significant relationship between work status and exclusive breastfeeding. With an OR (odd ratio) of 6.8 (2.084-22.56), this means that working mothers have 6 to 7 times the risk of not giving exclusive breast feeding compared to mothers who do not work.

Based on the results of the Cirebon District Health Office report in 2018, coverage of exclusive breastfeeding for babies aged 6 months in all Puskesmas in Cirebon Regency. The attainment of exclusive breastfeeding in the district is 69.1%, of the total number of babies of 36,251 people who are given exclusive breast feeding is only 25,045 people. The highest achievement of exclusive breast feeding was 200.6% in the sub-district of the Bunder Health Center, while the lowest

was in the Jamblang sub-district, the working area of the Wangunharja Community Health Center, namely 11.3%. The Suranenggala Puskesmas has the 4th lowest breastfeeding coverage, namely 21.3%.

Based on the results of a preliminary survey in the work area of the Suranenggala Health Center which was conducted with a breastfeeding knowledge questionnaire containing 24 questions (taken from Ina Masripah's research entitled the relationship between maternal knowledge and exclusive breastfeeding in the work area of Puskesmas Plumbon, Cirebon Regency 2016). In 10 mothers who had babies aged 6-12 months, it was found that 8 people did not provide exclusive breast feeding, but 9 of them had a good level of knowledge but one person had a sufficient level of knowledge. Of the 10 mothers who have babies 6-12 months, only 3 work, the majority of others do not work.

## Method

The design in this study uses analytical techniques with a case control approach (1: 1). The case group is a group of babies who are given exclusive breast feeding, the control group is those who are not exclusively breastfed. This research was

conducted in the working area of the Suranenggala Community Health Center. Conducted in February - April 2021. In the village (Purwawinangun, Keraton, Surakarta, Karangreja, Suranenggala Kidul, Suranenggala Lor, Suranenggala Kulon, Suranenggala).

The population in this study were mothers who had babies aged 6-12 months with a total of 269 in the work area of the Suranenggala Health Center in 2021. Sampling in the case group used total sampling by taking all samples from 1 February 2021 - 28 February as many as 30 samples. As for the control group, it was carried out using a proportional random sampling technique. In this study, including the inclusion criteria are: Willing to be research respondents and filling out a questionnaire and mothers who have children aged 6-12 months.

The data collection instrument used in this study was a questionnaire from Ina Masripah's research entitled the relationship between maternal knowledge and exclusive breastfeeding in the work area of the Plumbon Public Health Center, Cirebon Regency 2016, which had been tested for validity, with a cronbach's alpha value = 0.884. The questionnaire contained 24 closed questions, the types of questions

about mother's knowledge of exclusive breast feeding and the myths of exclusive breastfeeding. Bivariate data analysis using the chi square technique.

Data collection activities are carried out directly in accordance with the permission from the puskesmas. Data collection also followed health protocols where researchers conducted rapid antigen tests and conducted research using gowns,

a. Knowledge

gloves, masks, hand sanitizers, and applied distance maintenance.

**Results**

To find out the bivariate analysis in the knowledge group because it uses a 3 × 2 table, the p value uses chi square and for the OR value uses simple regression.

**Table 1. The Relationship of Mother's Knowledge of the Success of Exclusive Breastfeeding (Chi-Square)**

Variable	Case		Control		P Value
	F	%	F	%	
1. Good	25	83,4	13	43,3	0,003
2. Enough	1	3,3	9	30	
3. less	4	13,3	8	26,7	
Total	30	100	30	100	

**Table 2. The Relationship of Mother's Knowledge of the Success of Exclusive Breastfeeding (simple regression test)**

Knowledge	P Value	OR (CI 95%)	Lower	Upper
Good-Enough	0,55	0,260	0,66	1,028
Good-Less	0,217	4,500	0,418	49,077

Based on the results of statistical tests with the chi-square test between the variables of maternal knowledge about breastfeeding and the exclusive breastfeeding variable, the p value value

was 0.003 (<0.05), which means that there is a relationship between maternal knowledge and the success of exclusive breastfeeding. The OR value in the comparator is good against 0.260 (0.66-



1.028), while in the comparison group is

good against 4.500 (0.418-49.077).

b. Profession

**Table 3. The Relationship of Mother's Work to the Success of Exclusive Breastfeeding**

Mother's Work	Exclusive Breastfeeding				P Value	OR (95% CI)
	Case		Control			
	F	%	F	%		
Does Not Work	26	86,7	27	90	1.00	0,722 (0,147 - 3,545)
Work	4	13,3	3	10		
Total	30	100	30	100		

Based on table 3, the results of statistical tests with the chi-square test between the variables of maternal occupation and the success of exclusive breastfeeding, obtained a p value of 1.00 (> 0.05), it can be concluded that there is no relationship between work and the success of exclusive breastfeeding. With an OR value of 0.722 (0.147 - 3.545) so that the OR value exceeds the value of 1 means that the results of this study apply to the sample only and do not apply to the population.

**Discussion**

1) Knowledge

Based on the table, the majority of mother's knowledge is good and

giving exclusive breast feeding is 25 (83.4%), there is an effect of mother's knowledge with exclusive breastfeeding. Based on the results of the study, it shows that there is a relationship between knowledge and exclusive breastfeeding in the work area of the Suranenggala Health Center in 2021 with a p value of 0.003 with an OR value of good knowledge against 4.5, which means that well-informed mothers have a 4.5-fold effect on exclusive breastfeeding.

Based on the questionnaire given by the researcher, most of the respondents in the case and control groups did not know the answers to several questions in the questionnaire including questions in numbers 3 and

18, namely whether colostrum should be removed or the content of colostrum, question number 16 about family support against exclusive breastfeeding, and questions about the benefits of exclusive breastfeeding can be natural contraceptives.

The results of this study support the results of previous research conducted by (Anggraeni, 2016) with the results of the research that there is a relationship between knowledge and work of mothers with exclusive breastfeeding at Posyandu Lestari Handayani, Jembungan Village, Boyolali Regency ( $p < 0.05$ ). Another study was also conducted by Rica triseptinora. The Relationship between Knowledge Age and Mother's Occupation with Exclusive Breastfeeding at the Puskesmas Kenali Besar Jambi City in 2018 with a p-value = 0.039 ( $p$ -value  $< 0.05$ ).

Knowledge is the basis for a person to determine or make decisions. Health knowledge can be obtained with formal education and mass media, knowledge about exclusive breastfeeding will raise awareness of a mother to provide exclusive breastfeeding. Knowledge also includes motivation to behave and act. Mothers

who are less knowledgeable and less advised about the importance of exclusive breastfeeding will cause them to provide additional food besides breast milk before their time (Rahman, 2017).

## 2) Mother's Work

Based on the results of the study, it shows that there is no relationship between work and exclusive breastfeeding in the working area of the Suranenggala Health Center in 2021 with a p value of  $1,000 > 0.05$ . With an OR value of 0.722 (0.147 - 3.545) so that the OR value exceeds the value of 1 which means that the results of the study apply to the sample only and do not apply to the population. From the findings of researchers who conducted in-depth interviews with several respondents who work and do not provide exclusive breast feeding, they do not know how to give breast milk when the mother is working and do not know how to store breast milk.

The results of this study are in line with research conducted at the Bungus Health Center, which shows that most mothers do not work, which states that there is no significant

relationship between work and exclusive breastfeeding with  $p$  value =  $0.638 > \alpha 0.05$ . The study also states that many mothers only take care of household chores and do not exclusively breastfeed their babies. There were 59 mothers and of that number only 22 people (37.3%) were breastfeeding exclusively, the remaining 37 people (62.7%) were mothers who did not exclusively breastfeed. Similar research conducted in Manado stated that there was no relationship between maternal occupation and exclusive breastfeeding ( $p$  value =  $0.052 > \alpha 0.05$ ). These results indicate that there are more mothers who do not work than those who work. The study also stated that the majority of mothers who did not work chose not to breastfeed their babies (64%). While mothers who work and continue to breastfeed their babies 0-6 months are only 13 people (36%) (Kusmiyati, Adam & Pakaya, 2014).

Government Regulation No. 33 of 2012 concerning exclusive breastfeeding Article 30 (Workplace and Public Facilities) Paragraphs 1 and 2 state that work agencies and public facilities should provide support for exclusive breast feeding programs and can regulate work relations between

companies and employees (Indonesia, 2012). If not, the company or agency will receive criminal sanctions in accordance with Article 200/201 of the Health Law in Article 36 (DepKes, 2009).

### Conclusion

1. In the case and control groups, the majority of mothers were knowledgeable and did not work.
2. Good knowledge has a 4.5 fold effect on the success of exclusive breastfeeding.
3. There is no effect of mother's work on the success of exclusive breastfeeding.

### Suggestion

1. For puskesmas. Increase the activities of providing health education about exclusive breastfeeding to pregnant women in health service activities such as classes for pregnant women, posyandu, and others, so that the coverage of exclusive breast feeding increases.
2. For other researchers. conduct further research with more complete variables and a wider area, in addition to maximizing the total

sample size in order to achieve the minimum number of samples.

### Reference

- Anggraeni, T. 2016. Hubungan Pengetahuan dan Pekerjaan Ibu dengan pemberian ASI eksklusif di Posyandu Lestari Handayani Desa Jembungan Kabupaten Boyolali. *Infokes: Jurnal Ilmiah Rekam Medis dan Informatika Kesehatan*. 6(1).
- Astuti, I. 2013. Determinan pemberian ASI eksklusif pada ibu menyusui. *Jurnal Health Quality*. 4(1):1–76.
- Bahriyah, F., Putri, M. & Jaelani, A.K. 2017. Hubungan pekerjaan ibu terhadap pemberian asi eksklusif pada bayi di wilayah kerja puskesmas sipayung. *Jurnal Endurance: Kajian Ilmiah Problema Kesehatan*. 2(2):113–118.
- DepKes, R.I. 2009. Kebijakan departemen kesehatan tentang peningkatan pemberian air susu ibu (ASI) pekerja wanita. *Jakarta: Depkes*.
- Hilala, A. 2013. Faktor-Faktor Yang Berhubungan Dengan Pemberian Asi Eksklusif Di Wilayah Kerja Puskesmas Tuladenggi Kecamatan Telaga Biru Kabupaten Gorontalo Tahun 2013.
- Indonesia, P.R. 2012. Peraturan Pemerintah Republik Indonesia nomor 33 tahun 2012 tentang pemberian air susu ibu eksklusif.
- Kusmiyati, K., Adam, S. & Pakaya, S. 2014. Hubungan pengetahuan, pendidikan dan pekerjaan ibu dengan pemberian makanan pendamping ASI (MP-ASI) pada bayi di Puskesmas Bahu Kecamatan Malalayang Kota Manado. *JIDAN (Jurnal Ilmiah Bidan)*. 2(2).
- Mufdlilah, M. 2017. *Buku Pedoman Pemberdayaan Ibu Menyusui Pada Program Asi Eksklusif*. Universitas' Aisyiyah Yogyakarta.
- Rahman, N. 2017. Pengetahuan, Sikap, Dan Praktik Pemberian Asi Eksklusif Di Wilayah Kerja Puskesmas Jumpandang Baru Kecamatan Tallo Kota Makassar. *Universitas Hasanuddin Makassar*.
- Triseptinora, R. 2018. Hubungan Umur Pengetahuan dan Pekerjaan Ibu dengan Pemberian Asi Eksklusif di Puskesmas Kenali Besar Kota

Jambi Tahun 2018. *Scientia  
Journal*. 8(1):286608.

**THE EFFECT OF PRENATAL GENTLE YOGA AND HYPNOTHERAPY ON  
ANXIETY LEVEL AND SLEEP QUALITY IN THE THIRD TRIMESTER  
PREGNANT WOMAN AT PUSKESMAS SUMBER  
CIREBON REGENCY IN 2019**

Nurlaela Kurnia Rahayu, Pepi Hapitria, Rani Widiyanti

Poltekkes Kemenkes Tasikmalaya

*nkduabelasrahayu@gmail.com*

**Abstract**

As the pregnancy gets older, the attention and thoughts of pregnant women begin to focus on something that is considered as a climax, so that the anxiety experienced will intensify just before the childbirth. Excessive anxiety and sleep disorders during pregnancy can cause mental disorders in pregnant women and inhibit fetal growth. To determine the effect of prenatal gentle yoga and hypnotherapy on anxiety level and sleep quality in the third trimester pregnant women. This is a quasi-experimental study with a pre-post test with a control group. The sample was 32 respondents consisting of 16 respondents as an intervention group and 16 respondents as a control group taken by purposive sampling. The analysis used was the Paired T-test. There is a difference in the average of anxiety level in the third trimester pregnant women in the intervention and control groups with a p value 0,000; there is a difference in the average of sleep quality in the third trimester pregnant women in the intervention and control groups with a p value 0,000; and there is no difference in the average of anxiety level and sleep quality in the third trimester pregnant women in the intervention and control groups with a p value 0,64. Prenatal Gentle Yoga and Hypnotherapy have an effect in reducing the anxiety level and improving the sleep quality in the third trimester pregnant women.

*Keywords: Anxiety ; Hypnotherapy ; Prenatal Gentle Yoga ; Sleep Quality*

---

**Introduction**

WHO estimates that every day around the world around 830 women die

from pregnancy and childbirth and 99% of maternal deaths occur in developing countries. (WHO, 2016). In Indonesia,

MMR has decreased from 359 per 100,000 live births that occurred in 2012 to 305 per 100,000 live births in 2015. Although there has been a decrease, MMR in Indonesia has not yet reached the Long-Term Development target in the Health Sector 2005-2025, which can be reduced to 74 per 100,000 live births (Kemenkes, 2015)

The causes of maternal death due to pregnancy or childbirth are due to medical, social, cultural and religious aspects. One such medical aspect is labor with complications. One of the causes of complications in pregnancy is stress. In Indonesia, there are 107,000 (28.7%) pregnant women who experience anxiety in facing childbirth (Rahmitha, 2017).

The anxiety levels was indirectly one of problems associated with high rate of maternal mortality and maternal morbidity. Anxiety often interferes with sleep. A decrease in sleep quality in pregnant women can cause a decrease in the condition of pregnant women, reduced concentration, fatigue, body aches, not in mood to work, and tend to be emotional. This can make burden of pregnancy even heavier (Nurcahya, 2017).

There are many non-pharmacological methods developed by many health practitioners in dealing with

problems of pregnant women, including doing pregnancy exercise, yoga, relaxation, hypnobirthing and so on (Sindhu, 2011).

According to research results from (Pongsibidang, GS, 2019) and (Safriani, 2017), prenatal gentle yoga plays an important role in reducing anxiety level of pregnant women and improving sleep quality when entering third trimester of pregnancy.

Another method that can be done is hypnotherapy in pregnancy. Through hypnotherapy exercises, a pregnant woman is able to enter a state of deep relaxation so that she can maintain her calm and emotional stability. Emotional conditions are calm, comfortable, stable and diligent in instilling positive affirmations. Relaxation as a technique that has been proven to reduce anxiety in various subjects has also been shown to be effective in reducing anxiety in pregnant women (Kuswandi, 2014).

Based on the results of a preliminary study in form of interviews with 9 pregnant women third trimester carried out at Sumber Public Health Center, it was found that 7 out of 9 pregnant women interviewed experienced sleep disorders during pregnancy. They complained of anxiety and fear when

entering third trimester about how the baby will be born.

## Method

The research design used a quasy experiment research design. The research design used in this study was Pre and Post Test with Control Group, which is an experimental study using a comparison group (control), previously 2 groups had pre-test observations, so that the researcher could compare changes after doing experiment proven by post test (Notoatmodjo, 2012).

The population in this study were all pregnant women in work area of Sumber Public Health Center from August to November 2019 with as many as 47 people. Of the 47 pregnant women, 32 were pregnant according to inclusion criteria. This sample was divided into 2 groups, that are 16 respondents in intervention group and 16 respondents in control group.

The intervention group was given prenatal gentle yoga 2 times a week for 2 weeks with a duration of 2 hours each meeting and was guided by researcher. The control group was given hypnotherapy by researchers, respondents were taught to be able to do self-hypno at home for 7 days in 10-20 minutes before sleep at night and

given hypnotherapy observation sheets. The researcher had a certificate in prenatal gentle yoga and hypnotherapy.

This study used a parametric test, that are paired t-test to determine effect of prenatal gentle yoga and hypnotherapy on anxiety levels and sleep quality before and after intervention.

## Results

Based on data collected and analyzed, the following results were obtained:

### Analysis of Differences in Anxiety Levels in Prenatal Gentle Yoga and Hypnotherapy Groups

Table 1 shows the results of paired T-test for prenatal gentle yoga and hypnotherapy groups, p value for anxiety levels was 0.00 ( $p < 0.05$ ) with a mean difference of 14.56 and 8,06. Statistically, there were significant difference in the mean anxiety levels in pre and post test scores in prenatal gentle yoga and hypnotherapy groups.

### Analysis of Differences in Sleep Quality in Prenatal Gentle Yoga and Hypnotherapy Groups



Table 2 shows the results of paired T-test for prenatal gentle yoga and hypnotherapy groups, p value for sleep quality was 0.00 ( $p < 0.05$ ) with a mean difference of 5,06 and 4,69. Statistically,

there were significant difference at mean sleep quality in pre and post test scores in prenatal gentle yoga and hypnotherapy groups.

**Table 1. Paired T-test Anxiety Levels Pregnant Women Third Trimester In Prenatal Gentle Yoga Dan Hypnotherapy Group**

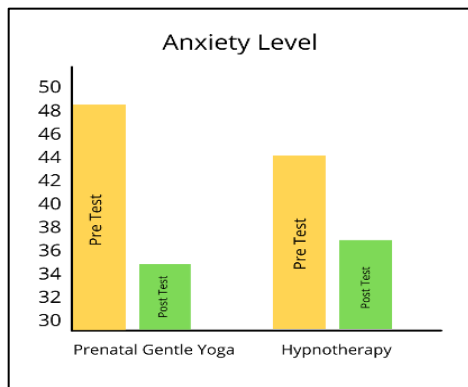
Groups	Variable	Mean	Mean Difference	SD	p value
Prenatal gentle yoga	Pre Test	48,81	14,56	11,79	0,00
	Post Test	34,25			
Hypnotherapy	Pre Test	44,25	8,06	6,64	0,00
	Post Test	36,19			

**Table 2. Paired T-test Sleep Quality Pregnant Women Third Trimester In Prenatal Gentle Yoga Dan Hypnotherapy Group**

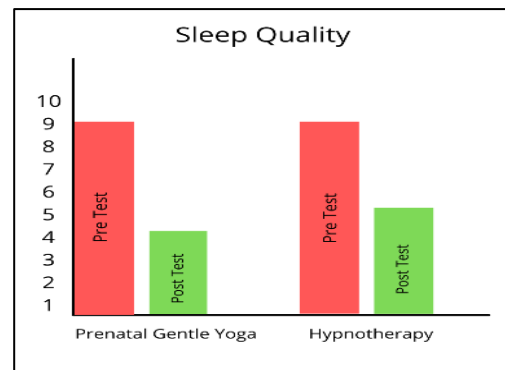
Groups	Variable	Mean	Mean Difference	SD	p value
Prenatal gentle yoga	Pre Test	9,94	5,06	2,02	0,00
	Post Test	4,88			
Hypnotherapy	Pre Test	9,94	4,69	1,85	0,00
	Post Test	5,25			

**Table 3. Independent T-test Anxiety Levels and Sleep Quality Pregnant Women Third Trimester In Prenatal Gentle Yoga Dan Hypnotherapy Group**

Variable	Mean	p value	Mean Difference (CI 95%)
<i>Anxiety Levels</i>			
- Prenatal gentle yoga	34,25	0,40	-2,25 (-7,65 – 3,15)
- Hypnotherapy	36,50		
<i>Sleep Quality</i>			
- Prenatal gentle yoga	4,88	0,64	-0,38(-2,00 – 1,25)



**Figure 1. Anxiety Levels**



**Figure 2. Sleep Quality**

## Discussion

### Anxiety level in Pregnant Women

The results of analysis are in Table 1 with pre-test score of anxiety level in prenatal gentle yoga group of 48.51 and post-test score of 34.25. In the hypnotherapy group, pre-test score was 44.25 and post-test score was 36.19.

This shows that the level of anxiety before and after the intervention there is a decrease in anxiety level, as evidenced by the lower the average value of before and after intervention in both groups. Whereas previously respondents had never followed and felt the benefits of prenatal gentle yoga and hypnotherapy.

Pregnant women experience anxiety caused by increase in the hormone progesterone. In addition to making pregnant women feel anxious,

this increase in hormones also causes emotional disturbances and makes pregnant women tired quickly. Another hormone that increases during pregnancy is hormone adrenaline. Hormone adrenaline can cause a dysregulation of the body's biochemistry, causing physical stress to appear in pregnant women such as irritability, anxiety, inability to concentrate, doubt, maybe even want to escape the realities of life (Priharyanti, W, 2018)

These results are in line with research conducted by (Gusti, N., dan Paramitha, A, 2017), Analysis of effect of antenatal yoga on anxiety levels in Q III pregnant women in facing the labor process in the study, the p value was 0.00 smaller than  $\alpha$  0.05, then H0 rejected or hypothesis in this study was accepted, namely that there was an effect of giving antenatal yoga

on the level of anxiety in TW III pregnant women in facing the labor process.

#### Sleep quality in Pregnant Women

Table 2, the results of pre-test analysis of sleep quality in prenatal gentle yoga group of 9.94 and post-test value of 4.88. In hypnotherapy group, pre-test score was 9.94 and post-test score was 5.25. This shows that quality of sleep before and after intervention there is a decrease in average quality of sleep.

This research is in line with results of research conducted by (Safriani, 2017), there was an increase in the results of measuring sleep quality before and after doing yoga exercises and by paying attention to the results of Wilcoxon statistical test which showed a significance value of  $p (0.00)$  which means  $p < 0.05$  or  $H_1$  accepted, which means that there is an effect of yoga exercises on sleep quality of third trimester pregnant women in Plandaan Jombang Public Health Center Work Area.

Prenatal yoga practice has a larger portion of physical exercise than relaxing portion. By relaxing and stretching muscles a person can relieve muscle contraction and experience a relaxed state in the body. It turns out that, physical exercise helps pregnant women reduce their physical complaints, such as back pain, bleg cramps,

and improving sleep quality (Fauziah L . et al, 2016).

Whereas in hypnotherapy, it can affect a person's relaxation due to secretion of hormone melatonin which is influenced by decrease in a person's brain waves down in delta waves. When in delta waves, brain will produce human growth hormone, which is serotonin, which is good for health. When a person reaches delta waves, the pineal gland will change substance serotonin into melatonin which is important to affect sleep quality, so that they feel good while sleeping and regulate the circadian rhythm. (Hidayat, S., dan Mumpuningtias, 2018)

#### Conclusion

Prenatal Gentle Yoga and hypnotherapy have an effect in reducing anxiety levels and improving sleep quality in third trimester pregnant women

#### Suggestion

Pregnant women are expected to be able to exercise regularly like prenatal gentle yoga and hypnotherapy, to reduce complaints during pregnancy such as anxiety and improve sleep quality.

#### Reference

- Fauziah L. et al. (2016). *Efektivitas Latihan Yoga Prenatal Dalam Menurunkan Kecemasan Pada Ibu Primigravida Trimester III*. Padjajaran.
- Gusti, N., dan Paramitha, A. (2017). Pengaruh Yoga Antenatal Terhadap Tingkat Kecemasan Pada Ibu Hamil Trimester III Dalam Menghadapi Proses Persalinan Di Klinik Yayasan Bumi Sehat. *Kesehatan Terpadu 1(1) : 1-5* Issn : 2549 - 8479, 1(1), 1–5.
- Hidayat, S., dan Mumpuningtias. (2018). Terapi Kombinasi Sugesti Dan Dzikir Dalam Peningkatan Kualitas Tidur Pasien Syaifurrahman. *Ilmiah Ilmu Kesehatan, 6(3)*, 219–230.
- Kemenkes, R. (2015). *Profil Kesehatan Indonesia*.
- Kuswandi, L. (2014). *Keajaiban Hypno-birthing*. Pustaka Bunda.
- Notoatmodjo, S. (2012). *Metodologi Penelitian*.
- Nurchaya, A. (2017). *Kualitas Tidur Pada Ibu Hamil Trimester III Sebelum dan Sesudah Dilakukan Senam Hamil di Puskesmas Kedungkandang Kota Malang*. Politeknik Kesehatan Kemenkes Malang.
- Pongsibidang, GS, dan M. A. (2019). Pengaruh Senam Prenatal Yoga terhadap Penurunan Kecemasan Ibu Hamil Trimester III. *MKMI, 15(1)*, 55–62.
- Priharyanti, W, et al. (2018). Pengaruh Prenatal Yoga Terhadap Tingkat Kecemasan Pada Ibu Primigravida Trimester II dan III di Studio Qita Yoga Kecamatan Semarang Selatan Indonesia. *Ejournal Keperawatan, 9(1)*, 25–34. <https://doi.org/11111>
- Rahmitha, N. (2017). *Tingkat Kecemasan Pada Ibu Hamil Primigravida Trimester Ketiga Di Puskesmas Kecamatan Tamalanrea Makassar*. Hasanudin.
- Safriani, I. (2017). *Pengaruh Senam Yoga Terhadap Kualitas Tidur Ibu Hamil Trimester III*. Sekolah Tinggi Ilmu Kesehatan Insan Cendikia Medika.
- Sindhu, P. (2011). *Yoga Untuk Kehamilan*. Qanita.

**THE CORRELATION BETWEEN LEVEL OF ANXIETY DURING COVID-19  
PANDEMIC AND THE INCIDENCE OF PRIMARY DYSMENORRHOEA  
IN FEMALE ADOLESCENTS AT SMAN 1 SINDANG  
INDRAMAYU IN 2020**

Deysi Rizky Al Fharizy, Nurasih, Nina Nirmaya Mariani

Poltekkes Kemenkes Tasikmalaya

*deysirizky.9d@gmail.com*

**Abstract**

Female adolescents who experience anxiety will have an increase in prostaglandin synthesis accompanied by decreased levels of estrogen or progesterone, causing uterine muscle contractions, uterine blood flow, uterine ischemia resulting in dysmenorrhea. The prevalence of dysmenorrhoea varies between 15.8% - 89.5%, with the highest prevalence in adolescents, this shows that adolescents are very vulnerable to anxiety which will lead to the incidence of dysmenorrhoea. This study aims to determine the correlation between the level of anxiety during the Covid-19 pandemic and the incidence of primary dysmenorrhoea in adolescents at SMAN 1 Sindang Indramayu in 2020. Non-experimental research with correlational analytic design with cross sectional approach using primary data of 50 female adolescents who were taken by quota sampling technique. Collecting data using an electronic questionnaire which is analyzed by the Spearman rank test.

In the univariate analysis, 36% of 50 female adolescents had mild anxiety and 72% had mild primary dysmenorrhoea. Bivariate analysis with the Spearman rank statistical test obtained significance or P value = 0.003 <0.05 and a correlation coefficient value of 0.418 and is positive.

There are correlation between the level of anxiety during Covid-19 pandemic and the incidence of primary dysmenorrhoea in female adolescents at SMAN 1 Sindang Indramayu with the strength of the correlation between two variables in the sufficient category and positive, which means that if the variable level of anxiety is high, the primary dysmenorrhoea variable is getting higher.

*Keywords: anxiety, primary dysmenorrhea, female adolescent*

## Introduction

Puberty is a period of transition from children to adults (adolescence) (BKKBN, 2019). Puberty begins at the age of 8-14 years (BKKBN, 2016). The physical changes that occur during puberty are important events, take place quickly and drastically, are irregular and occur in the reproductive system. Hormones begin to be produced and affect the reproductive organs to start the reproductive cycle and with the gradual development of primary sexual characteristics and secondary sexual characteristics, adolescent girls are marked by menarche (first menstruation). (Lubis, 2016). Menstruation is the release of the uterine wall (endometrium) where an unfertilized egg will come out along with the collapse of the thickened uterine wall marked by bleeding and occurs every month except during pregnancy. Menstruation usually occurs at age 11 years and lasts for 5-7 days. Bleeding as much as 50-80 cc / day (changing pads 2-3 times per day), a normal menstrual cycle averages 28 days (21-35 days) (BKKBN, 2016).

During menstruation, complaints or disorders often arise, especially in productive women, especially in adolescents, which often occurs, namely menstrual pain or dysmenorrhoea. (Supriatin, 2014). Dysmenorrhoea is pain during menstruation felt in the lower abdomen or in the miclaelic square area, pain felt before, during and after menstruation. Can be kholik or continuous (Lubis, 2016). The cause of dysmenorrhoea is thought to be due to spasms in the uterine muscles due to poor blood flow. Menstrual disorders occur 24 hours before menstruation comes and 12 hours during menstruation or menstruation, about 50% of women experience menstrual disorders and reach their peak at the age of 17-25 years. Dysmenorrhoea is divided into 2, namely primary dysmenorrhoea (no relationship with gynecologic disorders) and secondary dysmenorrhoea (caused by gynecologic disorders) (Harnani et al., 2015).

Research by dr. Cakir M. et al, found that dysmenorrhoea is a menstrual disorder with a prevalence of 89.5%, followed by menstrual irregularities 31.25%, and an extension of menstrual duration of 5.3% (DEPKES, 2011). In Indonesia, the incidence of dysmenorrhea is quite high, showing that people with dysmenorrhea reach 60-70% of women in Indonesia.

The incidence rate of primary type dysmenorrhoea in Indonesia is 54.89%, while the remaining 45.11% are secondary types (Lail Husnul, 2017). Based on the results of (Narulita, 2012), the incidence of dysmenorrhoea in West Java was quite high, the results showed that 54.9% of women had dysmenorrhoea, consisting of 24.5% having mild dysmenorrhoea, 21.28% having moderate dysmenorrhoea and 9, 36% had severe dysmenorrhea (Rahayu, R., 2019). In a review of other studies, Bieniasz J. et al, found the prevalence of dysmenorrhea varies between 15.8% - 89.5%, with the highest prevalence in adolescents (Depkes RI, 2011).

The prevalence of dysmenorrhoea is quite high in adolescents, the impact of dysmenorrhea is a decrease in daily activities to the use of therapy. The risk factors for dysmenorrhea are not only related to physiological factors but also psychological factors including anxiety (Calis, 2012).

In a study conducted by Supriatina on students of SMP X Bandung in 2014, it showed that almost all students tended to experience anxiety, namely 93.5% which stated dysmenorrhoea, so this study concluded that there was a significant relationship between adolescent anxiety and the incidence of dysmenorrhoea. The results of this study are in line with research conducted by Sukmati and Khairunnisa in 2017 with data on the incidence of dysmenorrhoea in class VII students at SMPN 1 Ciwidey showing a severe level of anxiety (40.3%) and those experiencing dysmenorrhoea (54.2%), in this study there was a significant positive relationship and had a moderate strength correlation between the level of anxiety and the incidence of dysmenorrhoea and showed that the higher the level of anxiety caused dysmenorrhoea in young women.

According to the calculation of disease burden in 2017, several types of mental disorders that are predicted to be experienced by residents in Indonesia include depression, anxiety, schizophrenia, bipolar disorder, behavioral disorders, autism, eating behavior disorders, intellectual disabilities, Attention Deficit Hyperactivity Disorder (ADHD). In a period of three decades (1990-2017), there was a change in the pattern of mental illness, which experienced an increase in DALYs including schizophrenia, bipolar disorder, autism, and eating disorders. Depression and anxiety disorders remain number one and second place respectively in the three decades of the Institute for Health metrics and evaluation (IHME) 2017 (Pusat Data dan Informasi Kementrian Kesehatan RI, 2019). (Pusat Data dan Informasi Kementrian RI, 2019) The results of a study by Michael and Fombon 2005 stated that all the

disorders experienced by adolescence were the greatest anxiety disorders compared to adult anxiety. This shows that at least teenagers are very vulnerable to anxiety (Mardjan, 2016).

Anxiety is worry, fear for which it is not clear. Anxiety or anxiety can be generated by external danger, possibly from within a person, and generally the threat is subtle. Danger from within, arises when there are things that cannot be accepted, for example thoughts, feelings, desires, and impulses (Chrisnawati, 2019).

Anxiety arises as a result of a response to stress or conflict conditions. This is commonplace where a person experiences changes in situations in his life and is required to be able to adapt. Anxiety is very familiar with human life which describes worry, anxiety, fear and a sense of uneasiness which is usually associated with the threat of danger both from within and from outside the individual. Anxiety is a normal symptom in humans and is called pathological if the symptoms persist for a certain period of time and disturb the peace of the individual. Anxiety is very disturbing the homeostasis and individual function, therefore it needs to be eliminated by various means of adjustment (Achmad & Sukohar, 2019).

Ida Rochmawati, M.Sc., Sp.Kj., explained directly in the webinar that: “Talking about anxiety, actually at this time during the COVID-19 pandemic everyone is anxious of all ages, not only teenagers, as well as parents, circles and professions, even now we are experiencing anxiety in congregation. Especially for adolescents, why is it important for us to talk about being anxious because in the future we will face a demographic bonus, and it will be a burden if adolescent anxiety is not managed properly, while these teenagers will become the occupants of the demographic bonus. Mentally and emotionally, the prevalence of mental disorders at the age of more than 15 years is 9.8% and this data is increasing compared to 2013 based on the results of riskesdas. Anxiety in adolescents occurs around 20% of adolescents aged 13-18 years (National Institute of Health-US) and as many as 7-10 adolescents aged 13-17 years say that anxiety and depression are the main problems”. (UGM, F, 2020).

Adolescents who experience anxiety or stress will experience an increase in prostaglandin synthesis accompanied by decreased levels of estrogen or progesterone, then uterine muscle contractions, uterine blood flow, uterine ischemia resulting in menstrual pain or dysmenorrhea (Supriatin, 2014).



A preliminary study conducted by researchers on 21-23 June 2020 using a questionnaire on google form filled out by 12 young women at SMAN 1 Sindang, showed that all had primary dysmenorrhoea (100%), 10 of them had severe dysmenorrhoea (83%) and 2 other girls had moderate dysmenorrhea (17%). These findings indicate a high incidence of dysmenorrhoea in adolescent girls at SMAN 1 Sindang Indramayu. Also obtained from the 12 female teenagers, 2 of them experienced mild anxiety (17%), 2 teenagers moderate anxiety (17%), and 8 other teenagers (66%) did not experience anxiety. Based on this description, anxiety during the COVID-19 pandemic is suspected to be related to the incidence of dysmenorrhea (DPL & Gustaman, n.d.) declared that: “ The Coronavirus pandemic threatens not only physical health, but also mental health of every individual. Not only fear, but the psychological effects it can cause can have serious consequences”.

## Method

This study is a non-experimental study with a correlational analytical research design using a cross-sectional approach, to determine the relationship between anxiety levels during the COVID-19 pandemic and the incidence of primary dysmenorrhoea. This research was conducted at SMAN 1 Sindang Indramayu which was held from May to December 2020. The population in this study were all girls in class XI of the Mathematics and Natural Sciences program at SMAN 1 Sindang, Indramayu Regency, totaling 140 students who had menarche and experienced primary dysmenorrhoea, with a sample of 50 students who met the inclusion and exclusion criteria. The sampling technique in this study used a non-probability sampling technique with quota sampling. Data collection in this study used an electronic questionnaire, the questionnaire was made on google form because many cases were confirmed positive for COVID-19 in Indramayu, during the COVID-19 pandemic, electronic research questionnaires made with google form and giving the questionnaire link to respondents would be more effective and efficient to collect data by minimizing contact with respondents and avoiding large mass gatherings so as to help curb the spread of the virus. The instrument used to measure the value of the independent variable level of anxiety during the COVID-19 pandemic in this study is the Depression Anxiety Stress Scale (DASS). In the dependent variable dysmenorrhoea in adolescent girls, researchers used a dysmenorrhoea questionnaire.

Data analysis includes univariate analysis which aims to describe the characteristics of each research variable, as well as bivariate analysis using the spearman rank test (Dahlan, 2015).

## Results

**Table 1. Frequency Distribution of Female Adolescent by Age at SMAN 1 Sindang Indramayu in 2020**

Characteristics	Frequency	Percentage
15 years old	1	2%
16 years old	35	70%
17 years old	14	28%
Total	50	100%

Based on table 1, it can be seen that the age of female adolescents at SMAN 1 Sindang Indramayu which has the most frequency is 16 years as many as 35 students (70%).

**Table 2. Frequency Distribution of Female Adolescent Based on Menarche Experience at SMAN 1 Sindang Indramayu in 2020**

Characteristics	Frequency	Percentage
Has Not Menarche Yet	0	0%
Has Menarche	50	100%
Total	50	100%

Based on table 2, all 50 female adolescents at SMAN 1 Sindang Indramayu have experienced menarche or have had their first menstruation (100%).

**Table 3. Frequency Distribution of Female Adolescent Based on Anxiety Levels during the Covid-19 Pandemic at SMAN 1 Sindang Indramayu in 2020**

Anxiety Level	Frequency	Percentage
Normal	23	46%
Mild	18	36%
Moderate	8	16%
Severe	1	2%
Panic	0	0
Total	50	100%

Based on table 3, it shows that as many as 23 adolescents at SMAN 1 Sindang Indramayu did not experience anxiety (46%) and the most anxiety levels during the Covid-19 Pandemic were experienced by students with mild anxiety with a frequency of 18 adolescents (36%).

**Table 4. Frequency Distribution of Female Adolescent Based on Primary Dysmenorrhoea Levels at SMAN 1 Sindang Indramayu in 2020**

Primary Dysmenorrhea	Frequency	Percentage
Mild	26	72%
Moderate	18	36%
Severe	6	12%
Total	50	100%

Based on table 4, it can be seen that most of the female adolescents at SMAN 1 Sindang Indramayu have mild dysmenorrhoea with a total of 26 students (72%).

**Table 5. Spearman rank statistical test**

			<i>Correlations</i>	
			Anxiety	Dysmenorrhea
<i>Spea</i>	Anxie	<i>Correlation</i>	1.000	.418**

<i>rman'</i> <i>s rho</i>	<i>Coefficient</i>		
	<i>Sig. (2-tailed)</i>	.	.003
	N	50	50
<i>Dysm</i> <i>enorr</i> <i>hea</i> <i>hea</i>	<i>Correlation</i>	.418**	1.000
	<i>Coefficient</i>		
	<i>Sig. (2-tailed)</i>	.003	.
	N	50	50

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Based on table 5, the results of the spearman rank statistical test obtained significance or P value = 0.003 < 0.05 and a correlation coefficient value of 0.418 and is positive so it can be concluded that there is a relationship between anxiety levels during the Covid-19 pandemic and the incidence of primary dysmenorrhoea in female adolescents at SMAN 1 Sindang Indramayu. The spearman rank correlation coefficient value of 0.418 indicates that the strength of the relationship between these two variables is in the sufficient category and the two variables are unidirectional.

## Discussion

### Anxiety Level

Research conducted on female adolescent at SMAN 1 Sindang Indramayu using the DASS42 questionnaire from the respondents studied, the results showed that 18 female adolescent experienced mild anxiety (36%), then followed by moderate anxiety as many as 8 female adolescent (16%) and severe anxiety experienced by 1 female adolescent (2%). From the results of the questionnaire analysis, female adolescents who experience anxiety are characterized by symptoms that are in accordance with the theory (Zaini, 2019), such as decreased concentration, feelings of worry, sadness, insecurity and confusion, decreased appetite, muscle tension, increased vital signs, trouble sleeping and pain. Then, there are behavioral changes that appear in people who experience anxiety such as decreased concentration, feelings of worry, sadness, insecurity and confusion, decreased appetite, muscle tension, increased vital signs, trouble sleeping and pain. Then, there are behavioral changes that appear in people who experience anxiety such as decreased productivity,

increased alertness and insecurity. Social changes such as lack of initiative, difficulty enjoying daily activities and avoiding social contact.

Based on (Fudyartanta, 2012), anxiety disorders are more easily experienced by someone who is younger than individuals with an older age and women have a higher level of anxiety than men. This is because women are more sensitive to their emotions. Stressor is a demand for adaptation to individuals caused by changes in circumstances in life, the nature of stressors can change suddenly and can affect a person in dealing with anxiety. This is an internal factor that affects anxiety during the Covid-19 pandemic in young women at SMAN 1 Sindang Indramayu.

#### Primary Dysmenorrhea

There are 26 out of 50 girls at SMAN 1 Sindang Indramayu experiencing mild dysmenorrhoea (72%), the remaining 18 girls (36%) and 6 girls (12%) respectively experienced moderate and severe dysmenorrhoea respectively. The results of the dysmenorrhoea questionnaire analysis showed that 26 young women with mild dysmenorrhoea were still able to carry out daily activities and were still able to concentrate even though they were painful, this is in accordance with (Manuaba, 2010), namely *Mild* dysmenorrhea is if the pain lasts for a while and only requires a short break and can continue daily activities so there is no need to use drugs, mild dysmenorrhea is accompanied by signs and symptoms such as being able to do activities and be able to concentrate on learning. During the Covid-19 pandemic, female adolescents must adapt to changing conditions in life that can affect a person in dealing with anxiety. Anxiety or stress will result in an increase in prostaglandin synthesis accompanied by a decrease in estrogen or progesterone levels, then uterine muscle contractions, uterine blood flow, uterine ischemia resulting in menstrual pain or dysmenorrhea (Supriatin, 2014).

The relationship between the level of anxiety during the Covid-19 pandemic with the incidence of primary dysmenorrhoea in young women at SMAN 1 Sindang Indramayu in 2020, based on table 5, the spearman rank statistical test obtained a significance result or P value =  $0.003 < 0.05$  and a correlation coefficient value of 0.418 and positive value, so it can be concluded that there is a relationship between the level of anxiety during the Covid-19 pandemic and the incidence of primary dysmenorrhoea in female adolescent at SMAN 1 Sindang Indramayu. The spearman rank correlation coefficient value of 0.418 indicates that

the strength of the relationship between these two variables is in the sufficient category and the two variables are unidirectional. The results of this study are in line with the research conducted by Supriatina on students of SMP X Bandung in 2014 which showed that almost all students tended to experience anxiety, namely 93.5% who stated dysmenorrhoea, So this study concludes that there is a significant relationship between adolescent anxiety and the incidence of dysmenorrhoea. Supported by the results of research conducted by Sukmati and Khairunnisa in 2017 with data on the incidence of dysmenorrhoea in class VII students at SMPN 1 Ciwidey showing a severe level of anxiety (40.3%) and those experiencing dysmenorrhoea (54.2%) in this study. There is a significant positive relationship and has a moderate strength correlation between the level of anxiety and the incidence of dysmenorrhoea and shows that the higher the level of anxiety, the higher the incidence of dysmenorrhoea in female adolescents. Anxiety according to (Wuryaningsih, Emi Wuri., 2018) is a general or universal response experienced by individuals when facing stressors. Anxiety will be a problem if it interferes with adaptive behavior, causes physical symptoms and becomes severe for the individual (Wuryaningsih, Emi Wuri., 2018). Anxiety or stress will result in an increase in prostaglandin synthesis accompanied by a decrease in estrogen or progesterone levels, then uterine muscle contractions, uterine blood flow, uterine ischemia resulting in menstrual pain or dysmenorrhoea (Supriatin, 2014).

According to (Sinaga et al., 2017), primary dysmenorrhoea is caused by natural chemicals produced by cells lining the uterine wall called prostaglandins. Prostaglandins will stimulate the smooth muscles of the uterine wall to contract. The higher the prostaglandin level, the stronger the contractions. Other pain mechanisms are caused by prostaglandins (PGE2) and other hormones that make the painful sensory nerves in the uterus hypersensitive to the action of bradykinin and other physical and chemical pain stimuli (Reeder et al., 2013).

## **Conclusion**

The majority of female adolescents at SMAN 1 Sindang Indramayu experience a mild level of anxiety.

The majority of female adolescents at SMAN 1 Sindang Indramayu have mild levels of primary dysmenorrhoea.

There is a relationship between the level of anxiety during the Covid-19 pandemic and the incidence of primary dysmenorrhoea in female adolescent at SMAN 1 Sindang Indramayu, with the strength of the relationship between variables in the sufficient category and is unidirectional or positive, which means that if the variable level of anxiety is high, then the primary dysmenorrhoea variable is getting higher too.

### **Suggestions**

The results of this study provide information and increase understanding and insight into the level of anxiety that occurred during the Covid-19 pandemic with the incidence of primary dysmenorrhoea in female adolescent, so it is suggested that female adolescent can be calmer in facing the Covid-19 pandemic, such as filtering the information obtained, so as not to cause anxiety, and divert fear or worry to positive things by adhering to health protocols every time you do activities.

Becoming one of the references for research sites in particular, in providing education to female adolescent about mental health through the Usaha Kesehatan Sekolah (UKS) program such as health education or provision of counseling, information and education, collaborating across sectors, namely Puskesmas with reproductive health programs related to primary dysmenorrhoea to improve the ability to live healthy and the health status of students. Further researchers should screen for primary dysmenorrhoea with clinical trials and should expand the coverage of research respondents and improve research results by controlling for other factors that influence this study by adding research variables such as knowledge, education level and age, primary dysmenorrhea in female adolescent in high school, in the presence of other variables and a larger age range, better research results will be obtained.

## References

- Achmad, F. R., & Sukohar, A. (2019). Perbedaan Derajat Kecemasan Antara Mahasiswa Tahap Akademik Tingkat Awal dengan Tingkat Akhir di Fakultas Kedokteran Universitas Lampung. *Jurnal Medula*, 9(1).
- BKKBN. (2016). *Materi Promosi dan Konseling Kesehatan Reproduksi*.
- BKKBN. (2019). *Membantu Remaja Merencanakan Masa depannya*.
- Calis. (2012). *Prevalensi Dismenorea Cukup Tinggi Pada Remaja*. Salemba Medika.
- Chrisnawati, G. & T. A. (2019). Aplikasi Pengukuran Tingkat Kecemasan Berdasarkan Skala Hars Berbasis Android. *Jurnal Teknik Komputer*, 5(2), 227–282.
- Dahlan, S. (2015). *Statistik Untuk Kedokteran dan Kesehatan*. Epidemiologi Indonesia.
- DEPKES, R. I. (2011). *Kesehatan Remaja Problem dan Solusinya*. Salemba Medika.
- DPL, N., & Gustaman, F. A. (n.d.). *Kompilasi Artikel Kkn Unnes Bersama Lawan Covid-19 Kecamatan Lasem*.
- Fudyartanta, K. (2012). Psikologi kepribadian. *Yogyakarta: Pustaka Pelajar*.
- Harnani, Y., Marlina, H., & Kursani, E. (2015). *Teori kesehatan reproduksi*. Deepublish.
- Lail Husnul. (2017). Hubungan Status Gizi, Usia Menarche dengan Dismenore pada Remaja Putri Di SMK K Tahun Remaja dengan Kejadian Dismenore pada Siswi SMP X Bandung. *Ilmu Keperawatan, II(I)*, 57–61.
- Lubis, N. L. (2016). *Psikologi Kespro. Wanita dan Perkembangan Reproduksi: Ditinjau dari Aspek Fisik dan Psikologinya*. Kencana.
- Manuaba. (2010). *Pengantar Kuliah Obstetri*. EGC.
- Mardjan, H. (2016). *Pengaruh kecemasan pada kehamilan primipara remaja*. Abrori Institute.
- Narulita, A. E., & NIM010810113. (2012). *Hubungan Lama Menstruasi Dan Siklus Menstruasi Dengan Perubahan Kadar Hemoglobin Siswi Kelas Ii Smk Ypm 11 Wonoayu Sidoarjo*.
- Rahayu, R., Patimah, S., Rohmatin, E., Kunci, K., & Penelitian, B. (2019). Pengaruh Minuman Jahe Merah Terhadap Penurunan Skala Nyeri Dismenorea Primer Pada Siswi Kelas VIII Di SMPN 10 Tasikmalaya Tahun 2018. *Midwifery Journal*, 5(02), 26–35.
- Reeder, S. J., Leonie, L. M., & Deborah, K. G. (2013). *Keperawatan Maternitas Kesehatan Wanita, Bayi, dan Keluarga Volume 2 Edisi 18*. Jakarta: EGC.
- RI, P. D. dan I. K. K. (2019). *Situasi Kesehatan Jiwa di Indonesia*. <https://pusdatin.kemkes.go.id/resources/download/pusdatin/infodatin/InfoDatin-Kesehatan-Jiwa.pdf>.
- Sinaga, E., Saribanon, N., Sa'adah, N.,



- Salamah, U., Murti, Y. A., & Trisnamiati, A. (2017). *Buku: Manajemen Kesehatan Menstruasi*. covid-19-rabu-15-april-2020-pukul-13-00-15-00/.
- Supriatin, E. (2014). *Hubungan Kecemasan Remaja Dengan Kejadian Dismenorea Pada Siswi Smp X Bandung*. *Jurnal Keperawatan BSI*, 2(1).
- UGM, F, -K. (2020). *Reportase Webinar Mengelola Kecemasan Pada Remaja Selama Masa Pandemi COVID-19*. <https://manajemencovid-dirs.net/index.php/2020/04/16/reportase-webinar-mengelola-kecemasan-pada-remaja-selama-masa-pandemi-covid-19-rabu-15-april-2020-pukul-13-00-15-00/>.
- Wuryaningsih, Emi Wuri., et al. (2018). *Buku Ajar Keperawatan Kesehatan Jiwa (1st ed.)*. UPT Percetakan & Penerbitan Universitas Jember.
- Zaini, M. (2019). *Asuhan Keperawatan Jiwa Masalah Psikososial Pelayanan Klinis dan Komunitas*. Deepublish.
- Saribanon, Nonon, et al. (2017). *Manajemen Kesehatan Menstruasi*. Universitas Nasional.
- Supriatin, E. (2014). Hubungan Kecemasan Remaja dengan Kejadian Dismenorea pada Siswi SMP X Bandung. *Ilmu Keperawatan*, II(I), 57–61.
- UGM, F.-K. (2020). *Reportase Webinar Mengelola Kecemasan Pada Remaja Selama Masa Pandemi COVID-19*. <https://manajemencovid-dirs.net/index.php/2020/04/16/reportase-webinar-mengelola-kecemasan-pada-remaja-selama-masa-pandemi->

## NUTRITIONAL STATUS OF TODDLERS IN NAGARAKEMBANG VILLAGE, CINGAMBUL DISTRICT, MAJALENGKA REGENCY

Ai Nurasih, Merisa Laora Heryanto, Ila Ayatilah

STIKes Kuningan

*ainurasiah@gmail.com*

### Abstract

The coverage of visits to the integrated service post for boys and girls in the village of Nagarakembang in January 2019 was 26.82%, in February it was 42.54%, in March 81.16%. The purpose of this study was to describe the nutritional status of children under five based on the frequency of visits to integrated service posts in Nagarakembang Village, Cingambul District, Majalengka Regency. This type of research is descriptive with a cross sectional design. The sampling technique is total sampling with a sample of 85 toddlers aged 25-60 months. The results showed that the toddlers who often visited the integrated service posts were 47.1%. The nutritional status of children under five was mostly normal, which was 82.4%. Respondents who frequently visited the integrated service posts were mostly with normal nutritional status, namely 31 toddlers. Conclusion: There are as many toddlers who do not visit the integrated service posts as children who visit the integrated service posts and on average have nutritional status. Suggestions for mothers of toddlers must be active in visiting integrated service posts so that they have knowledge about additional food for toddlers.

*Keywords: Integrated Service Posts; Nutritional Status*

### Introduction

The most important period for a toddler, the first two years of life is called the golden period. This period is a critical point for the growth and development of toddlers. Nutrient needs cannot be met, then nutritional disorders can occur at that time and will have an impact on the future

(Placeholder1) Nutritional status is a condition in which the human body can have an impact on food consumption and use of nutrients. Nutritional status is divided into 2 factors, namely direct factors and indirect factors. Food intake and infectious diseases are factors that directly cause nutritional status, while mother's

knowledge about nutrition, weaning age, low birth weight (LBW), feeding too early, family size, child care patterns, environmental health, and health services are factors that cause status indirectly (Wahyuni, 2009).

The results of (Riskedas, 2013) showed that nationally, the coverage of weighing children under five as a means of monitoring the nutritional status of the health centers was 65.7% (Riskedas, 2013). The frequency of visits by toddlers to integrated service posts decreases with increasing age of children. As an illustration, the proportion of children 6-11 months who are weighed at the integrated service posts is 91.3%, for children 12-23 months it drops to 83.6%, and at 24-35 months it drops to 73.3%.

Baby visits are aimed at increasing babies' access to basic health services, knowing as early as possible if there are abnormalities in babies so that they get help quickly, health care and disease prevention through growth monitoring, immunization, and improving the quality of life of babies by stimulating growth and development so that children's rights get health is fulfilled. The health of babies and toddlers must always be monitored to ensure that their health is always in optimal condition. Infant

health services are one of several indicators that can be a measure of the success of efforts to improve the health of infants and toddlers. Health services for infants are aimed at babies aged 29 days to 11 months by providing health services in accordance with standards by health workers who have clinical health competence (doctors, midwives, and nurses) at least four times, namely at the age of 29 days – 2 months, ages 3–5 months, ages 6–8 months and ages 9–12 months. This service consists of weighing, giving basic immunizations (BCG, DPT / HB1-3, Polio 1-4, DPT HB 123 and Measles), Stimulation of Early Development Intervention Detection infants, giving vitamin A to infants (6-11 months), counseling on infant health care as well as counseling on exclusive breastfeeding and complementary feeding. Coverage of infant health services in 2017 decreased by 3.5%, coverage in 2016 was 102% and in 2017 it was 98.5%. Based on the districts/cities the highest coverage of infant health services is Indramayu Regency, Cirebon Regency, Karawang Regency, Subang Regency, West Bandung Regency, Majalengka Regency, Kuningan Regency, Sumedang Regency, Banjar City, Bekasi Regency, Ciamis Regency, Tasikmalaya Regency, and Regency

Sukabumi whose coverage reaches 100% (Kementerian Kesehatan Republik Indonesia, 2016).

Health service factors such as integrated service posts also affect the nutritional status of toddlers such as activeness in integrated service post visits kunjungan. One of the goals of the integrated service post is to monitor the improvement of the nutritional status of the community, especially children under five and pregnant women. The low understanding of families and communities about the benefits of integrated service posts will result in not optimal monitoring of the growth of toddler (Sihotang & Rahma, 2017). The activeness of mothers in each integrated service post activity will certainly affect the nutritional status of toddlers. The coverage of children under five who are weighed describes the level of community motivation/participation in monitoring the growth and development as well as the health of children under five at the integrated service post. The coverage of the visit, the national percentage of children under five who are weighed at the integrated service post is 80% (Riskedas, 2013)

The success of the integrated service post can be seen from the SKDN coverage

where (S) is the total number of toddlers in the integrated service post area, (K) the number of toddlers who have KMS, (D) toddlers who are weighed, (N) toddlers whose weight has increased. Monitoring the growth of children under five in an area of  $K / S$  program coverage  $> 80\%$  is said to be good  $<80\%$  is less,  $D / S$  participation  $> 80\%$  is said to be good  $<80\%$  is less,  $N / D$  is said to be good  $<80\%$  is to be good  $<80\%$  is less (Legi et al., 2015)

Integrated service posts are a form of Community-Based Health Efforts which are managed from, by and for the community with technical support from health workers whose targets are the entire community. Weighing toddlers at the integrated service post is a government strategy set at the Ministry of Health to find out early about growth disorders in toddlers so that appropriate action can be taken immediately (Mubarak, 2012).

Some of the obstacles faced related to the visit of toddlers to integrated service posts, one of which is the level of family understanding of the benefits of integrated service posts. This will affect the activeness of mothers in visiting each integrated service post activity. Because one of the goals of the integrated service post is to monitor the improvement of nutritional

status, especially in toddlers, in order to achieve this, mothers who have children under five should be active in integrated service post activities so that the nutritional status of their toddlers is monitored (Sukrayasa et al., 2018).

Some of the impacts experienced by toddlers, when mothers of toddlers are not active in integrated service post activities include not getting health education about normal toddler growth, not getting vitamin A for eye health, toddlers and mothers of toddlers not getting counseling about additional food. Mothers who often participate in integrated service post activities can monitor the growth and development of their toddlers (Kementerian & Kesehatan, 2018)

Based on observations made by researchers in January-March 2019 at the Melati integrated service post, the coverage of visits (N) was obtained. In January,

males and females were 26.82%, in February males and females were 42.54%, in March male and female 81.16%.

Based on this background, the authors are interested in examining the description of the nutritional status of children based on the frequency of visits to integrated service posts in Nagarakembang Village, Cingambul District, Majalengka Regency.

### Method

This type of research uses a descriptive type of research. The design used in this research is cross sectional. The population in this study were all toddlers aged 25-60 months who visited the integrated service post for toddlers, Nagarakembang Village from April to June totaling 85 toddlers. The sampling technique used is total sampling.

## Results

**Table 1 Respondents Frequency Distribution**

Variable	Frequency (n)	Percentage (%)
<b>Integrated Service Post Visits</b>		
Often	40	47.1
Not Often	45	52.9
<b>Nutrition Status</b>		
Less	7	8.2
Normal	70	82.4
Over	8	9.4

Based on table 1, it is known that most of the respondents who did not frequently visit the integrated service posts

were 52.9% of respondents and the majority of respondents with normal nutritional status were 82.4% of respondents

**Table 2. xxxxxxxxxxxx**

Integrated Service Post Visits	Nutrition Status						Total	
	Less		Normal		Over		N	%
	F	%	F	%	F	%		
Often	4	10	31	77.5	5	12.5	40	100
Not Often	3	6.6	39	86	3	6.6	45	100

Based on table 2, it is known that most of the respondents with an infrequent visit frequency were as many as 45% of respondents.

activeness variables in integrated service post activities with the nutritional status of their toddlers (Octaviani et al., 2008).

**Discussion**

The results of the research in the village of Nagarakembang showed that it was known that most of the respondents did not often visit the integrated service post, as many as 52.9% of respondents. Mothers under five do not often visit integrated service posts because mothers under five are less motivated than cadres, if mothers under five visit integrated service posts, mothers under five can get knowledge about additional food, and their development and growth. This is in line with research, which shows that there is a significant relationship between family

Families who are not active in integrated service post activities have a 6,857 times greater risk of being affected by the nutritional status of KEP compared to families who are not active. This is supported by research by Cut (Nazri et al., 2015) which states that monitoring the nutritional status of children under five is the main reason mothers participate in integrated service posts (Nazri et al., 2015). Mothers who are satisfied with the integrated postal service are more likely to attend than those who are dissatisfied. Respondents with an intention to participate in an integrated service post every month are more likely to attend than those who do not intend to attend every month. Based on

the results of this study indicate that the reason for the activeness of mothers in integrated service post visits is to monitor nutritional status so that with routine monitoring it is hoped that toddlers will have good nutritional status and early detection of poor nutritional status can be carried out.

According to (Yulifah & Yuswanto, 2014), factors that affect compliance with integrated service post visits, one of which is education. Parents' education is an important factor in children's development. With a good education, parents can receive all information from outside, especially about good parenting, how to maintain their children's health, education, and so on (Yulifah & Yuswanto, 2014). This is also supported by research by (Reihana & Duarsa, 2012) that there is a relationship between maternal education and maternal participation in weighing toddlers to integrated service posts (Reihana & Duarsa, 2012)

Compliance with coming to the integrated service post is influenced by several factors, according to research results (Anwar et al., 2010) stated that not visiting the integrated service post every month has various reasons. The main reason given by mothers for high participation is that their

children are still asleep and they are busy. So, they cannot bring their children to the integrated service post. Only a small number of mothers have reasons that their children have received complete immunizations, so they do not feel like they come to the integrated service post every month (Anwar et al., 2010). There are various reasons that can be seen, it is necessary to have an understanding of integrated service posts and their benefits so that mothers can be more motivated to bring their children to integrated service posts.

Looking at the results of the research on nutritional status, it is known that most of the respondents with normal nutritional status are 82.4% of respondents, and some children under five have low nutritional status, this is because the mothers under five have less knowledge about nutritious food because they are less active in the integrated service posts. This nutritional status is important because it is a risk factor for illness and death. Good nutritional status for a person will contribute to his health and also to the ability to recover. The nutritional status of the community can be known through an assessment of their food consumption based on quantitative and qualitative data

(Harjatmo et al., 2017). Nutritional status indicators based on the BMI/U index can be used to identify thin and fat. The problem of thin and fat at an early age can result in the risk of various degenerative diseases in adulthood (Simbolon, 2019).

According to (Soekirman et al., 2006), a family with a small income and a large number of family members will further aggravate the nutritional status of children under five (Soekirman et al., 2006). In a developing country such as Indonesia, where the economic level of the people is mostly the lower middle class, this can have an impact on meeting food needs, especially nutritious food. (Simbolon, 2019) states that daily food intake that contains nutrients in the type and amount according to the body's needs by paying attention to the principles of food diversity or variation, physical activity, cleanliness and ideal body weight greatly affects the nutritional status of toddlers, in addition to community behavior. related to health maintenance, for example eating nutritious foods (Simbolon, 2019).

Looking at the results of the study, it is known that most of the respondents do not often make visits to the integrated service post, which is as much as 45%. In the routine activities of the integrated

service post, there are also counseling services, useful counseling for the community or mothers to increase knowledge about health and nutrition, so that when applied in daily life, a healthy lifestyle will be realized for their families. The higher the protein energy intake in toddlers, the better their nutritional status so that physical and brain growth can work optimally.

The effect of an increase in income will have an impact on improving nutritional status and family conditions, generally when income increases, the amount and type of food tends to improve as well. The level of income will determine what type of food will be purchased with this money, the higher the income, the higher the percentage used to buy fruit, vegetables and various other types of food.

According to (Sulistyoningsih, 2015), the direct cause of malnutrition in toddlers is the presence of infectious diseases and food consumption that is not sufficient for their needs, while the indirect causative factor is a supporting factor for the emergence of malnutrition problems in children under five is the mother's lack of knowledge about health, socioeconomic ( purchasing power) is still low, food availability at the family level is not



sufficient, consumption patterns are not good, and health service facilities are still difficult to reach (Sulistyoningsih, 2015). This is also in accordance with the theory put forward by (Supariasa, 2017) which states that there are two causes that cause malnutrition, one of which is the indirect factor, namely health maintenance (Supariasa, 2017).

The results of this study also show that mothers of toddlers do not often visit the integrated service post because mothers of toddlers are less motivated from cadres, if mothers of toddlers visit the integrated service post, mothers of toddlers can get knowledge about additional food, and their development and growth can also be monitored. Most of the toddlers in this Nagarakembang village do not gain weight, it is possible that mothers of toddlers lack knowledge about nutritious food because mothers of toddlers are less active in visiting integrated service posts.

### Conclusion

Most of the respondents who frequently visited the integrated service post mostly had normal nutritional status as many as 31 toddlers, 36%.

### Suggestion

It is recommended that mothers who have active toddlers follow routine integrated service post activities because they are important and beneficial for the growth and health of toddlers.

### Reference

- Anwar, F., Khomsan, A., Sukandar, D., Riyadi, H., & Mudjajanto, E. S. (2010). High participation in the Posyandu nutrition program improved children nutritional status. *Nutrition Research and Practice*, 4(3), 208.
- Dasar, R. K. (2013). Kementerian Kesehatan Republik Indonesia. *Kementerian Kesehatan Republik Indonesia*, 87–90.
- Harjatmo, T. P., Par'i, H. M., & Wiyono, S. (2017). Penilaian status gizi. *Kementerian Kesehatan Republik Indonesia. Jakarta*.
- Kementerian, & Kesehatan, R. . (n.d.). *Buku Saku Pemantauan Status Gizi Tahun 2017*.
- Kementerian Kesehatan Republik Indonesia. (2016). *Profil Kesehatan Indonesia 2016. In Profil Kesehatan Provinsi Bali*. <http://www.depkes.go.id/resources/download/pusdatin/profil-kesehatan-indonesia/Profil-Kesehatan-Indonesia-2016.pdf>
- Legi, N. N., Rumagit, F., Montol, A. B., & Lule, R. (2015). Faktor yang berhubungan dengan keaktifan kader posyandu di wilayah kerja Puskesmas Ranotana Weru. *Jurnal GIZIDO*, 7(2), 429–436.

- Mubarak, I. W. (2012). *Ilmu Kesehatan Masyarakat*. Salemba Medika.
- Nazri, C., Yamazaki, C., Kameo, S., Herawati, D. M. D., Sekarwana, N., Raksanagara, A., & Koyama, H. (2015). Factors influencing mother's participation in Posyandu for improving nutritional status of children under-five in Aceh Utara district, Aceh province, Indonesia. *BMC Public Health*, 16(1), 1–9.
- Reihana, R., & Duarsa, A. B. S. (2012). Faktor-faktor yang berhubungan dengan partisipasi ibu untuk menimbang balita ke posyandu. *Jurnal Kedokteran Yarsi*, 20(3), 143–157.
- Sihotang, H. M., & Rahma, N. (2017). Faktor Penyebab Penurunan Kunjungan Bayi di Posyandu Puskesmas Langsung Pekanbaru Tahun 2016. *Jurnal Endurance: Kajian Ilmiah Problema Kesehatan*, 2(2), 168–177.
- Simbolon, D. (2019). Pencegahan Stunting Melalui Intervensi Gizi Spesifik Pada Ibu Menyusui Anak Usia 0-24 Bulan. *Surabaya: Media Sahabat Cendekia*.
- Soekirman, S. S. W., Djoko, S., & Soenardi, T. M. (2006). *Hidup Sehat Gizi Seimbang dalam Siklus Kehidupan Manusia*. Jakarta: PT Primamedia Pustaka.
- Sukrayasa, I. W., Martiningsih, I. E., & Agung, I. G. A. A. (2018). Strategi Pemberdayaan Kader Posyandu untuk Meningkatkan Program Gizi di Kecamatan Denpasar Utara. *Jurnal Ilmu Gizi: Journal of Nutrition Science*, 7(2), 42–48.
- Sulistyoningsih, H. (2015). *Gizi Untuk Kesehatan Ibu dan Anak*. Graha Ilmu.
- Supriasa, I. D. N. (2017). *Ilmu Gizi Teori Dan Aplikasi*. Buku Kedokteran EGC Indonesia.
- Wahyuni, I. S. (2009). Hubungan Tingkat Pengetahuan Ibu tentang Gizi dengan Status Gizi Anak Balita di Desa Ngeplak Kecamatan Karangpandan Kabupaten Karanganyar. *Universitas Sebelas Maret*.
- Yulifah, R., & Yuswanto, T. J. A. (2014). *Asuhan Kebidanan Komunitas Edisi 2*. Jakarta: Salemba Medika.

**THE EFFECT OF HEALTH EDUCATION ON PREGNANT WOMEN'S  
KNOWLEDGE LEVEL ABOUT COVID-19 IN MAIN CLINIC CIDENG  
MEDICAL CENTER REGENCY OF CIREBON IN 2020**

Fadillah Mawaddah, Dyah Widiyastuti

Poltekkes Kemenkes Tasikmalaya

*fadillahmwd@gmail.com*

**Abstract**

Health education is an effort to convey the health message that is expected that people, groups, or individuals can gain knowledge about better health so that it can affect behavior. Video media is a health education tool used to facilitate the reception of health messages that rely on the senses of vision and hearing. Pregnant women are at considerable risk of being infected with COVID-19. There is still a low knowledge of pregnant women about COVID-19 at Cideng Medical Center Main Clinic by 40%. The purpose of this study is to analyze the differences in pregnant women's knowledge about COVID-19 before and after the provision of health education about COVID-19 at the Main Clinic of Cideng Medical Center Cirebon District in 2020. Research design using a quasi-experimental design with one group design pre test-post test without control design. The sampling technique used is accidental sampling. The population in this study was pregnant women, with a sample of 30 respondents. The results of the analysis with the Wilcoxon T-Test test in pregnant women before and after obtained a p-value of 0.000 from the results of the study obtained a value of  $p < 0.05$  so that the hypothesis is accepted. The average increase in the knowledge level score of pregnant women between before and after being given health education was 2.13. There is an influence of health education on the level of knowledge of pregnant women about COVID-19 at the Main Clinic of Cideng Medical Center Cirebon Regency in 2020.

*Keywords: COVID-19; Pregnant Women; Video Media; Health Education; knowledge*

---

**Introduction**

China reported on December 2019 an unknown case of pneumonia. Initially, the case was reported in

Wuhan, Hubei Province. In three days, the number of patients with such cases numbered 44 people and continues to grow to this day numbered thousands of

cases. Coronavirus disease 2019 (COVID-19) is a disease that is spreading almost all over the world today, caused by severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2). Originally named coronavirus (2019-nCoV) then on February 11, 2020, the World Health Organization (WHO) named the new virus Severe Acute Respiratory Syndrome coronavirus-2 (SARS-CoV-2) and named the disease coronavirus disease 2019 (COVID-19) (Simanjuntak 2020).

As of January 10, 2021, data from WHO obtained 88,383,771 confirmed cases spread across 223 countries with 1,919,126 deaths (who.int). Data in Indonesia as of January 10, 2021, shows 828,026 confirmed cases spread across 34 provinces with 22,129 deaths. Indonesia is the 65th country to confirm COVID-19 (Pusicov Indonesia, 2021). Data in West Java until January 10, 2021, shows 97,570 confirmed cases spread across 27 cities/districts in West Java with the number of deaths 1,140 cases

([pikobar.jabarprov.go.id](http://pikobar.jabarprov.go.id)). Meanwhile, data in Cirebon until January 10, 2021, showed 560 cases and 72 deaths (Pusicov Cirebon Regency, 2021).

Common signs and symptoms of COVID-19 infection can be non-symptomatic, mild, moderate, to severe symptoms. The main clinical symptoms that appear are fever (temperature > 38°C), cough, and difficulty breathing. The average incubation period is 5-6 days with the longest incubation period being 14 days. In severe cases of COVID-19, it can cause pneumonia, acute respiratory syndrome, kidney failure, and even death. Until now, there is still no evidence that pregnant women are more at risk of COVID-19 than the general population. However, due to changes in the body and immunity, it is believed that pregnant women have a higher risk for severe diseases, morbidity, and mortality compared to the general population if exposed to COVID-19 infection (WHO, 2020).

On January 30, 2020 WHO has designated COVID-19 as a Public Health Emergency that is troubling the

world, then on March 11, 2020 COVID-19 was designated as a pandemic, which means COVID-19 that has spread to several countries or continents, and infected many people. It is also inseparable in the pregnant population. Therefore, pregnant women should be aware of the risk of contracting COVID-19 (Simanjuntak, 2020).

The spread of the COVID-19 pandemic in Indonesia has increased every day and by the end of December 2020 almost 10,000,000 positively confirmed cases have been established. One vulnerable group is pregnant women. Quoted from several sources that more and more pregnant women in Indonesia are positive of COVID-19. Cases of pregnant women in Indonesia infected with COVID-19 include on April 8, 2020 in Bukittinggi, West Sumatra, 1 8-month pregnant woman died with her baby ([liputan6.com](http://liputan6.com)). On April 24, 2020 in Bali, a 7-month pregnant woman died in the womb ([bali.tribunnews.com](http://bali.tribunnews.com)). On June 20, 2020 in Batu City, Surabaya,

20 pregnant women were infected with Corona virus. The 50th patient is an 8-month pregnant woman who died with her baby ([madura.tribunnews.com](http://madura.tribunnews.com)).

On September 10, 2020, Yogyakarta's COVID-19 Handling Task Force said there were 13 cases of pregnant women being infected. On September 3, 2020, the Surabaya City Government obtained data on 123 COVID 19 positive pregnant women but as many as 90 pregnant women have recovered and as many as 33 people are still undergoing treatment. On September 1, 2020, positive cases of COVID-19 in Gresik are increasing. There are already 20 pregnant women who are COVID-19 positive. On September 3, 2020, there were 3 pregnant women who were positive for COVID-19 in Lampung ([popmama.com](http://popmama.com)).

To date, knowledge of COVID-19 infections in relation to pregnancy and fetus is still limited and there have been no specific recommendations for the treatment of pregnant women with

COVID-19. Fetal side effects in the form of preterm childbirth are also reported in pregnant women with COVID-19 infection (**WHO, 2020**).

Some research shows that pregnant women have a considerable risk of being infected with COVID-19, including mild symptoms. *The Center for Disease Control and Prevention* (CDC) notes that pregnant women are more susceptible to all types of respiratory infections, such as flu. This is partly because pregnancy changes the immune system in addition to affecting the lungs and heart. One of the researches on this subject was conducted by *the Priority Study* of the University of California San Francisco. The study involved about 30 pregnant women in China who were exposed to COVID-19. Another study published by *the American Journal of Obstetrics & Gynecology* in March 2020 suggests that there is no concrete evidence to suggest that pregnant women are more susceptible to COVID-19 than others (**tirto.id**).

Health education is an activity or effort to convey a health message. The existence of this message is expected that the community, group or individual can gain knowledge about better health so that it can affect behavior (Notoatmodjo, 2010). While the media is a health education tool used to facilitate the reception of health messages for the community (**Fitriani, Sinta, 2011**). Health education cannot be released from the media because through the media the messages delivered can be more interesting and easy to understand, so that the target can study the message so that until it decides to adopt it into positive behavior (Notoatmodjo, 2010b).

Basically there are three kinds of aids that support health education in gaining knowledge, namely: *visual aids*, hearing aid *and* hearing aids (*Audio Visual Aids*) (**Fitriani, Sinta, 2011**).

Video media is a medium that uses the sense of hearing and vision (*audio visual aids*) to help convey health messages. Video media falls into the category of *audio-visual* teaching

materials or listening materials. The advantages of video media is that it is well known that the public includes five senses, easier to understand, can be played over and over again, more interesting because there are sounds and moving images (Notoatmodjo, 2010a).

The media or tools are prepared based on the principle that the more five senses used to receive something, the more and more clearly the understanding or knowledge obtained (Fitriani, Sinta, 2011). Knowledge is the result of knowing, and this happens after people sense a particular object. Sensing of a human sense of five senses, namely the sense of vision, smell, taste and raba (Notoatmodjo 2010a). Good knowledge about COVID-19 is expected that mothers will have a good attitude to protect themselves by implementing a clean lifestyle, even later after the COVID-19 case has passed. As well as equipping yourself with the latest knowledge and information related to COVID-19 that is accurate and reliable (Santi, Dwi, 2020).

Based on research conducted by (Kurniawati, 2012) on *Differences in Media Leaflets and Videos On Maternal Knowledge On How to Overcome Complaints During Pregnancy* shows the results that there is a difference between *media leaflets* and videos to knowledge. The *mean* value in the video group (9.40) is higher than the *leaflet* group (5.80), so it can be concluded that the video media gives better results. Other research shows that there is an increase in knowledge and attitude after being given health education with *audiovisual* media seen at a *mean* knowledge value of  $15.8 \pm 0.34$  and an attitude *mean* value of  $12.8 \pm 0.37$  with a *p value* of  $0.000 < a 0.05$  (Zakaria, F, 2017).

Based on the results of studies that have been conducted at the Main Clinic Cideng Medical Center Cirebon Regency, author conducted a brief interview on 10 pregnant women obtained the results that 4 pregnant women have good knowledge about COVID-19 and 6 pregnant women have less knowledge

about COVID-19. This shows that pregnant women lack knowledge about COVID-19 at Cideng Medical Center Main Clinic. Because of the importance of knowledge about COVID-19 to be known by pregnant women, therefore by knowing COVID-19 all risks that will occur can anticipate well.

### Method

This research is quantitative analytical research, because the data of the research results in the form of figures that can be analyzed based on statistical procedures (Notoatmodjo, 2012). The research design used is *quasi experimental design*, which is research that gives treatment to objects that can control variables and expressly state the existence of causal relationships. The research design used is *one group pretest-posttest without control design*, which is experimental research conducted in one group that is selected randomly and not conducted

stability tests and clarity of the condition of the group before being treated (Notoatmodjo, 2012).

The design of this study, it begins with the filling of identity and *informed consent*. Then the initial test (*pretest*) aims to assess pregnant women's knowledge about COVID-19 through *google form* spread through *whatsapp*. Furthermore, health education *treatment* regarding COVID-19 with online video media (through *whatsapp* application) and ended with a final test (*posttest*). In this study to find out the effect of health education with video media on the level of knowledge of pregnant women about COVID-19.

### Results

#### Characteristics

The characteristics of respondents in this study include age and education. Here is a table of frequency distribution characteristics of respondents to this study:

**Table 1. Frequency Distribution of Respondent Characteristics**

Characteristic	Frequency (n)	Percentage (%)
----------------	---------------	----------------



<b>Age</b>		
19-25 Years Old	13	43,3
26-32 Years Old	9	30
33-40 Years Old	8	26,7
<b>Last Education</b>		
Primary School	3	10
High School/Vocational School	18	60
PT/Academy	9	30
<b>Number of Pregnant Women</b>	30	100

Based on table 1, it can be concluded that most of the 13 respondents were between 19-25 years old (43.3%), most of the last high

school education as many as 18 respondents (60%) and the number of pregnant women as many as 30 respondents (100%).

### Univariate Analysis

**Table 2. Distribution of Pre-test and Post-test Knowledge of Respondents**

Knowledge	N	Min	Max	Mean	Sd	Median	95% CI	Total Value
<i>Pretest</i>	30	11	21	18,10	1,749	18,00	17,45-18,75	21
<i>Posttest</i>	30	19	21	20,27	0,785	20,00	19,97-20,56	21

Based on table 4, it can be concluded that the average knowledge of pregnant women about COVID-19 before being given health education is 18.10. The lowest is 11 and the highest is 21. The median value is 18.00 with a *standard deviation of 1,749*. The result of *95% confidence interval (CI)* can be concluded that 95% of pregnant women's concern about COVID-19 between 17.45 to 18.75 and the average after being given health education is 20.27. The lowest is 19 and the highest

is 21. The median value is 20.00 with a *standard deviation of 0.785*. The result of *95% confidence interval (CI)* can be concluded that 95% of pregnant women's concern about COVID-19 between 19.97 to 20.56. There was an increase in the average knowledge level score of 2.13.

### Bivariate Analysis

Bivariate analysis was conducted to determine the influence of independent variables (health education through video media) with dependent

variables (pregnant women's knowledge of COVID-19) indicated by a p value of <0.05. Furthermore, to find out if normal distributed research data on knowledge level data before and after being given health education

interventions through video media, the *Shapiro Wilk* test was used.

**a. Normality Test**

The data normality test was conducted using *Shapiro Wilk* using computer software.

**Table 3. Normality Test Results of Knowledge Level Pregnant Women about COVID-19**

	A Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistics	Df	Sig.	Statistics	Df	Sig.
Difference	0,218	30	0,001	0,804	30	0,000
Pretest	0,311	30	0,000	0,726	30	0,000
Posttest	0,292	30	0,000	0,773	30	0,000

Based on table 3 based on the normality test data using "*Shapiro Wilk*" with the results showed that the data is not distributed normally, so to know the difference in knowledge before and

after health education is used is an alternative test (*Wilcoxon Test*).

**b. Wilcoxon Test**

**Table 4. The Effect of Health Education on Pregnant Women's Knowledge Level about COVID-19 at Cideng Medical Center Main Clinic Cirebon district in 2020**

		N	Median ( <i>Min-Max</i> )	P
Knowledge before intervention (n=30)	Negative Ranks	0 <sup>a</sup>		0,000
	Positive Ranks	26 <sup>b</sup>	18 (11-21)	
Knowledge after intervention (n=30)	Ties	4 <sup>c</sup>	20 (19-21)	
	Total	30		

Table 4 shows the results of *Wilcoxon T Test* in *pretest* and *posttest* pregnant women obtained a value of  $p$  value = 0.000 or  $p < 0.05$  can be concluded that there is an influence of health education on the level of knowledge of pregnant women about COVID-19 at the Main Clinic Cideng Medical Center Cirebon District in 2020. Respondents with an increased knowledge score / *positive rank* as many as 26 people, settled / *ties* as many as 4 people and no respondents who decreased their knowledge/ *negative ranks*.

## Discussion

### 1. Characteristics of Respondents

Knowledge is the result of human sensing, or the result of knowing a person to an object through his senses such as eyes, nose, ears and so on (Notoatmodjo, 2010a). Knowledge is influenced by several factors, namely age, education, economic status, environment, resources and social relations (Notoatmodjo, 2003). In this study, researchers only examined the

characteristics of age and education respondents.

Age affects a person's level of knowledge. According to Notoatmodjo, age is very closely related to one's knowledge, because the more age the more the capture and mindset of a person. This means that age is one of the factors influencing information capture that ultimately affects increased knowledge, including knowledge about COVID-19.

Judging from the characteristics of respondents based on the age of most respondents aged 19 - 25 years as many as 13 people (43.3%), where at that age respondents can be quite mature in receiving information that is new to him. This is in accordance with Aminingsih's research which states that the more mature the age, the more mature it will be, making it easier to receive information. The age of sufficient respondents will have a better level of knowledge (Aminingsih, Warsini, and Padmiati 2013). Astuti (2013) on The Characteristic Relationship of Pregnant Women With The Level of Knowledge About The Danger Signs In KePregnant In Sidoharjo Health Center Sragen District

stated that there is a statistically meaningful relationship between the variable age with  $p$  value = 0.0001.

Based on the level of education, most of the respondents of the education level is SMA / SMK which is 18 people (60%), it shows that educated people are easier to receive new information or knowledge.

The level of education can determine the level of ability of a person in understanding and absorbing the knowledge that has been obtained. Education affects the learning process, the higher one's education, the easier it is for the person to receive information (Budiman 2014). According to Notoatmodjo, education can affect a person including one's behavior of lifestyle, especially in motivating to participate in development, in general the higher one's education the more receptive one is to receive information.

This is in accordance with the theory that the level of education pursued by individuals is one of the factors that will support his ability to receive information, as written by **Utami (2007)** that the higher the level of education of a person, the wider the way of view and way of thinking in the

face of a situation that occurs around him.

## **2. Average Knowledge of Pregnant Women About COVID-19 Before and After Health Education at Cideng Medical Center Main Clinic Cirebon regency**

Based on table 3, the results showed that there is a significant difference between the level of knowledge of pregnant women before and after being given health education through video media about COVID-19. This shows the delivery of information about COVID-19 with health education through video media can change the knowledge of pregnant women at the Main Clinic Cideng Medical Center Cirebon Regency.

The results also showed the average value of knowledge during pre-test at is 18.10 with a median value of 18, a minimum value of 11, a maximum value of 21 and a standard deviation of 1,749 after health education through video media (post-test) obtained an average value of 20.27 with a median value of 20, a minimum value of 19, a maximum value of 21 and a standard deviation of 0.785. It is assumed that the information provided is conveyed

well to respondents, resulting in an increase in the value of respondents' knowledge about COVID-19 after being given health education with a video about COVID-19 of 2.13.

Health education by using video media can increase pregnant women's knowledge about COVID-19 because the media used can attract respondents' attention by displaying real images and sounds from COVID-19 material. In addition, the health education material shown in the video is also easy to understand because it is directly at the core of the discussion and uses words that are easy to understand. The use of video media in health education causes respondents to absorb more knowledge because it involves the two largest senses in the absorption of information, namely the sense of vision and hearing (Ashyar, 2011).

This is in line with the results of research conducted by **Zakaria (2017)** conducted on pregnant women at the Jetis Health Center Yogyakarta which shows that there is an influence of health education with audiovisual media on the level of knowledge and attitude of pregnant women about the initiation of early breastfeeding.

This is in accordance with the theory that health education aims to change unhealthy behaviors into healthy which means that it can change the knowledge of respondents who are not good (**Fitriani, Shinta, 2011**). In addition, the results in this study are also supported by the theory that the selection and use of media aids is one of the important components carried out, with the aim of helping the use of the senses as much as possible (**Ministry of Health, 2014**). According to Ardianto (2013) in his research that changes in knowledge and attitudes or behavior changes are one of them influenced by the media in counseling. The existence of media in the counseling can affect knowledge, attitudes that can further affect the prevention of COVID-19 itself.

### **3. The Effect of Health Education on COVID-19 on Pregnant Women's Knowledge Level at Cideng Medical Center Main Clinic Cirebon regency**

Based on the results of the analysis conducted using wilcoxon T-Test in table 6 obtained p value of 0.000, there is an influence of health education on the level of knowledge of

pregnant women about COVID-19. The results of this study are in accordance with the results of the study of Chyntia Venty Ardiana, which states that health education interventions in mothers with video media have an effect on improving knowledge (**Chyntia Venty Ardiana, 2016**).

Knowledge is the result of human sensing, or the result of knowing a person's knowledge of objects through their senses such as eyes, nose, ears and so on. By itself at the time of sensing until it produces such knowledge is strongly influenced by the intensity of attention and perception of objects (Notoatmodjo 2010a).

The knowledge measured in this study is the knowledge of pregnant women which includes understanding, signs and symptoms, risk factors, ways of transmission and prevention of COVID-19.

Pregnant women's knowledge about COVID-19 is the result of knowing pregnant women about a specific condition of pregnancy where pregnant women are at risk of covid-19 infection. Knowledge will affect the mindset so that it can affect the behavior of pregnant women. Pregnancy is a normal, natural process

that begins with the growth and development of intrauterine fetuses and begins from conception to childbirth (**Dewi &Sunarsih, 2011**). Pregnancy causes various changes to the body and immune system (**WHO, 2020**). Corona virus or SARS-CoV-2 is a virus that attacks the respiratory system. Corona virus infection is characterized by several symptoms, such as fever, cough, and shortness of breath. In severe conditions, this viral infection can cause acute respiratory failure, severe pneumonia (pulmonary infection), pulmonary edema, malfunction of the organs, to death. Changes in the immune system that occur in pregnancy can make pregnant women more susceptible to coronavirus infection (POGI (Indonesian Society of Obstetrics and Gynaecology) 2020).

Data published by the Centers for Disease Control and Prevention (CDC) on Wednesday, September 16, 2020. This data contains two reports related to pregnancy and COVID-19. One of the reports contains data on 598 pregnant women affected by COVID-19 and hospitalized (**Dwinanda, Reiny, 2020**). The spread of coronavirus is increasing in Indonesia, pregnant women are becoming a group at risk of

COVID-19 infection (WHO, 2020). The lack of knowledge of pregnant women about COVID-19 can be one of the causes. Efforts can be made to provide information about COVID-19 through health education. The earlier health education about COVID-19 is provided, the lower the risk.

Bivariate test results using Wilcoxon T-Test obtained a value of  $p = 0.000$  or  $p < 0.05$  means there is a significant difference between the level of knowledge of pregnant women before and after being given health education. This shows the delivery of information about COVID-19 with health education through video media can change the level of knowledge of pregnant women at the Main Clinic Cideng Medical Center Cirebon Regency.

Health education interventions will be conducted in this study with video media that include understanding, signs and symptoms, risk factors, ways of transmission and prevention about COVID-19.

Health knowledge can be improved by providing education about health through health education. Health education is one of the methods

commonly used in health promotion whose emphasis is on changing or improving behavior through awareness raising, and efforts to maintain and improve health (Nur'azizaturrahmah, 2013).

Through health education, especially about COVID-19, respondents were given a new knowledge that they do not know so that pregnant women become affected in accordance with what researchers want, which is related to the habit of behaving clean and healthy life. In accordance with the stated by (Notoatmodjo, 2010b), that the provision of health education is an effort to create behaviors of pregnant women that are conducive to health. This means that here researchers provide stimulus in the form of new knowledge, most likely respondents feel the need to acquire that knowledge so that respondents respond that it is worth receiving. This is indicated by the respondent's knowledge score after being given health education improved than before being given health education. It is clear that health education here the level of knowledge and health of pregnant women is related

to the habit of behaving clean and healthy life.

Health education cannot be released from the media because through the media, the messages delivered can be more interesting and understood, so that the target can study the message so that it decides to adopt positive behavior (Notoatmodjo 2010b)

The increase in knowledge is due to the learning process by the respondent and occurs due to the increase in sensitivity or readiness of the subject to the test given to the respondent. Knowledge is the result of knowing what happens after people have sensed a particular object. Sensing occurs through the senses of vision, hearing, smell and taste (Notoatmodjo, 2010a). Most of human knowledge is gained through the eyes and ears. Video media is one type of audio visual media. Audio visual media is a medium that relies on the sense of hearing and sense of vision (Ashyar, 2011).

Audio visual media (video) is the most appropriate tool today because the knowledge in a person is received through the senses reaches 75% to 87% of human knowledge obtained or channeled through the senses of view

and 13% through the senses of hearing (Rahmawati, 2007).

Video media can channel knowledge to the brain more maximally because it provides a more tangible picture and can improve memory retention because it is interesting and memorable compared to other media (Maulana, 2009). According to (Kapti, R 2013) audio visual media as a medium of effective health education is used to provide increased knowledge to mothers and change maternal attitudes for the better.

Sulastri (2016) in his research entitled *The Influence of Health Counseling Using Video In Breast Examination Itself (SADAR) On Changes in Knowledge and Attitudes of Young Women in SMAN 9 Balikpapan Year 2012*, showed the average value of respondents' knowledge before counseling was 18.44. While the average knowledge after counseling is 39.14, with a p value of 0.000 or  $p < 0.05$  means there is a significant difference in knowledge of respondents before and after health counseling activities using SADAR videos.

According to (Silva et al. 2017) stated there is an influence of health education on the level of knowledge of



pregnant women. Farinta Isna Nur Fauziyyah research results, health education interventions using the media influence on maternal knowledge (Fauziyyah, Nur, and Andriani 2018).

Research conducted by (Kurniawati, 2012) with the title Differences In Media Leaflets and Videos on Maternal Knowledge on How to Overcome Complaints During Pregnancy, showed the results that there is a difference between media leaflets and videos to knowledge. The mean value in the video group (9.40) is higher than the leaflet group (5.80), so it can be concluded that the video media gives better results.

Post test is conducted after 1 day of health education. Hopefully there is no decrease in the memory of knowledge embedded in the respondent so that it can support the change of knowledge that is more inherent to the respondent (**Rita L. Atkinson, 2000**).

These results show that health education interventions conducted briefly will have a positive impact in improving one's knowledge (**Fauziah, 2012**). The results of this study are also in line with Maulana theory (2009) which states that information obtained

from both formal and nonformal education can have an influence so as to produce changes or increase knowledge.

Based on the above research, it can be concluded that providing health education to pregnant women about COVID-19 with video media can increase the level of knowledge of pregnant women, so providing health education about COVID-19 is very important.

In terms of health education concept is all activities to provide or improve the knowledge, attitudes and practices of the community in maintaining and improving health (**Notoadmodjo, 2003**).

From this understanding, researchers or midwives here act as educators or givers of knowledge so that new knowledge is formed in pregnant women. Health education about COVID-19 with video media affects the level of knowledge in pregnant women. More attention is needed in the community about health education about COVID-19. Providing health education is prepared appropriately so that pregnant women easily understand and remember information and guided by the selection of adequate topics,

methods, strategies, and media in an effort to increase knowledge and establish positive attitudes and behaviors.

### Conclusion

Based on the results of research and discussion, it can be concluded that

1. The average increase in the knowledge level score of pregnant women between before and after being given health education was 2.13.
2. There is an Influence of Health Education on The Level of Knowledge of Pregnant Women About COVID-19 at Cideng Medical Center Main Clinic in 2020 with the results of differences in pregnant women's knowledge about COVID-19 before and after the provision of health education about COVID-19 at Cideng Medical Center Main Clinic Cirebon district in 2020.

### Suggestion

Based on the conclusions of the research results that have been described, there are several things that are suggested as follows:

1. Main Clinic Cideng Medical Center Cirebon Regency

The results of this Health Education study are expected to still be applicable at Cideng Medical Center Main Clinic to be a guideline for midwives in providing Health Education to pregnant women about COVID-19 in order to increase the knowledge of pregnant women and midwives can provide health education videos about COVID-19 to pregnant women who come to Cideng Medical Center Main Clinic.

2. Other researchers

It is expected that this research can be used as a reference to conduct further research and can develop this research by increasing the number of samples so that the scope and generalization of research becomes wider and use different research methods or designs.

### Reference

- Aminingsih, S, Warsini, and Umi Padmiati. 2013. "Effect of Health Education on Knowledge And Skills In Breast Care In Post Psrtum Mothers In Oen Surakarta Hospital. KOSALA." *JIK* 1(2).
- Ardianto. 2013. "Effect of Health Education with Audio Visual Method on HandWashing Behavior in Preschoolers in Aba Notoyudan

- Kindergarten. Thesis.”
- Ashyar, Rayanda. 2011. *Creatively Developing Learning Media*. Jakarta: Gaung Persada (GP) Press.
- Astuti, H. A. 2013. *Asuhan Kebidanan Nifas Dan Menyusui*. Jakarta: Erlangga.
- Budiman, Riyanto A. 2014. *Kapita Selekta Questionnaire Of Knowledge and Attitudes In Health Research*. Jakarta: Salemba Medika.
- Fauziyyah, Farinta Isna Nur, and Kristien Andriani. 2018. “Effectiveness of Media Use To Improve Mother’s Knowledge and Attitude About Breast Milk Companion Food (MP Asi) In Kenep Village, Sukoharjo Regency.” Muhammadiyah University of Surakarta.
- Kapti, R, E. 2013. “Audiovisual Effectiveness As a Medium of Health Abuse Against Increased Knowledge And Attitudes of Mothers In The Management of Toddlers With Diarrhea In Two Hospitals Malang.” University of Indonesia.
- Kurniawati, Nindya. 2012. “Differences Between Media Leaflets And Videos On Mother’s Knowledge On How to Overcome Complaints During Pregnancy.” <http://garuda.ristekdikti.go.id>.
- Maulana, H. 2009. *Health Promotion*. Jakarta: EGC.
- Notoatmodjo, Soekidjo. 2010a. *Health Behavioral Sciences*. Jakarta: PT. Rineka Cipta.
- . 2010b. *Health Promotion Theory and Application*. Bloom F.E. Jakarta: PT. Rineka Cipta.
- Nur’azizaturrahmah. 2013. “Differences in Knowledge Between Before And After Counseling Intervention Using Media Leaflet About The Causes of Dermatitis And Its Prevention In Workers Finishing Wood Furniture In East Ciputat Year 2013.” Health Sciences Syarif Hidayatullah State Islamic University Jakarta.
- POGI (Indonesian Society of Obstetrics and Gynaecology). 2020. *Recommendations for Handling Coronavirus Infection (COVID-19)*. Jakarta.
- Pusicov Cirebon Regency. 2021. “COVID-19 Data and Information Center. Covid Center Cirebon Regency. Quoted January 10, 2021.” <https://covid19.cirebonkab.go.id>.
- Pusicov Indonesia. 2021. “COVID-19 Data and Information Center. Covid Center Indonesia. Quoted January 10, 2021.” <https://covid19.go.id>.
- Silva, Mônica Maria de Jesus, Denismar Alves Nogueira, Maria José Clapis, and Eliana Peres Rocha Carvalho Leite. 2017. “Anxiety in Pregnancy: Prevalence and Associated Factors.” *Journal of school of nursing-university of sao paulo* 51(0): 1–8. [http://www.scielo.br/scielo.php?script=sci\\_arttext&pid=S0080-62342017000100444&lng=en&tlng=en](http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0080-62342017000100444&lng=en&tlng=en).
- Simanjuntak, L. 2020. “Analysis of Anxiety Levels of COVID-19 and Factors Affecting Pregnant Women in Leo Simanjuntak SpOG’s Doctor’s Practice.” *Research, HKBP Nommensen University Medan*. <https://uhn.ac.id>.
- Sulastri. 2016. “Perawatan Hipertensi Dengan Labu Siam Terhadap Penurunan Tekanan Darah Hipertensi Pada Wanita Di Puskesmas Balongan Indramayu.” *Jurnal Care* 4(3).
- Utami, Pinilih Pangesti, Adi Isworo, Hanafi Moh, and Siti Arifah. 2017. “Jurnal Keperawatan Soedirman (The Soedirman Journal of Nursing), Volume 12, No.2 Juli 2017.” *Jurnal Keperawatan Soedirman (The*

*Soedirman Journal of Nursing* 12(2):  
 77–83.

**journal:**

Aminingsih, S, Warsini and Padmiati Umi. (2013). *Effect of Health Education on Knowledge And Skills In Breast Care In Post Psrtum Mothers In Oen Surakarta Hospital*. KOSALA, JIK. Vol. 1 No.2, 2013.

Ardianto. (2013). *Effect of Health Education with Audio Visual Method on HandWashing Behavior in Preschoolers in Aba Notoyudan Kindergarten*. Thesis. Yogyakarta : Faculty of Health Sciences.

Astuti, H. P. (2011). *Characteristic Relationship of Pregnant Women with Knowledge Level of Danger Signs in Pregnancy in Sidoharjo Health Center, Sragen Regency*. Kusuma Husada Health Journal, 3(2), 1–13. <http://stikeskusumahusada.ac.id/jurnal/index.php/JK/article/view/40/95>.

Kurniawati, Nindya. (2012). *Differences Between Media Leaflets And Videos On Mother's Knowledge On How to Overcome Complaints During Pregnancy*. Quoted July 14, 2020 <http://garuda.ristekdikti.go.id>

L, Simanjuntak. (2020). *Analysis of Anxiety Levels of COVID-19 and Factors Affecting Pregnant Women in Leo Simanjuntak SpOG's Doctor's Practice*. Quoted May 8, 2020 <https://uhn.ac.id>. Research, H KBP Nommensen University Medan.

Nur'azizaturrahmah. (2013). *Differences in Knowledge Between Before And After Counseling Intervention Using Media Leaflet About The Causes of Dermatitis And Its Prevention In Workers Finishing Wood Furniture In East Ciputat Year 2013*. Public Health Study Program Faculty of Medicine and Health Sciences Syarif Hidayatullah State Islamic University Jakarta, No3, c.30.

POGI. (2020). *Recommendations for Handling Coronavirus Infection (COVID-19)*. Jakarta: Indonesian Society of Obstetrics and Gynaecology.

**Textbooks:**

Ashyar, Rayanda. (2011). *Creatively Developing Learning Media*. Jakarta: Gaung Persada (GP) Press Jakarta.

Budiman, Riyanto A. (2014). *Kapita Selektu Questionnaire Of Knowledge and Attitudes In Health Research*. Jakarta: Salemba Medika.

Maulana, H. (2009). *Health Promotion*. Jakarta:EGC.

Notoatmodjo, Soekidjo. (2010). *Health Promotion Theory and Application*. Jakarta: PT. Rineka Cipta. 17. Bloom F.E. 1988.

Notoatmodjo Soekidjo. (2010). *Health Behavioral Sciences*. Jakarta: PT Rineka Cipta.

**Thesis/Dissertation:**

Fauziyyah, Farinta Isna Nur and, Kristien Andriani, SKM, M.Si Kristien Andriani, SKM, M.Si (2018) *Effectiveness of Media Use*

*To Improve Mother's Knowledge and Attitude About Breast Milk Companion Food (Mp Asi) In Kenep Village, Sukoharjo Regency. Thesis Thesis, Muhammadiyah University of Surakarta.*

Kapti, R, E. (2013). *Audiovisual Effectiveness As a Medium of Health Abuse Against Increased Knowledge And Attitudes of Mothers In The Management of Toddlers With Diarrhea In Two Hospitals Malang. Thesis Master Of Nursing Program, University of Indonesia Depok.*

**Website:**

Pusicov Indonesia. (2021). *COVID-19 Data and Information Center. Covid Center Indonesia. Quoted January 10, 2021*  
<https://covid19.go.id>

Pusicov Cirebon Regency. (2021). *COVID-19 Data and Information Center. Covid Center Cirebon Regency. Quoted January 10, 2021*  
<https://covid19.cirebonkab.go.id>

**THE EFFECT OF AUDIO VISUAL AND WEBTOON EXPLANATION TO  
KNOWLEDGE AND ATTITUDE ABOUT THE THREE BASIC THREATS  
OF ADOLESCENT REPRODUCTIVE HEALTH (TRIAD KRR) ON  
STUDENTS OF SMAN 8 CIREBON CITY, 2021**

Diyah Sri Yuhandini, Nadhifatun Khulaidah

Poltekkes Kemenkes Tasikmalaya

*diyahsriyuhandini80@gmail.com*

**ABSTRACT**

The problem of adolescent reproductive health in Indonesia is about sexuality, HIV / AIDS and drugs. The problem occurs due to low knowledge of the TRIAD KRR which will affect the attitudes that adolescents will take in relation to the TRIAD KRR. The low level of knowledge occurs due to the lack of education that adolescents get about TRIAD KRR. The aim of this study was to find out the effect of providing counseling through *audio-visual* and *webtoon* on increasing knowledge and attitudes about the three basic threats to adolescent reproductive health (TRIAD KRR). This research is a quasi experimental study using a two groups pretest-posttest design approach. The research sample was students of SMAN 8 Cirebon City. The data analysis used was univariate and bivariate analysis using the Wilcoxon test, paired t test and the Man-witney test. The measuring instrument used is a questionnaire. The analysis of the median pretest obtained for knowledge in the audiovisual group was 8.0000 and the posttest was 11,000. In the attitude, the median value for pretest was 36.00 and posttest was 37.00. Bivariate analysis in the audio-visual group, both knowledge and attitude, obtained p value 0.000 (<0.05). In the knowledge of the webtoon group, the p value was 0.000 (<0.05) and for the attitude, the p value was 0.350 (> 0.05). Differences in knowledge of audio visual media with webtoon obtained p value of 0.411 and for attitude that is 0.033. There is no significant difference in knowledge through audio-visual media and webtoon but in attitude there is a difference.

*Keywords : knowledge, attitude, sexuality*

---

## Introduction

The results of data research from the BKKBN regarding the incidence of adolescent cases in Indonesia in 2019, 48 out of 1000 teenagers in Indonesia experienced pregnancies outside of marriage. So it can be concluded that the incidence of such cases in Indonesia often increases by more than 500 cases every year.

Based on data from the Ministry of Health of the Republic of Indonesia (Kemenkes RI) which was published through Public Info in 2019 amount of Indonesian people suffering from HIV/AIDS reached 349,883 thousand people. Then in 2020, according to a report by the Directorate General of P2P of the Indonesian Ministry of Health, the cumulative cases of HIV / AIDS in Indonesia have reached 500,000 thousand people.

In 2020 the Head of the National Anti Narcotics Agency Commissioner General of Police Heru Winarko said, narcotics abuse among teenagers was increasing, namely by 24-28% of teenagers who used narcotics.

According to the Directorate of Youth Resilience Development (2018), adolescence is a transitional age, the search

for identity is accompanied by a great sense of youth curiosity, reinforced by increasingly sophisticated flows of technology and information causing adolescents to have unhealthy behavior and are at risk of being exposed to the Three Basic Threats of Reproductive Health (TRIAD KRR).

Adolescence is a period of change from childhood to adulthood, developing romantic feelings, and sexual experimentation, in the cycle of life, adolescence is a golden age. Teens begin to be able to think abstractly, criticize, and want to know new things. If not based on sufficient knowledge, adolescents can try new things related to reproductive health and can have a negative impact (Prabandari, 2018).

The unavailability of adequate information about KRR forces teenagers to seek access to this information and conduct their own exploration, especially through the media. Promotion of reproductive health in adolescents is often connoted as sex education where most Indonesian people are still taboo about this.

The low of knowledge an adolescents about adolescent reproductive health will affect the attitudes that adolescents will take regarding adolescent

reproductive health. The impact if not given education about adolescent reproductive health is easier to carry out risky sexual behavior which will cause reproductive health problems such as unwanted pregnancy (KTD), abortion and IMS (Nilasari, 2019).

According to M Basyarudin Usman, media is something that transmits messages and can stimulate the thoughts, feelings and desires of the audience (students) so that the learning process can occur in him. According to Burhan (2016), the level of effectiveness of learning through audio is only able to absorb 10-25%, through visual only 25-55%, then for audio-visual itself it reaches 55-80% and is participatory (role play, case studies and practice). up to 80-90%.

In accordance with the research conducted by Telly Katarina and Yuliana (2018) on the research title The Effect of Reproductive Health Education through Audio Visual with the Results of Knowledge After Counseling on Adolescents at SMA Negeri 2 Pontianak said that there was an influence between reproductive health education through audio-visual and the results of knowledge (Katharina & Yuliana, 2018).

Likewise, the results of research conducted by Agustin Wahyu Prabandari (2018) on the research title The Effect of Counseling with Video Media and Booklets on Adolescent Reproductive Health Knowledge Levels at SMK 2 Muhammadiyah Bantul said that there was an effect after being given counseling either through video media or booklets (Prabandari, 2018).

Based on the results of a preliminary study of class X students at SMAN 8 Cirebon City with a total of 47 students through a questionnaire about TRIAD KRR, it was found that 80.4% of students did not really understand the knowledge of sexuality, only 41.3% who understand about HIV / AIDS and as much as 52.2% of them who understand about drugs.

In 2018 there was counseling on adolescent reproductive health for representatives of class X and class XI students. The counseling was carried out using the lecture and question and answer method. From 47 people during the preliminary study, who filled out the attitude questionnaire there were 70.2% of the students who answered agreed to conduct counseling on adolescent reproductive health in schools. So the



researchers decided to re-do the counseling on the three basic threats to adolescent reproductive health (TRIAD KRR) with a new method, namely by using audio-visual media and webtoons.

The existence of counseling on the three basic threats to adolescent reproductive health (TRIAD KRR) by selecting the right method is expected to increase knowledge and attitudes about TRIAD KRR and become an effort to prevent unwanted pregnancy, HIV / AIDS cases and drug abuse incidents. illicit drugs (NAPZA). This makes researchers interested in conducting further research on the effect of audio-visual and webtoon extension on knowledge and attitudes regarding the three basic threats to reproductive health (TRIAD KRR) at SMAN 8 Cirebon City.

## Method

This research is a design quasi experimental study with a two-group pretest-posttest design approach, where the research was conducted at SMAN 8 Cirebon City which was conducted in February - March 2021. The population in this study were students of class XI, amounting to 309 people, the sample was

taken by simple random sampling technique.

Inclusion criteria are willing to be respondents, students who have a cell phone technology device (whatsapp), students who have quotas or are connected to the internet, respondents who follow the research process to completion. Exclusion criteria are respondents who are sick or there is no quota when collecting data, respondents who cannot follow the research process to completion.

The instrument in this study was a questionnaire from Sri Rezeki, 2015 with closed questions, namely 15 questions for knowledge and 10 questions for attitudes regarding the three basic threats to adolescent reproductive health (TRIAD KRR).

Data analysis to be carried out in this study is univariate and bivariate analysis with the Wilcoxon test, paired t-test and the Mann-Whitney test.

## Result

### Univariate Analysis

**Table 1. Median knowledge on audio visual**

	Min	Max	SD	Median
Pre Test	0	12	2.85409	8.0000
Post Test	4	13	2.21722	11.0000

The results of the analysis showed that the median value of knowledge about TRIAD KRR before being given audio-visual intervention was 8.0000 with a standard deviation of 2.85409. The lowest score is 0 and the highest score is 12 out of

a total score of 15 questions. The result of the median value after being given the audio visual intervention was 11,000 with a standard deviation of 2.21722. The lowest score is 4 and the highest is 13.

**Table 2. Median attitude on audio visual**

	Min	Max	SD	Median
Pre Test	29	43	3.973	37.00
Post Test	29	44	3.678	39.00

The results of the analysis showed that the median value of the attitude about TRIAD KRR before being given audio-visual intervention was 37.00 with a standard deviation of 3.973. The lowest score was 29 and the highest score was 43

from a total score of 10 questions. The result of the median value after being given audio-visual intervention was 39.00 with a standard deviation of 3.678. The lowest value is 29 and the highest is 44.

**Table 3. Median knowledge on webtoon**

	Min	Max	SD	Median
Pre Test	0	12	3.14469	9.0000
Post Test	4	13	2.09127	10.000

The results of the analysis showed that the median value of knowledge about the KRR TRIAD before being given the webtoon intervention was 9.0000 with a standard deviation of 3.14469. The lowest score is 0 and the highest score is 12 out of

a total score of 15 questions. The result of the median value after being given the webtoon intervention was 10,000 with a standard deviation of 2.09127. The lowest score is 4 and the highest is 13.

**Table 4. Median attitude on webtoon**

	<b>Min</b>	<b>Max</b>	<b>SD</b>	<b>Median</b>
Pre Test	21	45	5.342	36.00
Post Test	29	45	4.26605	37.00

The results of the analysis showed that the median value of attitudes about the TRIAD KRR before the webtoon intervention was given was 36.00 with a standard deviation of 5.342. The lowest score is 21 and the highest score is 45 from

the total score of 10 questions. The median value after being given a webtoon intervention was 37.00 with a standard deviation of 4.26605. The lowest score is 29 and the highest is 45.

**Bivariate Analysis**

**Table 5. Wilcoxon test on audio visual and webtoon**

	<b>Median (min-max)</b>	<b>P</b>
Pre test – post test knowledge audio visual	8.0000 (0-12) 11.000 (4-13)	0.000
Pre test – post test attitude audio visual	37.00 (29-43) 39.00 (29-44)	0.000
Pre test – post test knowledge webtoon	9.0000 (0-12) 10.000 (4-13)	0.000

Based on the Wilcoxon test in the audio-visual group, both knowledge and attitude obtained a p value of 0.000 (<0.05) so that there was a statistically significant difference before and after the audio visual intervention. While in the webtoon group

for knowledge, a p value of 0.000 was obtained (<0.05) so that statistically there was a significant difference before and after being given counseling with webtoon media.

**Table 6. Paired t-test of attitude on webtoon**

	<b>Median (min-max)</b>	<b>P</b>
Pre test – post test attitude webtoon	-.73 (-2.3 - .84)	0.350

Based on the paired t-test, it was found that the p value was 0.350 (> 0.05) so

that statistically there was no significant difference before and after the intervention

through the webtoon media.

**Table 7. Mann-whitney U test of knowledge and attitude on audio visual and webtoon**

	<b>P value</b>
Pre Knowledge	0.247
Post Knowledge	0.411
Pre Attitude	0.971
Post Attitude	0.033

Based on the Mann-Whitney U pretest test, the knowledge of audio visual and webtoon obtained the Asym.sig value or p value  $0.247 > 0.05$ . If the p value > the critical limit of 0.05, there is no significant difference between the two groups. Then for the posttest value of audio visual and webtoon knowledge, the Asym.sig value or p value is  $0.411 > 0.05$ . If the p value > the critical limit of 0.05, there is no significant difference between the two groups. As for the pretest value for audio-visual and webtoon attitudes, the Asym.sig value or p value was  $0.971 > 0.05$ . If the p value > the critical limit of 0.05, there is no significant difference between the two groups. For the audio-visual and webtoon posttest, the Asym.sig value or p value  $0.033 < 0.05$  was obtained. If the p value < critical limit 0.05, there is a significant difference between the two groups.

#### Univariate Analysis

Based on the results of the univariate analysis of the data that has been carried out, it shows that the median value before the audio-visual media intervention on knowledge is 8.0000 and after the intervention the median value is 11.00000. Meanwhile, the median value before the intervention using webtoon media was 9.0000 and after the intervention was given the median value was 10.0000. Both treatments increased knowledge, but the difference in the median knowledge before and after in the experimental group, namely counseling with audio-visual media, the results were greater.

This is in accordance with the theory described by Burhan (2016), which states that the level of effectiveness of learning through audio is only able to absorb 10-25%, through visuals is only 25-55%, then for audio-visual itself it reaches

#### Discussion

55-80% and participatory (role play, case studies and practice) reaches 80-90%.

From the results of the univariate analysis using computer assistance, it can be seen that the median value before the intervention of audio visual media on attitudes is 37.00 and after being given the intervention the median value is 39.00. Meanwhile, the median value before the intervention using webtoon media was 36.00 and after the intervention was given the median value was 37.00. Judging from the median value, both intervention through audio-visual media and webtoon media resulted in an increase in attitude.

Based on Ernawati's research (2018), adolescence is a transitional period between childhood and adulthood. Adolescents at this stage have not yet reached mental and social maturity, so they have to face many conflicting emotional and social pressures.

Many phenomena show that some adolescents do not know and understand about the three basic threats to adolescent reproductive health (TRIAD KRR), for example about the dangers of engaging in promiscuity which causes three basic threats to adolescent reproductive health. But parents in rural areas still think that

talking about the TRIAD KRR to adolescents is still considered taboo.

This is supported by research by Ernawati (2018) that parents are not a source of information on TRIAD KRR for adolescents in the village, so that it will have an impact on the correctness of information obtained by adolescents.

#### Bivariate Analysis

Differences in students' knowledge and attitudes about TRIAD KRR through Audio Visual media.

The results in the Wilcoxon test that had been carried out, obtained the Asym.sig value for the pretest-posttest results of audio-visual media knowledge, namely (0.000). As for attitude, the value of Asym.sig is (0.000). It can be concluded that there are differences in counseling using audio-visual media about TRIAD KRR on the knowledge and attitudes of respondents.

The results obtained from this study are in line with the research of Telly Khatarina and Yuliana with the title The Effect of Reproductive Health Counseling Through Audio Visual with Knowledge Results after Counseling for Adolescents at SMA Negeri 2 Pontianak in 2017 the results are that there is an effect of

reproductive health counseling through audio visual with the results of knowledge after explanation.

This research is in line with Lia Kurniasari's research (2017) which shows that knowledge can be influenced by the provision of video media because video can reflect a more effective absorption of information by using the senses of sight and hearing and can increase knowledge compared to using only the sense of sight.

This is in line with the results of research conducted by Yuce Nilasari (2019) with the title The Effect of Adolescent Reproductive Health Education with the Lecture Method on Knowledge and Attitudes in Vocational School 1 Poncol Students, Magetan Regency, that there is an effect of adolescent reproductive health education on knowledge.

According to the researcher's assumption, the similarity of attitudes is in accordance with the level of knowledge of the students, most of whom are quite knowledgeable about TRIAD KRR. If knowledge can change their negative attitude, then religious teachings can be used as a deterrent to these negative attitudes.

According to Maolinda (2012), a good attitude is also because students have

received sufficient education from the environment and formal institutions. Experiences with family, friends, and society have equipped students to sort out what is good and what is bad for themselves. It is this separation of knowledge in the form of observation and experience that produces individual attitudes.

Differences in students' knowledge and attitudes about TRIAD KRR through Webtoon media.

The results of the Wilcoxon test that had been carried out, for the pretest-posttest of knowledge on webtoon media, the Asym.sig value for knowledge of webtoon media was obtained, namely (0.000). so that statistically there is a significant difference before and after counseling with webtoon media.

This is in line with the research of Ni Ketut Ayu Wulandari, et al (2020) with the title Development of the Reproductive Health Education Comic Module on Increasing Adolescent Knowledge and Attitudes About the Impact of Premarital Sex at SMAN 2 Singaraja, Buleleng Regency, Bali Province which stated that there was a significant difference between the pretest knowledge scores. and posttest in the experimental group, so that the comic

module is effective in increasing respondents' knowledge. This statement is reinforced by research conducted by Danaswari (2013) regarding teaching materials in the form of comic media which can significantly increase the mean score of students on test results by showing a p-value  $<0.01$  ( $p <0.05$ ). The results for the pretest-posttest attitudes that have been carried out in the paired t test are obtained for a p value of 0.350 ( $> 0.05$ ) so that statistically it can be concluded that there is no significant difference before and after the intervention through webtoon media.

Researchers assume that when counseling using the webtoon media takes place, the respondent only “knows” what he has got, but has not yet entered the “understanding” level, so the respondent is not able to apply it.

This is in accordance with the cone of experience by Edgar Dale who suggests understanding the role of the media in the process of getting a learning experience for students, namely being able to go through the process of doing or experiencing for yourself what is being learned, the process of observing and listening through certain media and the process of listening through language.

This is reinforced by the theory of Notoatmodjo (2011) which suggests that to obtain a supportive attitude, knowledge is not only needed, but is also influenced by emotional factors, personal experience, mass media, educational institutions, religious institutions, the influence of other people who are considered important, social and culture.

Differences in knowledge and attitudes of students about TRIAD KRR through Audio Visual and Webtoon media

From the results of the Man-Witney test conducted on the audio-visual and webtoon groups, it can be concluded that for knowledge there is no significant difference between the audio-visual and webtoon groups, but for attitudes there are significant differences between the audio-visual and webtoon groups.

In Rosmiyati's 2019 research with the research title How is the effect of health education using comics and video media on increasing knowledge in breast self-examination (BSE) in adolescents at SMA Negeri 1 Cibingbin in 2019 says that there is no significant difference between the 2 groups of comics and videos, both comic and video media are both effective.

According to the results of the evaluation of the reproductive health education information communication material (KIE KRR), the results show that respondents generally like pictorial stories both printed and audio-visual. Each media has its own segment according to the type of target (Sadiman, 2009).

Researchers (Rahmawati, 2016) said that a person's knowledge can be influenced by various factors such as economy, social relations, experience and exposure to mass media. Exposure to the mass media will get various information that can be accepted by the public, so that someone who is more frequently exposed to the mass media will get more information than someone who has never been exposed to mass media information.

In accordance with (Pocut Susila, 2015) said that the ease of obtaining information can help speed up a person to acquire new knowledge. can have a short-term effect resulting in a change or increase in knowledge. The existence of new information about a matter provides a new cognitive foundation for the formation of knowledge about it.

## Conclusion

Based on research and discussion on the relationship between knowledge and attitudes about the three basic threats to adolescent reproductive health (TRIAD KRR), it can be concluded that there are differences in median knowledge and attitudes before and after the intervention in the audio-visual group, there are differences in median knowledge and attitudes before and after given intervention in the webtoon group, there were differences in knowledge and attitudes before and after intervention in the audio visual group, there were differences in knowledge but there were no differences in attitudes before and after intervention in the webtoon group, there was no difference in knowledge in both the audio visual and webtoon groups after being given the intervention but there are differences for attitudes.

## Suggestion

It is hoped that the school will continue to increase cooperation with the puskesmas or health workers to conduct health education information on the three basic threats to adolescent reproductive health (TRIAD KRR) on a regular basis. It is hoped that the school will be able to add reading books in the library on adolescent health education, especially about the three



basic threats to adolescent reproductive health.

## References

- Danaswari. (2013). Pengembangan Bahan Ajar Dalam Bentuk Media Komik Untuk Meningkatkan Hasil Belajar Siswa Kelas X SMAN 9 Cirebon Pada Pokok Bahasan Ekosistem. *Jurnal Scientiae Educatia*, 2(2).
- Ernawati, H. (2018). Pengetahuan Kesehatan Reproduksi Remaja Di Daerah Pedesaan. *Indonesian Journal for Health Sciences*, 2(1), 58. <https://doi.org/10.24269/ijhs.v2i1.820>
- Katharina, T., & Yuliana, Y. (2018). Pengaruh Penyuluhan Kesehatan Reproduksi melalui Audio Visual dengan Hasil Pengetahuan Setelah Penyuluhan pada Remaja SMA Negeri 2 Pontianak Tahun 2017. *Jurnal Kebidanan*, 7, 47–54.
- Kurniasari, L. (2017). Pengaruh Media Video Terhadap Pengetahuan Dalam Upaya Pencegahan Perilaku Seks Pranikah Pada Siswa Kelas VIII Di SMP Nuri Samarinda. In *Ilmu Kesehatan Masyarakat Sekolah Tinggi Ilmu Kesehatan Muhammadiyah Samarinda*.
- Maolinda, N. et al. (2012). Hubungan Pengetahuan Dengan Sikap Siswa Terhadap Pendidikan Kesehatan Reproduksi Remaja di SMAN 1 Margahayu. *Student e-Journal*, 1, 3.
- Nilasari, Y. (2019). *pengaruh penyuluhan kesehatan reproduksi remaja dengan metode ceramah terhadap pengetahuan dan sikap pada siswa smkn 1 poncol kabupaten magetan*. Stikes Bhakti Husada Mulia Madiun. <http://repository.stikes-bhm.ac.id/id/eprint/626>
- Notoatmodjo, S. (2011). *Kesehatan Masyarakat Ilmu dan Seni*. Jakarta : Rineka Cipta.
- Pocut, S. (2015). *Faktor-Faktor Yang Berhubungan Dengan Pengetahuan Penggunaan Obat Generik Pada Masyarakat Di Wilayah Kerja Puskesmas Padang Panyang Kabupaten Nagan Raya Tahun 2015* (Vol. 151, Nomor 1). Universitas Teuku Umar.
- Prabandari, A. W. (2018). Pengaruh Pemberian Penyuluhan Dengan Media Video Dan Booklet Terhadap Tingkat Pengetahuan Kesehatan Reproduksi Remaja Di Smk 2 Muhammadiyah Bantul. In *Skripsi poltekkes Yogyakarta*. <http://eprints.poltekkesjogja.ac.id/1675/1/SKRIPSI.pdf>
- Rahmawati, F. (2016). *Hubungan Pengetahuan Ibu, Pola Pemberian Makan, Dan Pendapatan Keluarga Terhadap Status Gizi Balita Di Desa Pajerukan Kecamatan Kalibagor* Universitas Muhammadiyah Purwokerto. <http://repository.ump.ac.id/id/eprint/839>
- Sadiman, et all. (2009). *Media Pendidikan, Pengertian, Pengembangan, dan Pemanfaatannya*. Jakarta : Rajawali Press.
- Wulandari, N. K. A., Purnami, L. A., Rubaya, A. K., & Kresnayana, M. Y. (2020). Pengembangan Modul Komik Pendidikan Kesehatan Reproduksi Terhadap Peningkatan Pengetahuan dan Sikap Remaja Tentang Dampak Seks Pranikah di SMA N 2 Singaraja Kabupaten Buleleng Provinsi Bali. *Jurnal Kesehatan MIDWINERSLION*, 5(1), 176–183.

## AUDIOVISUAL MEDIA INCREASES PREGNANT MOTHERS' KNOWLEDGE AND ATTITUDE OF HEPATITIS B DURING COVID-19 PANDEMIC

Indah Permadani, Rani Widiyanti Surya Atmaja, Diyah Sri Yuhandini

Poltekkes Kemenkes Tasikmalaya

*indahpermadani2@gmail.com*

### Abstract

During pregnancy, mothers are at very high risk of getting infected with viruses, one of the viruses is hepatitis B. Hepatitis B is transmitted through horizontal and vertical ways. The knowledge deficit on pregnant mothers toward hepatitis B caused a lot of them to be infected with hepatitis B virus. One of solutions to increase their knowledge and attitude toward hepatitis B is by giving them health education with audiovisual media. The purpose of the study was to know if there was an impact of the health education with audiovisual media on the increase of pregnant mothers' knowledge and attitude toward hepatitis B in the working area of the Public Health Center of Waruroyom, Cirebon regency, in 2021. This research used *quasi experimental* methods which are *pretest and posttest with control group design*. Sample used in this research were 72 pregnant mothers obtained with *the purposive sampling* technique and the data collection used questionnaires. Based on the independent t-test on the knowledge variable, the obtained result was *p value* 0.00 whereas the obtained result on the attitude variable using *mann-whitney* was *p value* 0.00. Hence, there was an impact of education health with audiovisual media on the increase of pregnant mothers' knowledge and attitude toward hepatitis B. Audiovisual media can increase pregnant mothers' knowledge and attitude toward hepatitis B during Covid-19 Pandemic

**Keywords:** *Audiovisual, Knowledge, Attitude, Pregnant mothers, Hepatitis B*

### Introduction

During pregnancy, mothers are at very high risk of getting infected with viruses, one of the viruses is hepatitis B which attacks the liver. In pregnancy, the risk of pregnant women getting

Hepatitis B Virus (HBV) is actually similar to the risk of non-pregnant women getting the same disease at the same age, also this can happen in the third trimester of pregnancy. Pregnant mothers who have hepatitis B may gets

risks such as abortion, premature birth and bleeding. (- & Lestanti, 2018)

Horizontal transmission of HBV can be transmitted through percutaneous, mucous membrane or mucosa. Vertical transmission or Mother-To-Child-Transmission (MTCT) will happen when a pregnant mother who has acute hepatitis B or who has a persistent HBV transmits the virus to the baby in her womb or the baby she has given birth to. HBV transmission can be divided into VHB in-utero transmission, perinatal transmission, and postnatal transmission (Gozali, 2020).

According to the World Health Organization (WHO), the viral hepatitis B and C viruses affected 325 million people worldwide leading to about 1.4 million deaths a year. It is the second major killer infectious disease after Tuberculosis (TBC), and 9 times more people are infected with hepatitis than Human Immunodeficiency Virus (HIV). Hepatitis can be prevented and treated even in hepatitis C case, it can be cured. However, most of the people living with hepatitis - over 80% - lack access to prevention, testing and treatment (WHO, 2019)

According to Riskesdas (2018), the hepatitis infection in Indonesia has an average prevalence of 0.4 %, where 1-5% are pregnant mothers who have hepatitis B (riskesdas, 2018). The total number of HBsAG positive located in the working area of Puskesmas Waruroyom, Cirebon regency in 2019 were 7 cases and has grown as a result from January to October 2020 surpassing 17 cases of pregnant mothers having HBsAG positive (Dinkes, 2020).

With the new virus case, COVID-19, spreads so quickly both worldwide and in Indonesia, knowing no boundaries, can attack anyone without exception, including pregnant mothers and children. In this case, it caused the limitation of the access to provide health services especially antenatal care service for pregnant mothers

Health education is an application of education in health sector. Operationally, health education includes all activities of giving and increasing knowledge and attitude for individuals, groups or the public in order to maintain and improve their health (Notoatmodjo, 2012). By providing video media in delivering health education hopefully pregnant

mothers' knowledge and attitude toward hepatitis B can be increased.

## Method

This study uses a quantitative approach as the research method in the form of *quasi experimental design (pretest and posttest with control group design)*.

The study took place in the working area of the Public Health Center of Waruroyom, Cirebon regency. It was conducted from August 2020 to March 2021. The population of pregnant mothers during the July to November period was 120 people. The sample size was 36 people for each group. The sampling method was *purposive sampling*, a form of *nonprobability sampling*.

The research instrument used a questionnaire taken by the previous researcher, Nugroho, F, F, (2019), modified by the researcher and had been tested for its validity and reliability consisting of 18 knowledge questions using *Guttman* scale with Yes or No answers. On the other hand, there were 19 questions about attitude taken from the previous researcher, Wulandari, (2017) and modified by the researcher using *Likert* scale.

Inclusion criteria of pregnant mothers who are able to read and write, are ready to become respondents, have *gadgets* and are able to access the internet, are at 1st and 2nd of trimester, and agree to join the survey until they finish. Exclusion criteria included pregnant mothers who did not complete the questionnaires. After answering the pretest questionnaires, continued by being given intervention, the interval between intervention to posttest questionnaires completion was 1 week and in each 2 days respondents were reminded to watch the video again which were sent through WhatsApp group. Bivariate analysis used Independent t-test for knowledge variable and Mann-Whitney for attitude variable getting help on the 21.0 version of SPSS program.

## Results

Finding out the changes of knowledge before and after approach on the experimental and the control group, finding out the changes of attitude before and after approach on the experimental and the control group, finding out the changes of knowledge average before and after approach on the experimental and the control group,

and finding out the changes of attitude average before and after approach on the experimental and the control group.

The normality test used the Shapiro-Wilk statistical test because the sample < 50 (less than 50).

**Table 1. The Changes in the Pregnant Women' Knowledge Toward Hepatitis B Before and After Being Given Health Education on the Experimental and the Control Group (n=36)**

Knowledge	Group	Average (s.b)	Difference (s.b)	IK95%	P Value
Before audiovisual media intervention	Experimental	6,11 (5,70)	10,44(5,00)	8,75-12,1	0,000
After audiovisual media intervention		16,56 (1,56)			
Before leaflet intervention	Control	6,33(6,30)	6,25(4,96)	4,60-7,93	0,000
After leaflet intervention		12,60 (2,71)			

The average of knowledge on both the experimental group and the control group before intervention were almost similar. After being given intervention, both groups had increase but the

experimental group had bigger difference. While it was found out that both audiovisual media and leaflet had knowledge changes with *P value* 0.00.

**Table 1. The Changes in the Pregnant Women' Attitude Toward Hepatitis B Before and After Being Given Health Education on the Experimental and the Control Group (n=36)**

Attitude	Group	Average (s.b)	Differen ce (s.b)	IK95%	Median (Min-Max)	P Value
Before audiovisual media intervention	eksperimen	58,11 (6,30)	10,47 (5,70)	8,54-12,40	-	0,000
After audiovisual media intervention		68,58 (4,52)				
Before leaflet intervention	Kontrol	-	-	-	56,00 (49-71)	0,001
After leaflet intervention		-	-	-	69,00 (54-76)	

The average of attitude on both the experimental group and the control group before intervention were almost

similar. After being given intervention, there was an increase with 10,47 differences in the experimental group

while the control group had 9 subjects' attitudes decreased, 4 stayed the same, and 23 increased. While it was found

out that both audiovisual media and leaflet had attitude changes with *P value* 0.00.

**Table 3. The Changes of Pregnant Mothers' Knowledge Average Toward Hepatitis B on Experimental and Control Groups**

Group	Average (s.b)	Average Difference (IK95%)	<i>P Value</i>
Experimental	10,44 (5,00)	3,57 (1,85-6,53)	0,000
Control	6,25 (4,96)		

There was average difference on the experimental and control groups with *P value* 0.00

**Table 3. The Changes of Pregnant Mothers' Attitude Average Toward Hepatitis B on Experimental and Control Groups**

Group	Median (Min-Max)	<i>P Value</i>
Experimental	10,50 (0-22)	0,000
Control	2,00 (-6-19)	

There was average difference on the experimental and control groups with *P value* 0.00

**Discussion**

The obtained analysis stated that there is an increase on the knowledge level of the pregnant mothers before and after having the health education that used both audiovisual media and leaflet with *p value* 0.000. This result is in line with the theory of Notoatmodjo, (2010) that one of the factors that can affect

someone's level of knowledge is mass media or information.

The delivery of information in this research was conducted through health education where education health is an application of education in the health sector (Notoatmodjo, 2012). This result is in line with the theory of (Permatasari et al., 2017) who stated that there is a significant difference on

the knowledge level; between *pretest-posttest* with *p* value 0,000 ( $<0,05$ ).

Meanwhile, for the attitude before and after the approach, the result also described that there were differences on the experimental and control group because of the *p* value  $<0,05$ . According to Azwar (2013), one of the factors that can influence someone's attitude is mass media. In accordance with the J et al (2019) that there is an effect of health education with video media on the prevention of diarrhea disease with the *p* value 0,000.

The analysis result for the knowledge average difference on the experimental and control groups with *p* value  $<0,05$  therefore audiovisual media can increase the knowledge of pregnant mothers during Covid-19 pandemic compared with the leaflet media. The outcomes of health education gave significant impact on the increase of someone's level of knowledge. There were many ways to be done in giving health education to targets, one of the ways is through video. Based on the explained theory of Cahyo (2001) that *Audio visual* media is a supporting tool for someone to receive a message, so he or she can get useful knowledge and experiences to reach the goals and the

targeted knowledge (in this case, it is the brain and memory practice). In line with the research of Jafar,S (2021) that there is an increase of knowledge and attitude toward the risk of hepatitis B before and after the approach of giving the health education using audiovisual media with *p* value 0,000 or  $<0,05$  on the knowledge variable, on contrary, the result of *p* value on the attitude variable was 0,004 atau  $<0,05$ .

This study is not in line with the study conducted by Yuniwati (2019) declared that there is no difference on the average score on the level of knowledge among the audiovisual media group before and after intervention in which *p* value 0,137  $<0,05$ .

On the average difference of the pregnant mothers' attitude on the experimental and control group the *p* value obtained was 0,000 atau  $<0,05$  which means audiovisual media can increase pregnant mothers' attitude toward hepatitis B, in comparison with the leaflet media. According to Notoatmodjo (2010) attitude was a reaction or response that is still closed from the stimulus. Or certain objects which involve related opinions and emotional factors (happy-unhappy,

agree-disagree, good-bad, like-dislike, and so on. In accordance with the theory. The researcher assumed that the use of video media was very different with other medias, because video has more understandable pictures and sounds. In line with the research conducted by Lisa et al (2020) that there is a significant change or difference between education through video media and leaflet media toward personal's hygiene attitude during teenager menstruation period *p value* 0,000 that means  $H_0$  was rejected and  $H_a$  was accepted. While the attitude that obtains *p* 0,001 means  $H_0$  was rejected and  $H_a$  was accepted and the treatment's *p value* 0,001 means  $H_0$  was rejected and  $H_a$  was accepted.

It is different with the other research that was done by Andriani, (2020) whose statement there was an impact of health education on the knowledge of school age children with *p value* 0,025 and there was no impact of health education on the school age children's attitude as the *p value* 0,510 toward dengue fever disease.

## Conclusion

The conclusion is that the method of audiovisual media increased both pregnant mothers' knowledge and attitude during the Covid-19 pandemic in the Working Area of Waruroyom Public Health Center, Cirebon regency in 2021.

## Suggestion

The suggestion for the public health center was to give online education health so the pregnant mothers would not miss any informations. Next, for the research in the future it is suggested that the study can develop media, appraisal and attitude.

## Reference

- , R.-, & Lestanti, D. M. (2018). *Konseling Individual Dan Media Leaflet Meningkatkan Pengetahuan Ibu Hamil Tentang Hepatitis B Dalam Kehamilan Di Kelurahan Tanjung Ayun Sakti Wilayah Kerja Puskesmas Sei Jang Kota Tanjungpinang Tahun 2017. Photon: Jurnal Sain Dan Kesehatan*, 9(1), 122–129. <https://doi.org/10.37859/jp.v9i1.1065>
- Azwar, S. (2013). *Sikap Manusia: Teori dan Pengukurannya*. Pustaka Pelajar.



- Cahyo, A. N. (2001). *Berbagai Cara Latihan Otak dan Daya Ingat Dengan Menggunakan Ragam Media Audio Visual*. DIVA Press.
- Dinkes. (2020). *Data Hepatitis B Ibu Hamil*. Dinas Kesehatan.
- Gozali, A. P. (2020). Diagnosis , Tatalaksana , dan Pencegahan Hepatitis B dalam Kehamilan. *CDK Journal*, 47(5), 354–358.
- J, H., Oktavidiati, E., & Astuti, D. (2019). Pengaruh Pendidikan Kesehatan Media Video dan Poster terhadap Pengetahuan dan Sikap Anak dalam Pencegahan Penyakit Diare. *Jurnal Kesmas Asclepius*, 1(1), 75–85. <https://doi.org/10.31539/jka.v1i1.747>
- Jafar,S, R. (2021). Pendidikan Kesehatan Pada Remaja Tentang Faktor Risiko Berhubungan Penyakit Hepatitis B Dengan Media Video. *Media Bina Ilmiah*, 15. <http://ejurnal.binawakya.or.id/index.php/MBI>
- Lisa, L. H., Kurnaesih, E., & Sundari. (2020). Pengaruh Edukasi Melalui Media Video Dan Leaflet Terhadap Perilaku Personal Hygiene Pada Masa Menstruasi Remaja Di SMPN 2 Toili Kec. Mailong Kab. Banggai. *Journal of Aafiyah Health Research (JAHR)*, 1(1), 19–27. <https://doi.org/10.52103/jahr.v1i1.92>
- Notoatmodjo. (2010). *Promosi Kesehatan dan Teori Aplikasi*. Rineka Cipta.
- Notoatmodjo. (2012). *Pendidikan dan Perilaku Kesehatan*. Rineka Cipta.
- Nugroho, F, F, A. (2019). *Faktor-Faktor Yang Berhubungan Dengan Pengetahuan Ibu Hamil Tentang Hepatitis B Pada Ibu Hamil Di Puskesmas Kecamatan Cilincing [Poltekes jakarta 3]*. [http://repository.poltekkesjakarta3.ac.id/index.php?p=show\\_detail&id=1854&keywords=](http://repository.poltekkesjakarta3.ac.id/index.php?p=show_detail&id=1854&keywords=)
- Permatasari, A., rezal, F., & Munandar, S. (2017). Efektifitas Media Audio Visual Dan Leaflet Terhadap Peningkatan Pengetahuan, Sikap Dan Tindakan Tentang Pencegahan Penyakit Gastritis Pada Santriwati Di Pondok Pesantren Hidayatullah Putri Dan Ummusshabri Kota Kendari Tahun 2017. *Jurnal Ilmiah Mahasiswa Kesehatan Masyarakat Unsyiah*, 2(6), 184073. <https://doi.org/10.37887/jimkesmas>
- riskesdas. (2018). *Laporan Nasional Riskesdas 2018*. [http://labdata.litbang.kemkes.go.id/images/download/laporan/RKD/2018/Laporan\\_Nasional\\_RKD2018\\_FINAL.pdf](http://labdata.litbang.kemkes.go.id/images/download/laporan/RKD/2018/Laporan_Nasional_RKD2018_FINAL.pdf)
- WHO. (2019). *Hepatitis B. World Health Organization*. <https://www.who.int/campaigns/world-hepatitis-day/2019>
- Wulandari, F. (2017). *FAKTOR-FAKTOR YANG MEMPENGARUHI PEMANFAATAN PROGRAM SKRINING HEPATITIS B PADA IBU HAMIL DI PUSKESMAS KECAMATAN KEMBANGAN TAHUN 2017 [Universitas Esa Unggul]*.

<https://digilib.esaunggul.ac.id/faktor-faktor-yang-mempengaruhi-pemanfaatan-program-skrining-hepatitis-b-pada-ibu-hamil-di-puskesmas-kecamatan-kembangan-tahun-2017-9616.html>

Yuniwati, C., Yusnaini, Y., & Khatimah, K. (2019). Pengaruh Media Audio Visual Dan Media Leaflet Terhadap Tingkat Pengetahuan Remaja Mas Darul Ihsan Aceh Besar Tentang Hiv/Aids. *Jurnal Ilmiah PANNMED (Pharmacist, Analyst, Nurse, Nutrition, Midwivery, Environment, Dentist)*, 13(2), 116–120.  
<https://doi.org/10.36911/pannmed.v13i2.398>

**DESCRIPTION OF MIDWIFERY STUDENT KNOWLEDGE ABOUT  
1000 HARI PERTAMA KEHIDUPAN (HPK) BASED ON MEDIA  
INSTITUTE OF HEALTH SCIENCES KUNINGAN 2020**

<sup>1</sup>Evi Soviyati, <sup>2</sup>Toto Sutarto Gani Utari, <sup>1</sup>Tri Hardini

<sup>1</sup>STIKes Kuningan, <sup>2</sup>Universitas Pasundan Bandung

*eviesofia73@gmail.com*

**Abstract**

The first 1000 days of life or 1000 Hari Pertama Kehidupan (HPK) is a period starting from the beginning of pregnancy until the baby is 2 years old. Knowledge of 1000 HPK is very important for midwifery students as a benchmark for health workers in serving clients in the future. About 6 in 10 students still do not understand and know about the First 1000 Days of Life. The purpose of this study was to describe the level of knowledge of midwifery students about the first 1000 days of life based on media sources at the Kuningan College of Health in 2020. Descriptive research method with observational design, population of midwifery students of level II as many as 40 people, using a total sampling technique. Direct data collection (primary data) using a questionnaire. Data analysis using univariate analysis. The results showed that most midwifery students level II had less knowledge of 20 respondents (50%), most of the media sources for obtaining information about HPK were mostly audio-visual 32 (80%), and the level of knowledge of midwifery students level II about 1000 HPK based on media sources. as many as 17 (42.5%) had less knowledge. It is recommended that level II midwifery students get information about 1000 HPK not only through the media but can seek information from various sources, for the Midwifery Study Program to be used as evaluation material, as input for developing an additional curriculum related to 1000 HPK in the Midwifery Care course so that it can increase student knowledge.

*Keywords: HPK ; Knowledge; Midwifery Students; Media Resources.*

**Introduction**

The First 1000 Days of Life or 1000 Hari Pertama Kehidupan (HPK) is an event

where a mother begins to become pregnant for 9 months until her baby is 2 years old. This period is also called the golden age

period because at this time the baby's growth has experienced very rapid growth and development and that period will never be repeated at any time. For this reason, to support the growth and development of these babies, it is necessary to fulfill needs such as nutrition, parenting, health checks and others. If the needs in 1000 HPK are not fulfilled, it will have an impact on the growth and development of the baby such as impaired brain development, intelligence, physical and mental development so that these disorders will affect their future.

Midwifery students as prospective midwives must understand and understand about 1000 HPK, because in the future, they will prepare women to become good prospective mothers. Thus, good student knowledge is needed to support this. The low level of knowledge of midwifery students will have an impact on the baby the mother will deliver. In addition, the impact felt by herself as a midwife is the stigma of society regarding her being incompetent in serving the community, especially women who will become prospective mothers so that the midwife will no longer be trusted by the community.

Print media and mass media are a means of obtaining various information needed by everyone, including information about 1000 HPK which can be used as knowledge by midwifery students. At this time there are many media sources available, even so we must remain selective in using these media sources so that the knowledge we seek can be accounted for.

According to (Rahayu, 2018), the 1000 HPK Movement is a movement to accelerate nutrition improvement adopted from the Scaling Up Nutrition (SUN) Movement. The SUN Movement is a global movement under the coordination of the UN Secretary General. The global goal of the SUN Movement is to reduce nutritional problems in 1000 HPK, from early pregnancy to 2 years of age states that the bad effects that can be caused by nutritional problems in the short term are disruption in brain development, intelligence, physical development disorders and metabolic disorders in the body, while in the long term the bad effects that can be caused are reduced cognitive abilities and learning achievement, decreased immunity so that you get sick easily, and a high risk for diabetes, obesity, heart disease and blood vessels, cancer,

stroke, and disabilities in old age. All of this will reduce the quality of Indonesia's human resources, productivity and national competitiveness.

According to UNICEF, in (Patimah, 2017) states that the critical period is a period of rapid growth of the number or size of cells during which cells are prone to loss. The vulnerability occurs during a period of maximum growth speed. This is the maximum period which is the potential for determining the end of cell development.

According to the National Education Association (NEA) in (Riyanto, 2014) media are forms of printed and audiovisual communication and their equipment. The media should be manipulable, visible and readable. they state that learning resources are used in education and training in a system consisting of a set of materials or situations that are created on purpose and created to allow students to learn individually.

Research results from (Dattilo & Saavedra, 2020) Healthy growth during the first 1,000 days, spanning from conception to age 24 months, represents a crucial period which influences the long-term physical and cognitive development of

individuals, Considerations related to intervention design, behavior change strategies, and scale-up efforts are needed to improve the efficacy of nutrition education strategies in early nutrition.

Based on the results of the study, it can be concluded that there is an effect of nutrition education about 1000 HPK on the knowledge and nutritional attitudes of female students. The results of preliminary studies that have been carried out on students of the Diploma and Bachelor Midwifery study programs at Institute of Health dan Science Kuningan (STIKes Kuningan) from the first to the third level are obtained values that vary from the smallest to the largest score. The range of values obtained was from the value 5 to the value 8. There were 10 questions asked of 10 students of various levels regarding the First 1000 Days of Life based on media sources. The percentage of students who get a score of 5 is 40%, then those who get a score of 6 are 30% and 7 are 20% and who get the highest score of 8 is 10%. That way the accumulated percentage of students who get a score of more than 5 is 60% and students who get a score of 5 are 40%, but there are 2 students who get a score of more than 5 in a bad way by looking at the answer on the internet and

asking other people. So, indirectly, the 2 students did not know about the first 1000 days of life, so the researcher was interested in conducting research with the title " Description Of Midwifery Student Knowledge About 1000 Hari Pertama Kehidupan (Hpk) Based On Media Institute Of Health Sciences Kuningan 2020”

### Methods

This type of research is a descriptive method. The research design used an observational design. The population in this study were students of midwifery level II because they had received courses on Midwifery Care as many as 40 students who were at the Institute of Health Sciences. The number of samples in this study were 40 student taken from

midwifery students level II. The sampling technique in this total sampling.

The independent variable in this study is the source of the media used by midwifery students who are at Institute of Health, Kuningan. The dependent variable is the level of knowledge of midwifery students about 1000 HPK. Data collection that has been standard or data collection tools that have standards of validity and reliability. The instrument in this study was to use a questionnaire containing the knowledge of mid-level midwifery students and 1000 HPK to determine the knowledge of midwifery students level II about the first 1000 days of life based on media sources. This questionnaire uses the google form application.

### Result

**Table 1. Distribution of Frequency Levels of Knowledge and Media Source of Midwifery Students about 1000 HPK**

Knowledge	Frequency	Percentage (%)
Well	2	5
Enough	18	45
Less	20	50
Total	40	100
Media sources	Frequency	Percentage (%)
Audio	2	5
Visual	6	15
Audio visual	32	80
Total	40	100

Source : 2020 Research Result

The following is a table of frequency distribution of media sources for midwifery students level 2 as many as 20 respondents (50%), knowledgeable enough as many as 18 respondents (45%), and good knowledge as many as 2 respondents (5%). And the results show that from 3 kinds of media sources, most of the

respondents were audio-visual as In addition, here is a table of frequency distribution of the level of knowledge of midwifery students about the first 1000 days of life based on media sources many as 32 respondents (80%), visual media were 6 respondents (15%) and media sources form of audio were 6 respondents (5%).

**Table 2. Cross Tab Levels of Knowledge of Midwifery Students About 1000 HPK and Media Sources**

Media Sources	Knowledge						Total	
	Well		Enough		Less		F	%
	F	%	F	%	F	%		
Audio	0	0	0	0	2	5	2	5
Visual	0	0	5	12,5	1	2,5	6	15
Audio Visual	2	5	13	32,5	17	42,5	32	80
Total	2	5	18	45	20	50	40	100

Source: 2020 research results

Based on table 3 above, it can be seen that of the 40 respondents there are 20 respondents who have less knowledge of using media sources in the form of audio as many as 2 respondents (5%), visual as many as 1 respondent (2.5%) and the use of audio-visual by 17 respondents (42.5%). Then of the 18 respondents who have sufficient knowledge, none of them use media sources in the form of audio (0%),

while the use of visual media is only 12.5% or only 5 respondents use it and for the use of audio visual there are 32.5% or there are 13 respondents who use it. Furthermore, for students who have good knowledge there are only 2 respondents with a percentage of 5% and 2 respondents only use media sources in the form of audio-visuals.

## Discussion

Based on the description of table 1, it is found that some of the level of knowledge of midwifery students about the first 1000 days of life is in the poor category (50%) of the 40 respondents.

Based on the results of the study, this is due to the lack of interest of respondents in seeking and digging information on their own desires, lack of support, encouragement and motivation from people around the respondent towards the respondent's learning process, especially in studying 1000 HPK, respondents are more interested in something that makes he feels happier than looking for information about 1000 HPK such as playing on social media (whatsapp, Instagram, twitter, facebook and others), the lack of facilities and infrastructure owned by respondents such as quotas, networks, etc. so that respondents do not know about 1000 HPK, this results in a lack of student knowledge. Based on the description of table 2, it can be concluded that the media sources of midwifery students about the first 1000 days of life mostly use media sources in the form of audio-visual (80%) or there are 32 users (respondents) media sources from 40 respondents.

Based on the results of the research, this is because audio visual is one of the media sources that is easier to understand because audio visuals display video or recordings so that those who see it are easier to remember, it is more interesting to watch because in the audio visual there are images, videos as well as sound make respondents excited to see it, the process of capturing power is faster than other media sources because this audio visual consists of images and sounds that can be heard and seen. In addition, due to the increasingly sophisticated process of the times, this audio visual is easy to carry anywhere, to use anywhere, and anytime because it is already included in a gadget (handphone) whether it is connected to an internet connection or not.

This study is in accordance with the results of research (Trisnawati et al., 2016) The results of this study are that most of the respondents' knowledge about nutrition in the first 1000 days of life is good, and most of the respondents' attitudes towards nutrition in the first 1000 days of life are supportive. However, after being tested there was no correlation between knowledge and attitudes of pregnant women towards nutrition in the first 1000



days of lifenamely the fisher exact value was 0.589.

This is in line with research from (Mardiana et al., 2020) Nutrition counseling is a learning process to develop understanding and positive attitudes towards nutrition so as to form and have good eating habits. The research aims to increase knowledge and attitudes as well as nutrition intake of pregnant women through the media drama of the first thousand days of life at the 11 Ilir Health Center in Palembang. Types of research Quasi-experimental with pretest posttest with control design. The results of the independent t test statistic test found a significant effect of 1000 HPK Drama Interventions on the average score of knowledge, attitude, intake of E, P, KH, Fe, and there was no effect of fat intake of respondents in both groups.

### Conclusion

1. An overview of the level of knowledge of midwifery students about 1000 HPK at Institute of Health Kuningan, some of them fall into the low category, namely as many as 20 respondents with a percentage of 50%.
2. Description of media sources for midwifery students about 1000 HPK at

Institute of Health Kuningan that almost all of them use media sources in the form of audio visuals by 80% or as many as 32 users (respondent). An overview of the level of knowledge of midwifery students about 1000 HPK on media sources at Institute of Health Sciences, Kuningan there were 20 respondents who were included in the category of lack of knowledge using media sources in the form of audio use by 2 respondents (5%), visual 1 respondent (2.5%) and audio visual use by 17 respondents (42.5%).

### Suggestion

#### 1. Midwifery Students

It is hoped that students will be more active in finding out information about 1000 HPK either through the level of education that is currently being taken or from various media sources that are better and more relevant so that they can prepare mothers in the future starting from early pregnancy to the baby's age 2 years.

#### 2. STIKES Kuningan

It is hoped that they can become one of the facilitators for students in supporting learning and digging deeper into information about the first 1000 days of life so that it can indirectly develop a curriculum, especially in the course of

Maternity Care for Pregnancy, Childbirth,  
Newborns, Infants, Toddlers and Pre  
School children.

Thousand Days First Life Media  
Drama. *Jurnal Midpro*, 12(1), 25–32.

## Reference

### Journal:

Dattilo, A. M., & Saavedra, J. M. (2020).  
Nutrition education: application of  
theory and strategies during the first  
1,000 days for healthy growth. In  
*Nutrition Education: Strategies for  
Improving Nutrition and Healthy  
Eating in Individuals and  
Communities* (Vol. 92, pp. 1–18).  
Karger Publishers.

Mardiana, M., Yulianto, Y., Yuniarti, H.,  
& Susanto, E. (2020). Increased of  
Knowledge, Attitudes, and Nutrient  
Intake Pregnant Women Through a

Trisnawati, Y., Purwanti, S., & Retnowati,  
M. (2016). Descriptive Study of  
Knowledge and Attitudes of Pregnant  
Women on Nutrition in the First 1000  
Days of Life at Sokaraja Health  
Center, Banyumas Regency. *Jurnal  
Kebidanan*, 8(02).

### Text Book:

Patimah, S. (2017). *Nutrition for Young  
Women plus the First 1000 Days of  
Life*. PT. Refika Aditama.

Rahayu, A. (2018). *Nutrition of the First  
Thousand Days of Life*. CV Mine.

Riyanto, B. (2014). *Knowledge and  
Attitudes Questionnaire in Health  
Research*. Salemba Medika.

**THE EFFECT OF HYDROTHERAPY ON THE REDUCTION OF BLOOD  
PRESSURE IN PREGNANT WOMEN WITH HYPERTENSION AT THE  
PRIMARY HEALTH CARE ASTANAJAPURA  
CIREBON DISTRICT IN 2019**

Larasyati Sholekha, Entin Jubaedah, Lia Nurcahyani

Poltekkes Kemenkes Tasikmalaya

*larasyatis@gmail.com*

**Abstract**

One of the causes of maternal mortality and morbidity is pregnancy induced hypertension (PIH). One of many hypertension management in pregnancy with non-pharmacological is hydrotherapy, which is soaking the feet using warm water for 20 minutes. This study aims to determine the differences in systolic and diastolic blood pressure in the hydrotherapy group with a temperature of 40° - 43° compared to temperatures of 37° - 39°.

The study using Quasi-Experimental non-randomized pre-test and post-test with control design on 22 hypertensive pregnant women using purposive sampling technique. Research instruments included observation sheets, sphygmomanometer, stethoscope, and digital water thermometer. Univariate and bivariate data analysis using the Wilcoxon and Mann-Whitney tests.

This study showed difference of systolic blood pressure p value 0,000 and difference of diastolic p value 0,013 ( $p < 0,05$ ), therefore there were differences in systolic and diastolic blood pressure in the hydrotherapy group with a temperature of 40° - 43° compared to 37° - 39°. Hydrotherapy using temperature of 40° - 43° is better to use than temperature of 37° - 39°. Midwives can use hydrotherapy as an early treatment alternative for hypertensive pregnant women.

*Keywords : Decrease In Blood Pressure; Hydrotherapy; Hypertension; Pregnant Women.*

---

## Introduction

The maternal mortality rate is very high. According to the World Health Organization in Alkema et al. (2016) worldwide, around 830 women die every day due to complications related to pregnancy or childbirth. It is estimated that in 2015, approximately 303,000 women died during and after pregnancy and childbirth (WHO, 2018). According to (WHO, 2018), 75% of the causes of maternal mortality in the world are heavy bleeding (mostly bleeding after childbirth), infection (usually after childbirth), high blood pressure during pregnancy (pre-eclampsia and eclampsia), complications from childbirth and unsafe abortion.

Hypertension in Pregnancy (HDK) is one of the causes of maternal morbidity and mortality besides bleeding and infection. In Indonesia, the Maternal Mortality Rate according to the Indonesian Health Demographic Survey (IDHS) in 2012 shows a significant increase, namely 359 maternal deaths per 100,000 live births. MMR again shows a decrease to 305 maternal deaths per 100,000 live births based on the results of the 2015 Inter-Census Population Survey (SUPAS) (Ministry of Health, 2017). Preeclampsia and eclampsia are the causes of 30-40% of perinatal deaths, while in several Indonesian hospitals it has shifted bleeding as the main cause of maternal death (Fadlun & Feryanto, 2011). Based on District / City health reports in 2016, in West Java the number of maternal deaths was

799 people (84.78 / 100,000 KH) (West Java Provincial Health Office, 2016). In Cirebon Regency in 2015, the number of maternal deaths was recorded as many as 53 people, in 2016 it decreased to 47 people, and in 2017 it decreased again to 39 cases. The highest cause of maternal death in Cirebon Regency in 2017 was eclampsia 44%, bleeding 18%, heart disease 8%, Diabetes Miletus 5%, infection 2% and others 23%. In Cirebon Regency, the most cases of hypertension in pregnancy occurred in the Work Area of the Primary Health Care Astanajapura, namely, in 2015 there were 47 cases, in 2016 it had increased to 79 cases, in 2017 it had decreased to 56 cases and in 2018 from January to November there were 76 cases of hypertension in pregnancy have increased.

Blood pressure is the lateral force on the artery wall by blood that is pushed with pressure from the heart (Potter & Perry, 2010). Blood pressure is measured in units of Hydrargyrum millimeters (mmHg) and recorded in two numbers, namely systolic pressure (when the heart beats) and diastolic pressure (when the heart relaxes) (LeMone, & Burke, 2008). Hypertension is a medical problem that often occurs during pregnancy and can cause complications in 2-3% of pregnancies. Hypertension in pregnancy is defined as systolic blood pressure  $\geq 140$  mmHg and diastolic blood pressure  $\geq 90$  mmHg (Robson, S. E. & Waugh, 2013). Hypertensive disorders due to pregnancy induced hypertension (PIH) can cause morbidity / pain

in the mother (including eclamptic seizures, cerebral hemorrhage, pulmonary edema (fluid in the lungs), acute kidney failure, and blood clots in the blood vessels (Fadlun & Feryanto, 2011). There is also an impact on perinatal mortality due to conditions associated with placental abruption, intrauterine growth restriction in normal fetuses, and preterm birth. 500-600 babies each year die due to PIH (Medforth et al., 2015).

Hypertension can be treated pharmacologically and non pharmacologically or what is called complementary therapy. Pharmacological treatment of hypertension certainly contains chemicals that can cause side effects, while non-pharmacological treatment is natural treatment including herbal therapy, nutritional therapy, aromatherapy, reflexology massage and foot soaking therapy with warm water (Nurahmandani, A. R., Hartati, E. & Supriyono, 2016) Hydrotherapy is a therapy that is done by soaking the feet in warm water, this therapy will provide a relaxing effect, reduce pain and increase the ability of the tools to move. Scientifically, warm water has a physiological impact on the body. The hydrostatic pressure of water against the body encourages the enlargement of blood vessels from the legs to the chest cavity and blood will accumulate in the blood vessels of the heart. Warm water will dilate blood vessels, reduce blood viscosity, reduce muscle tension, increase tissue metabolism and increase permeability (Nurahmandani, A. R., Hartati, E. & Supriyono,

2016). Hydrotherapy or warm water soaking is one type of natural therapy that aims to improve blood circulation, reduce edema, increase muscle relaxation, nourish the heart, relax muscles, relieve stress, muscle aches, relieve pain, increase capillary permeability, provide warmth to body so it is very useful for blood pressure reduction therapy in hypertension (Dilianti, Candrawati, & W, 2017).

### **Method**

The research method used is Quasi-Experimental non-randomized pre-test and post-test with control group design. This type of research is quantitative with an analytic research design (Arikunto, 2010). This study analyzed the differences in blood pressure in the hydrotherapy group with a temperature of 40° - 43° compared to 37° - 39°.

The population is the entire research subject (Arikunto, 2010) . The population in this study were all pregnant women with hypertension in the working area of the Primary Health Care Astanajapura for the period February s.d. April 2019.

The sample is part or representative of the population under study (Arikunto, 2010). The sampling technique used in this study is the Non Random Sampling technique with purposive sampling, which is a sampling technique with certain considerations (Sugiyono, 2015). The research sample was all pregnant women with hypertension in the work area of the Primary Health Care Astanajapura,

Cirebon Regency in the period February to April 2019, the sample size was calculated using sample size software based on previous research entitled The Effectiveness of Soaking Feet With Warm Water Against Lowering Blood Pressure in Mothers Pregnancy with Preeclampsia at Ngaliyan Public Health Center Semarang by Sabbatani, C. F., Machmudah & Supriyono, (2016), and a study by Rahim, et al., (2015) entitled the effect of warm foot soaking on changes in blood pressure in pregnant women with hypertension, using the hypothesis test for two population means (one -side test):

$$n = \frac{2\sigma^2 (Z_{1-\alpha/2} + Z_{1-\beta})^2}{(\mu_0 - \mu_a)^2}$$

With a level of significance (%)  $\alpha = 5$ , power of the test  $1-\beta = 80$ , population standard deviation,  $\sigma = 5,476$ , population variance  $\sigma^2 = 29.986576$ , test value of the population means,  $\mu_0 = 15$ ,  $3$ , Anticipated population mean,  $\mu_a = 9$ , obtained a sample of  $n = 10$ . Then the minimum number of subjects needed is 10 people, taking into account the drop out rate of 10% ( $f = 0.1$ ), then the estimated study subjects are calculated based on formula:

$$n' = \frac{n}{(1 - f)}$$

Then the minimum number of samples in this study for each group is 11 people. If it is assumed that the number of hypertensive pregnant women who get hydrotherapy with a temperature of  $40^\circ - 43^\circ$  and a temperature of

$37^\circ - 39^\circ$ , the estimated minimum total sample size is 22 people.

Data collection uses primary data and secondary data. Secondary data is data obtained from village midwives at the Primary Health Care Astanajapura regarding pregnant women with hypertension or blood pressure  $\geq 140/90$  mmHg as respondents for the period February to April 2019. Primary data is about the identity of the respondent, and the results of blood pressure measurements taken before and after the intervention was given at the respondent's house using an observation sheet.

Researchers conducted blood pressure checks using a sphygmomanometer and a stethoscope on the respondents, the results were recorded on the observation sheet. The respondent's family or companion prepares warm water, a bucket for soaking the feet and preparing a closed room. Researchers measured the temperature of the water using a digital water thermometer. Warm water in group I with a temperature of  $40^\circ - 43^\circ$  and group II with a temperature of  $37^\circ - 39^\circ$ . Water is poured into the bucket. After that, a hydrotherapy intervention was carried out, namely soaking the mother's feet to the top of her ankles for 20 minutes in a bucket of warm water that had been prepared. Tidy up used tools and encourage the mother to rest for 30 minutes. After completion, the researchers conducted blood pressure checks on respondents, the results were recorded on the

observation sheet. This treatment is only done once while the mother is at rest.

the classification of hypertension, age, and parity, is as follows:

## Results

The description of the characteristics of pregnant women with hypertension based on

**Table 1. Frequency Distribution of Pregnant Women with Hypertension Based on the Classification of Hypertension, Age and Parity in the Work Area of the Primary Health Care Astanajapura Cirebon Regency in 2019**

Variable	Frequency	Percentage (%)
Classification of Hypertension		
Chronic Hypertension	2	9.1
Gestational Hypertension	19	86.4
Peeclampsia	1	4.5
Total	22	100
Age (Years)		
21-35	15	68,2
>35	7	31,8
Total	22	100
Parity		
Primipara	3	13,6
Multipara	18	81,8
Grandemultipara	1	4,5
Total	22	100

Normality test is the distribution to determine the distribution of normal or abnormal data. Data presentation and hypothesis testing depend on whether the data is normal or not. For data presentation, if the distribution is normal, use means and standard

deviations. If the distribution is not normal, use the median and percentile. To test the hypothesis, if the distribution is normal, use a parametric test. If the distribution is abnormal, use a non-parametric test. Normality test using Shapiro-wilk if n 50 (Dahlan, 2017).

**Table 2. Normality Distribution using Shapiro-Wilk on the Difference in Systolic and Diastolic Blood Pressure Pregnant Women with Hypertension with Hydrotherapy in the Work Area of the Primary Health Care Astanajapura Cirebon Regency in 2019**

		N	Median (Minimum-Maksimum)	Mean	P
<i>Pre-test Sistolik</i>	<i>Negative Ranks</i>	11 <sup>a</sup>	140 (140-180)	150.91	0.003
	<i>Positive Ranks</i>	0 <sup>b</sup>			

<i>Post-test Sistolik</i>	<i>Ties</i>	0 <sup>c</sup>	130 (110-170)	134,91	
	Total	11			
<i>Pre-test Diastolik</i>	<i>Negative Ranks</i>	9 <sup>d</sup>	90 (80-110)	94,55	
	<i>Positive Ranks</i>	0 <sup>e</sup>			0.005
<i>Post-test Diastolik</i>	<i>Ties</i>	2 <sup>f</sup>	84 (70-100)	86,18	
	Total	11			

**Table 3. Results of Wilcoxon Test Analysis for Systolic and Diastolic Variables in Pregnant Women with Hypertension by Giving Hydrotherapy Using a Temperature of 37° - 39° in the Work Area of the Primary Health Care Astanajapura Cirebon Regency in 2019**

	Median (Minimum-Maksimum)	Mean Rank	P
Temperature 40° - 43°	16 (10-30)	16.55	0.000
Temperature 37° - 39°	6 (2-10)	6.45	

**Table 4. Results of the Mann-Whitney Test Analysis Based on the Difference in Systolic Blood Pressure in Pregnant Women with Hypertension by Giving Hydrotherapy Using Temperatures of 40° - 43° and 37° - 39° in the Work Area of the Primary Health Care Astanajapura Cirebon Regency in 2019**

	N	Median (Minimum-Maksimum)	Mean	P
<i>Pre-test Sistolik</i>	<i>Negative Ranks</i>	11 <sup>a</sup>	140 (140-150)	0.003
	<i>Positive Ranks</i>	0 <sup>b</sup>		
<i>Post-test Sistolik</i>	<i>Ties</i>	0 <sup>c</sup>	134 (130-148)	
	Total	11		
<i>Pre-test Diastolik</i>	<i>Negative Ranks</i>	8 <sup>d</sup>	90 (80-90)	0.011
	<i>Positive Ranks</i>	0 <sup>e</sup>		
<i>Post-test Diastolik</i>	<i>Ties</i>	3 <sup>f</sup>	84 (80-100)	
	Total	11		

**Table 5. Results of the Mann-Whitney Test Analysis Based on the Difference in Diastolic Blood Pressure in Pregnant Women with Hypertension by Giving Hydrotherapy Using Temperatures of 40° - 43° and 37° - 39° in the Work Area of the Primary Health Care Astanajapura Cirebon Regency in 2019**



	<b>Median (Minimum-Maksimum)</b>	<b>Mean Rank</b>	<b>P</b>
Temperature 40° – 43°	10 (0-16)	14.86	0.013
Temperature 37° – 39°	6 (0-8)	8.14	

### Discussion

Based on table 1, it can be seen that most pregnant women in the work area of the Primary Health Care experienced gestational hypertension, as many as 19 people (86.4%), while 2 people with chronic hypertension (9.1%), and 1 person with mild preeclampsia (4.5%). Most pregnant women experience gestational hypertension starting from gestational age > 20 weeks. According to the theory, gestational hypertension is hypertension without proteinuria after 20 weeks of gestation and disappears after delivery. Chronic hypertension is hypertension without proteinuria that arises from before pregnancy and persists after delivery. (Ministry of Health of the Republic Indonesia, 2017).

This study is in line with research conducted by Rahim et al., (2015), entitled The Effect of Warm Water Foot Soak on Changes in Blood Pressure of Pregnant Women with Hypertension, the results of the study are the history of hypertension in third trimester pregnant women who experience hypertension in the Kahuripan

Health Center Work Area is in the gestational category, namely as many as 15 people (88.2%).

Based on table 2, it can be seen that the majority of pregnant women experiencing hypertension are at the age of 21-35 years, namely 15 people (68.2%), while age > 35 are 7 people (31.8%). The results of this study are supported by research conducted by (Jumaiza, et al., 2018) with the title Analysis of Factors Associated with the Incidence of Hypertension in Third Trimester Pregnant Women, the results of research on age with hypertension in pregnancy, most of the respondents were 24 people (60%) 20-35 years old. Researchers argue that pregnant women can experience pregnancy hypertension at a young or old age. The possibility that can cause most pregnant women to experience gestational hypertension at the age of 20 - 35 years is a lack of knowledge about the physiology of pregnancy so that the mother feels afraid something will happen to her pregnancy. This can affect the mother's subconscious, causing anxiety that causes the mother to

lack sleep or rest. Therefore, pregnant women should immediately check their pregnancy when they feel signs of pregnancy in order to get more complete information about pregnancy and the danger signs of pregnancy are detected as early as possible.

Based on table 3, it can be seen that most pregnant women experience hypertension, namely multiparous as many as 15 people (81.8%), while primipara as many as 3 people (13.6%), and grandemultipara as many as 1 person (4.5%). The results of this study are in line with the research of (Jumaiza, Elvira, D. & Panjaitan, 2018). Based on the results of research on parity with hypertension in pregnancy, some of the respondents, namely 23 people (57.5%) were included in multigravida and 17 people (42.5%) were primigravida. However, the results of this study are not in line with research conducted by Imaroh, (2018), showing that the incidence of hypertension in pregnant women is more common in the primigravida group of 16 respondents (72.7%), compared to the multigravida group of 6 respondents (27.3%). The researcher argues that most pregnant women with hypertension are multiparous due to several possible factors, namely the

distance between pregnancy is too close from the last child, and environmental conditions that are less supportive during pregnancy, for example, husbands are busy working while pregnant women have to do their own homework plus bother taking care of them. young children. Therefore, it is important to plan a healthy pregnancy by managing the distance between pregnancies, and the role of the family, especially the husband, can help ease the work of pregnant women.

Based on table 4, it can be seen that the Wilcoxon test shows that the average blood pressure value of pregnant women with hypertension before being given hydrotherapy is systolic 150.91 mmHg, and diastolic is 94.55 mmHg. The average blood pressure of pregnant women with hypertension after hydrotherapy was given, namely systolic of 134.91 mmHg and diastolic of 86.18 mmHg. So that the difference between the decrease in blood pressure of pregnant women and hypertension is 16 mmHg systolic and 8 mmHg diastolic. From these data it can be seen that there is a decrease in blood pressure of pregnant women with hypertension after being given hydrotherapy. Systolic blood pressure in respondents after being given hydrotherapy

completely decreased (100%), while diastolic blood pressure as many as 9 people (81.8%) experienced a change, and as many as 2 people (18.2%) did not change. The results of the Wilcoxon test study showed that the systolic results were  $p = 0.003$  ( $<0.05$ ) and the diastolic  $p = 0.005$  ( $<0.05$ ), so that there was a statistically significant difference before and after the intervention on systolic and diastolic blood pressure.

The results of the research analysis are in accordance with the research conducted by Rahim et al., (2015). The research method used was an experiment with a pre-experimental research type with a one group pre-test and post-test approach. The study population was all pregnant women with hypertension as many as 24 people. Sampling technique using accidental sampling technique that is as many as 17 people. The results showed that the average blood pressure before being given warm water foot bath therapy (using a water temperature of  $40^{\circ}$ ), systolic was 144.7 mmHg, and diastolic was 92.9 mmHg. The average blood pressure after therapy was 129.4 mmHg systolic and 87.6 mmHg diastolic. The results showed that the significance value of systolic blood pressure was 0.000 and diastolic blood

pressure was 0.003, ( $p < 0.05$ ), so  $H_0$  was rejected, meaning that there was an effect of warm water foot soak therapy on changes in blood pressure in third trimester pregnant women.

Researchers believe that hydrotherapy with a temperature of  $40^{\circ}$  -  $43^{\circ}$  can help lower blood pressure in pregnant women with hypertension effectively because it can be done at home and cheap. At the time of the study some pregnant women said the warm water used was appropriate, not too cold and not too hot. In addition to lowering blood pressure, hydrotherapy with warm water can provide calm, relaxation, reduce dizziness, feel lighter, and reduce aches.

Based on table 5, it can be seen that the Wilcoxon test shows that the average blood pressure value of pregnant women with hypertension before being given hydrotherapy is 141.82 mmHg systolic, and 89.09 mmHg diastolic. The mean value of blood pressure for pregnant women with hypertension after being given hydrotherapy were systolic at 136.64 mmHg and diastolic for 84.91 mmHg. So that the difference between the decrease in blood pressure of pregnant women and hypertension is 5 mmHg systolic and 4 mmHg diastolic. From these data it can be

seen that there is a decrease in blood pressure of pregnant women with hypertension after being given hydrotherapy. Systolic blood pressure in respondents after being given hydrotherapy all decreased (100%), while the diastolic blood pressure of 8 people (72.7%) experienced changes, and as many as 3 people (27.3%) did not change. The results of the Wilcoxon test showed that the systolic p value of 0.003 ( $< 0.05$ ) and diastolic p value of 0.011 ( $< 0.05$ ), so that statistically there was a significant difference before and after the intervention on systolic and diastolic blood pressure.

This research is in line with Sabattani et al. In 2016, where the results showed that after soaking the feet with warm water at 39° for 15 minutes it had an effect on the blood pressure of pregnant women with preeclampsia. This statement can be seen from the p value of 0.0001 ( $\leq 0.05$ ), then H<sub>0</sub> is rejected and H<sub>a</sub> is accepted, meaning that there is an effectiveness of foot soaking with warm water on reducing blood pressure in pregnant women with preeclampsia Sabattani, C. F., Machmudah & Supriyono, (2016). The researcher believes that hydrotherapy with a temperature of 37° – 39° can be given to hypertensive pregnant

women whose blood pressure is not too high ( $< 160/100$  mmHg). Some respondents said that the temperature of 37°C – 39°C was not warm enough. Respondents who do not experience changes in blood pressure may be due to the open room, environmental conditions that are too much wind that disturbs the water temperature, respondents are too tense, talk a lot during therapy.

Based on table 6 in the Mann-Whitney test, it is obtained p 0.000 ( $< 0.05$ ) so that statistically there is a significant difference in the decrease in systolic blood pressure. Based on the Mann-Whitney test in Table 7, it is obtained p 0.013 ( $< 0.05$ ) so that there is a statistically significant difference in the decrease in diastolic blood pressure. It can be concluded that this study showed a difference in systolic and diastolic blood pressure in the hydrotherapy group with a temperature of 40 ° - 43° compared to a temperature of 37° – 39°.

This research is supported by Putri, Kristiani & Sonhaji, (2015). Based on the statistical test of the Mann-Whitney test, it is known that the p-value is 0.004. Where the p-value  $\leq (0.05)$ , it can be concluded that the reduction in systolic blood pressure in the intervention group with foot soak treatment using warm water and elderly exercise was more effective than the control

group with elderly exercise alone. Researchers argue that the warmer the water used is with a temperature of 40° - 43° , the greater the decrease in blood pressure experienced by pregnant women with hypertension. Hydrotherapy with a temperature of 40°-43° can be given to hypertensive pregnant women to lower blood pressure, while at temperatures of 37° - 39° can be given to pregnant women to be more relaxed and reduce complaints such as aches. There are several factors that can influence this research, namely the atmosphere during hydrotherapy, pregnant women are required to calm down, lean back on their body and head, close their eyes, and regulate their breathing. It would be better during hydrotherapy given soothing aromatherapy and hypnotherapy with positive affirmations. Therapy is better done in a closed room that has been prepared so that the water temperature can last longer. The time for hydrotherapy can be carried out in the afternoon or evening when the mother is not doing household activities such as in the morning to make it more effective.

### **Conclusion**

Based on the results of the research and discussion that has been submitted, the

researcher can convey the following conclusions Most pregnant women with hypertension experience gestational hypertension, aged 20-35 years, and are multiparous, There is a difference in blood pressure (systolic and diastolic) before and after the intervention in the hydrotherapy group with a temperature of 40° - 43° , There was a difference in blood pressure (systolic and diastolic) before and after the intervention in the hydrotherapy group with a temperature of 37° – 39° and The decrease in systolic and diastolic blood pressure in the hydrotherapy group with a temperature of 40 ° - 43° was greater than the temperature of 37° – 39°.

### **Suggestion**

Based on the results of the conclusions above, the researcher can submit suggestions to several parties as follows It is hoped that the Health Primary Care can improve facilities and infrastructure such as hydrotherapy banners and leaflets, digital water thermometers, and stainless steel kits, to support the handling of complications of early pregnancy with hydrotherapy for pregnant women with hypertension. It is hoped that midwives can apply this research by increasing knowledge and providing

demonstrations about hydrotherapy to pregnant women with hypertension. The results of this study can be continued by using other methods and increasing the frequency of hydrotherapy to determine a steady decrease in blood pressure. Future research will be better if the place of therapy is well prepared.

### Reference

- Alkema, L. et al. (2016). Global , Regional , and National Levels and Trends in Maternal Mortality Between 1990 and 2015 , with Scenario-based Projections To 2030 : A Systematic Analysis by The UN Maternal Mortality Estimation Inter-Agency Group', The Lancet. World Health Organiza. Elsevier Ltd/Inc/BV. All rights reserved, 387, 462–474. [https://doi.org/10.1016/S0140-6736\(15\)00838-7](https://doi.org/10.1016/S0140-6736(15)00838-7)
- Arikunto, S. (2010). *Procedur Penelitian Suatu Pendekatan Praktik*. Rineka Cipta.
- Dahlan, S. (2017). *Statistik Untuk Kedokteran dan Kesehatan: deskriptif, bivariat dan multivariat, dilengkapi aplikasi dengan menggunakan SPSS*. (6 th). Epidemiologi Indonesia.
- Dilianti, I. E., Candrawati, E. & W, R. C. A. (2017). Efektivitas Hidroterapi Terhadap Penurunan Tekanan Darah Lansia Penderita Hipertensi Di Panti Wreda AlIslah Malang. *Nursing News*, 2, 193–206. <https://publikasi.unitri.ac.id/index.php/fikes/article/view/579>
- Fadlun and Feryanto, A. (2011). *Asuhan Kebidanan Patologis*. Salemba Medika.
- Imaroh, I., Nugraheni, S. & D. (2018). Faktor Risiko Yang Mempengaruhi Kejadian Hipertensi Pada Ibu Hamil Di Wilayah Kerja Health Primary Care Kedungmundu, Kota Semarang Tahun2017. *Jurnal Kesehatan Masyarakat*, 6(2), 570–580.
- Jumaiza, Elvira, D. & Panjaitan, A. (2018). *Analisis Faktor-faktor yang Berhubungan dengan Kejadian Hipertensi Pada Ibu Hamil Trimester III*.
- LeMone, P. & Burke, K. (2008). *Medical-Surgical Nursing : Critical thinking in client care* (4 th edn). Pearson Practice Hall.
- Medforth, J. et al. (2015). *Kebidanan Oxford dari Bidan untuk Bidan*. EGC.
- Ministry of Health. (2017). *PROFIL KESEHATAN INDONESIA*. Kementerian Kesehatan Republik Indonesia.
- Nurahmandani, A. R., Hartati, E. & Supriyono, M. (2016). Efektivitas Pemberian Terapi Rendam Kaki Air Jahe Hangat Terhadap Penurunan Tekanan Darah Pada Lansia Dengan Hipertensi di Panti Werdha Pucang Gading Semarang. *Ilmu Keperawatan dan Kebidanan*.
- Perry, P. &. (2010). *Buku Ajar Fundamental Keperawatan* (7 th edn). EGC.
- Putri, A., Kristiani, E. & S. (2015).

*Efektifitas Terapi Rendam Kaki Menggunakan Air Hangat Dan Senam Lansia Terhadap Tekanan Darah Di Unit Rehabilitasi Sosial (URESOS) Pucang Gading Unit Semarang II.*

Rahim, R., M, S. S. & Rismawati, S. (2015). *Pengaruh Rendam Kaki Air Hangat Terhadap Perubahan Tekanan Darah Ibu Hamil Hipertensi.*

Robson, S. E. & Waugh, J. (2013). *Patologi Pada Kehamilan Manajemen & Asuhan Kebidanan.* EGC.

Sabattani, C. F., Machmudah & Supriyono, M. (2016). Efektivitas Rendam Kaki dengan Air Hangat Terhadap Penurunan Tekanan Darah Pada Ibu Hamil Penderita Preeklamsi di Health Primary Care Ngaliyan Semarang. *jurnal Ilmu Keperawatan dan Kebidanan, 1.*

Sugiyono. (2015). *Metode Penelitian Kuantitatif, Kualitatif Dan R&D.* Alfabeta.

WHO. (2018). *Maternal mortality.*

**THE OUTCOME OF PMTCT GUIDELINE IMPLEMENTATION TOWARDS  
THE PROGRAM PERFORMANCE FOR THE ELIMINATION OF HIV  
TRANSMISSION FROM MOTHER TO CHILD IN DENPASAR CITY**

Lely Wahyuniar

UNAIDS Indonesia

*wahyuniarl@unaids.org*

**Abstract**

UNAIDS report on the level of HIV transmission from mother to child shows that Indonesia is in the highest rank in the world. This study aims to conduct rapid assessment about the full extent of PMTCT program and services in Denpasar City, Bali. This study located Denpasar City as a capital of Bali with high HIV cases and currently apply PMTCT services. The study conducted through FGDs, in-depth interview and observation in the primary health centers and hospitals. The data was validated by triangulating data from several sources. The results showed that there is no specific local policy for PMTCT programs and services. There is no PMTCT program management guideline or SOP for PMTCT services at the Health Office and primary health centers. In Denpasar City there are already 5 primary health centers that provide comprehensive HIV and AIDS prevention and treatment services (LKB), and this includes providing PMTCT services consisting of HIV testing and ARV treatment for pregnant women. However, there is no ARV treatment for infant, this service must be obtained at general hospital through a referral mechanism. There is funding from local government (APBD) to buy diagnostic test for HIV and to capacity strengthening of human resources, but no support for further laboratory examinations. The empowerment for midwives to be involved in PMTCT program is limited, there has never been a comprehensive training on PMTCT and no empowerment of private practice midwives for PMTCT. The assistance's activities to ensure ARV adherence is limited. There has been assistance for HIV positive mothers by NGOs in Denpasar City. Women with HIV still get stigma and discrimination from the community and health workers. There are also some challenges in data input, including error in inputting the data that need permission to edit it. It is recommended to improve: the HIV test coverage to 100% for pregnant women (for the first 90); the coverage and quality of ARV treatment (for the second 90); the capacity of PMTCT human resources; the commitment of local government; and data utilization.

*Keywords: PMTCT, HIV, AIDS, South Sulawesi, Indonesia.*

---



## Introduction

In Indonesia, an increase in HIV transmission from mother to child causes an increase in HIV infection among new-born. This condition seems to be related to low coverage of HIV testing and prompt antiretroviral (ARV) therapy in pregnant women in Indonesia. Only 28% pregnant women are HIV tested, and only 13% of HIV-positive pregnant women received ARV (UNAIDS, 2014). These figures are very far from the target coverage of Elimination of HIV Transmission from Mother to Child (EMTCT) set by WHO in 2015, which among the targets that at least 90% of all pregnant women living with HIV know their HIV status (WHO, 2015; Wariki *et al.*, 2017). This target can only be achieved if all pregnant women get an HIV test when they visit antenatal care (ANC) services. In fact, the data have shown that the coverage of pregnant women visiting ANC in 2017 has been very high that is 95.4% (Ministry of Health RI, 2019) his condition, if used properly, constitutes a huge opportunity for Indonesia to achieve the national and global target.

The gaps also occur in the coverage of the EMTCT cascade in Indonesia, which is always low from year to year. This indicates that the program of EMTCT in

Indonesia has not been successful. The trend of coverage of HIV testing for pregnant women in Indonesia in 2015 was from only <1% which rose to 28% in 2017. The coverage of ARV treatment for pregnant women with HIV in Indonesia is also still low at 8% in 2015, 10% in 2016, and 13% in 2017. In sharp contrast, at the global level the proportion of HIV-positive pregnant women who receive ARVs in 2017 already reached 80% (UNAIDS, 2017).

Government policies regarding EMTCT have existed since 2013 (Kementerian Kesehatan RI, 2015). This raises the question why was EMTCT's coverage in Indonesia is still low until now. If this situation persists the program will never achieve its target. With the continuation of HIV transmissions from mother to child, Indonesia has not been able to break the chain of transmission, which implies that the transmission continues into the next generation (Gliddon *et al.*, 2017). The implementation of the EMTCT program apparently has many obstacles including high levels of stigmatization (Ejigu & Tadesse, 2018), low levels of maternal knowledge about HIV and EMTCT (Deressa *et al.*, 2014; Audureau *et al.*, 2013) , negative perceptions of HIV

sufferers (Ndege et al., 2016), and the cost of HIV testing and ARV (Muyunda & et al, 2018). There is a need to explore the reasons of low EMTCT coverage in Indonesia, thus we conducted this rapid assessment in Denpasar as the province with HIV highest prevalence.

### Method

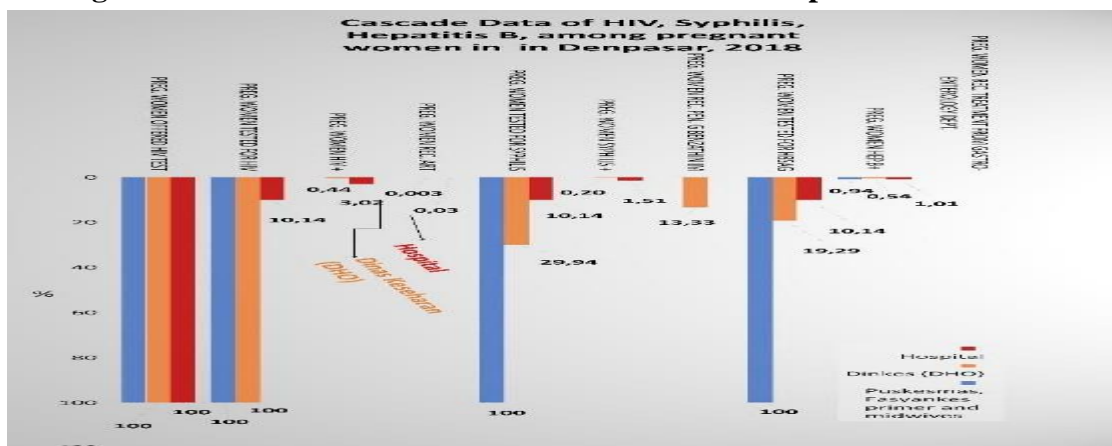
The study conducted in Denpasar, Bali province with qualitative approach by using Rapid Assessment. Method used was focus group discussion (FGD), in-depth interview and observation in the primary health centers and hospitals. The instrument used was the questionnaire that adopted from WHO (2017). The data was taken by triangulating data from several sources (pregnant or breastfeeding women, midwives, HIV program managers in primary health centers, HIV program

managers in hospitals, and program managers in the health office), taking into account aspects of the adequacy of participants (10 people are sufficient to accommodate variations of answers and can be managed maximally), as well as several methods (FGD, in-depth interviews, and field observations).

Data collection conducted through some steps: (1) implementation of FGD, in-depth interview and observation, (2) wrote transcript, (3) content analysis, (4) matrix development and (4) discussion development. There are 2 main findings that will be explained in discussions, first what is the program achievements and challenges in the field, to eliminate HIV transmission from mother to child. Second is what should be strategically done to eliminate HIV transmission from mother to child in Denpasar.

### Results

#### A. Findings on the 2018 HIV PMTCT Cascade Data from Hospitals and Puskesmas.



VARIABLE	DENPASAR			
	PHC	HEALTHOFFICE	HOSPITAL	TOTAL
Number of women being recommended for test	1064	17173	1963	20,200
Number of pregnant women being tested	1064	17173	199	18,436
Number of pregnant women being tested HIV+	0	75	6	81
Number of HIV+ pregnant women who received ART	0	52	6	58

**Figure 1. Cascade Data among Pregnant Women in Denpasar, 2018**

**B. FGD with pregnant or breastfeeding women**

**Table 1. Matrix of FGD Results from Pregnant or Breastfeeding Women in Denpasar City**

Issues	Problem	Causes	Recommendation
Access to ANC services	Long queue time (about 30 minutes, if you come at 9 will be served at 12).	PMTCT services only given once a week.	The frequency of ANC services with PMTCT should be added on other days or attempted with other media such as brochures, leaflets, or videos that could be showed during waiting for a call in the ANC room. At present there is only a standing banner.
PMTCT services	In HIV, syphilis and hepatitis B test, the information provided before the test is very limited. The complete information is provided for those who HIV positive.	Perhaps it was caused by limited-service time and the huge number of patients, so the information provided is very limited	Provision of complete information can be given in the form of a variety of media outside the pre-counseling session.
PMTCT services fee	There is financial support for the program	-	-
Community point of view about people living with HIV/AIDS	There was a fear of contracting from eats, drinks and hold hands with a people living with HIV. The neighbors of PLWHA also still discriminate, but after 2-3 years they begin to accept.	There is stigma and discrimination towards PLWHA in the community.	There is a need to give comprehensive information about HIV to the community to eliminate stigma and discrimination

**C. FGD with midwives from primary health centers and private practice.**

**Table 2. Matrix of FGD Results of Midwives from primary health centers and private practices in Denpasar City**

<b>Issues</b>	<b>Problem</b>	<b>Causes</b>	<b>Recommendation</b>
PMTCT services (mainly HIV test)	All midwives from primary health center have provided PMTCT services in the form of HIV testing for pregnant women. Midwives from private practices (BPM) refer pregnant women to the primary health center to get an HIV test, but many patients did not go because of the long queue in primary health center. If they test, it will be recorded in the MCH book.	Midwives from private practices (BPM) have not been trained in HIV testing so pregnant women should be referred to the primary health center, so there is a possibility for loss of follow-up cases. In addition, not all midwives apply universal precaution (UP) when serving pregnant women because there is discomfort for the patient.	There is a need for OJT and the provision of logistics for HIV testing for BPM. The midwives should apply UP when examining pregnancy or assisting childbirth.
	There are also cases of pregnant women who did not go to ANC at all.	Reasons for pregnant women not checking for pregnancy to the primary health center or <b>Posyandu</b> are because the pregnancy is still too early, there was no transportation, no one is taking care the house, no husband's permission	Raise HIV awareness of pregnant women about the importance of HIV testing. Schedule a home visit.
	Midwives refuse PLHAs, or at least fear in providing services for them.	There is still stigma and discrimination in PLWHA.	Training for health workers to eliminate stigma and discrimination in people with HIV.
Treatment referral	An HIV-positive	The number of	It is necessary to

	pregnant woman cannot get ARV immediately when she is served at a non-LKB primary health center.	LKB primary health center only 5 sites.	consider the addition of LKB primary health center, especially those that have HIV positive among pregnant and breastfeeding women, bearing in mind that this situation indicates the number of HIV positive patients among the bridging population and key populations in the area.
Assistance for HIV positive women (social support)	Not all primary health centers can provide assistance to HIV positive pregnant women	Not all primary health centers have LKB capacity, so they do not yet have an assistance mechanism for HIV positive women	It is necessary to add the LKB primary health center as mentioned above.
Adherence for ARV.	<p>There were patients who claimed to be compliant with the treatment, but they had AIDS symptoms.</p> <p>There were also 2 women with HIV who stop the treatment because they feel dizzy and vomited due to side effects. They did not visit the health workers because they were taking care of their children.</p>	Side effects of ARVs can cause a person to stop the treatment; such conditions should be handled by the assistant who has a competency.	Empowerment of assistants to be able to provide deeper counseling about the side effects of ARVs, and what to do if you experience this.
Recording (MCH book)	According to the midwives, all ANC activities including HIV testing are	-	-

	recorded in the MCH handbook		
PMTCT service guidelines	The service guidelines (SOP) are existed at the Kassikassi and Jongaya primary health center only.	The absence of SOP in almost all primary healthcenters, both for HIV testing and treatment, including how to refer patients	Develop SOPs that can be applied at all primary health centers

**D. FGD with HIV program manager in primary health center in Denpasar City**  
**Table 3. Matrix FGD with HIV Program Manager in Primary Health Center in Denpasar**

Issues	Problemx	Causes	Recommendation
PMTCT Services	Provincial/City-level local guidelines do not yet exist on mandatory testing for HIV, syphilis and hepatitis B, but directly refer to national policies.  There are no guidelines for HIV care in newborns  There are still ANC service flows in primary health center that do not explicitly mention HIV testing	The commitment of the local government has not been sufficient	Develop provincial or City PMTCT Guideline
PMTCT program	The ANC target is too high  Coverage and quality has not been achieves	The target setting is not based on the baseline data of the previous year  Pregnant women did not ANC in primary health center but in private practice	The number of pregnant women as ANC target should bebased on real data  Maximizing the role of environmental midwives, caring groups for pregnant women
		Pregnant women get	

		HIV tested in hospital	
Logistic availability	There is once primary health center stock out of reagent.	Insufficient logistical management	Strengthening logistics management both at the Health Office and at the Primary health centers
SIHA recording and reporting	There were many times error in data input	The data input staff must input the same data in different program	Data integration
Supervision	Supervision by the Health Office conducted every month to help HIV program manager if there is error in data input	-	-

**E. In-depth interview with HIV Program Manager in the Hospital**

**Table 4. Matrix In-depth Interview with HIV Program Manager in Denpasar**

<b>Issues</b>	<b>Problem</b>	<b>Causes</b>	<b>Recommendation</b>
PMTCT Services	There are still pregnant women coming to the hospital not being HIV tested	Their first ANC were done at midwife from private practice or private doctor, with the absence of HIV testing	Strengthening the network with midwives and doctor from private practices
	There are still HIV pregnant women who have been referred from the primary health center do not get counseled on HIV	HIV testing in primary health center is inadequate in terms of counselor's place and counselor's competency	PMTCT training for midwives
	Pregnant women that has been tested for HIV and are HIV positive did not immediately receive ARV treatment	Her condition was unstable by the presence of opportunistic infection (chronic diarrhea)	Make standard procedures for HIV patient with Opportunistic infection
	There was one case	Lack of family	Socialization to the

	where a child did not HIV tested	awareness about the need for HIV testing in children	importance of HIV testing in children of HIV positive mother
		PCR to HIV test for children is not available	RSUD needs to be equipped with a PCR diagnostic tool
Treatment referral	Children born from an HIV mother do not get prophylactic treatment	Prophylactic ARVs are not available for children so they must be referred	RSUD must be able to conduct early infant diagnostics (EID) and have prophylactic ARVs for children
Assistance to HIV pregnant women	There has not been an assistance or support group for HIV positive pregnant women	Focus on building CST team in the hospital	Establish an HIV positive pregnant women assistance group, work together with hospital and NGOs in Denpasar
Adherence to ARV	CD4 examination for pregnant women cannot be done at the hospital	CD4 reagent is not available	RSUD provide CD4 reagent
	Viral load examination for pregnant women cannot be done in the hospital	Viral load reagents (such as from Abbott and Cobas) are not available	RSUD provide viral load reagent
Recording (MCH book).	For pregnant women who came to primary health center for the first ANC, the HIV test results are recorded in MoH book, while those who have their first contact at the midwives from private practices are not recorded	Midwives from private practices (BPM) do not conduct HIV test	Training or OJT for midwives of private practice on HIV testing as well as training for recording.
PMTCT Service Guidelines	There is nothing explicit, and there is only <b>Perda</b> HIV No.2/2016	PMTCT is still considered not a priority for specific policy	There is a need to develop Regulation from Head of City ( <b>Perbup</b> )



**F. In-depth Interview with HIV Program Manager in Health Office**

**Table 5. Matrix In-depth Interview with HIV program manager in Denpasar City's Health Office**

<b>Issues</b>	<b>Problem</b>	<b>Causes</b>	<b>Recommendation</b>
PMTCT services	HIV tests in Denpasar City has not achieved 100% (79.8%)	<p>The type of ANC services being accessed by pregnant women is still widespread</p> <p>In general, almost all pregnant women have come to ANC services with various types of ANC providers. Most of the ANC services at the primary health center are by ASN midwives. There are also ASN midwives outside the primary health center, namely village's midwives (<b>bidan desa</b>) or <b>posyandu</b>. There are also some pregnant women that go to private services (private midwives, private doctors and private hospitals).</p>	<p>Empowerment for midwives so they can provide PMTCT services</p> <p>There is a need to establish mechanisms for a midwife to have an overall responsi environment (this bility for an activity is called <b>Darling = Sadar Lingkungan/ Environmental Awareness</b>).</p> <p>There is a need to involve ANC service providers from private practices</p> <p>Civil servant' midwives who provide services outside the primary health center will be equipped with a complete HIV test (Rapid test up to three times/R1-3</p> <p>ANC standard training for civil servant' midwives</p> <p>The ASN midwife also continued the results of this trainingto all non-civil servant'</p>

			midwives through the mechanism of IBI meetings starting from the City level to the lowest level at the branch level.
			There is a need to establish OJT (on the job training) mechanism.
	Primary health center in Denpasar cannot provide ARV	There is no ARV available in primary health center in Denpasar	Improve the competency of primary health center in Denpasar City to become LKB that can provide ARV
	RSUD Salewangang cannot assess the compliance to ARV	There is no reagent available to examine CD4 and viral load diRSUD Salewangang and should be referred to Wahidin General Hospital in Denpasar	Improve the competency of RSUD in Denpasar for CD 4 and viral load examination
	RSUD Salewangang does not have PMTCT services for children born from HIV positive mother	There is no ARV for pediatrics and early infant diagnostic (EID) available and should be referred to Wahidin General Hospital in Denpasar	Improve the competency of RSUD in Denpasar to provide ARV for pediatric and early infant diagnostic (EID)
PMTCT Program	HIV testing at the primary health center is only 1 time if the R-1 is negative. If R-1 is positive, confirm to R-2 and R-3 at the hospital	In the planning, there is only request R1	HIV testing with the Rapid Test method can be done in full (3 tests) in all primary health center and all other services
	The civil servant' midwives who provide ANC services outside the		

	primary health center can have tests but are not complete (1 test only), which if found positive for confirmation will be referred to the primary health center		
Management (HR, funding, logistic)	There is still a shortage of test kits and the availability of ARV	There is constraints in PMTCT funding	Training for HIV program manager
	Patients do not want to take ARV in Salewangang Hospital	Pharmacy for ARC and other drug is located in one place	
		Disclosure of HIV status	
		Stigma and discrimination	
	There are still healthworkers who do not understand PMTCT services	Training held previously did not sufficient	Availability of competent human resources
			Competency-based training
	Lack of capacity and numbers of program managers	Limited OJT that attended by the program manager	Provide similar opportunity to all HIV program manager to attend OJT
		Lack of funds to develop human resource as HIV program manager	
	Unavailability of assistance and support group	Commitments for PMTCT services are just beginning for standard service	Preparing outreach groups and assistants in collaboration with NGOs to reach and assist pregnant women to obtain information about HIV and assistance for HIV positive pregnant women

Coordinativemeeting	There is still a lack ofcommunication	Coordination with program managers at the primary health centers. Relations between the primary health center and the hospital went smoothly through the WA group	Hold regular coordination meeting
Policy	The local policy forPMTCT is not explicitly mentionedbut there is a regulation on HIV, <b>Perda</b> No 2/2016	Depend to national policy	Develop local guidelines for PMTCT services in Denpasar City

## Discussion

This assessment focuses on eliminating HIV transmission from mother to child. The elimination means that there is no HIV transmission from mother to baby. This is only possible with 100% coverage of pregnant women who are tested for HIV in one working area and all HIV positive pregnant women should get ARV treatment immediately. Therefore, HIV transmission from pregnant women to their babies can be prevented completely. In this assessment, several progresses have been found in the Prevention of HIV Transmission from Mother to Child (PMTCT), in Denpasar. However, it appears that the current program achievement still has many obstacles that need to be addressed immediately. Fortunately, there is hope to

implement the PMTCT program in order to have high coverage and quality to achieve zero new infection in newborns. This fourth section will comprehensively discuss the achievement and challenges of the PMTCT program's performance, and strategic steps to eliminate HIV transmission from mother to baby.

### 1. Achievements and Challenges to Eliminate HIV Transmission from Mother to Child, in Denpasar.

#### 1.1. Policy.

The national and local policies on HIV and AIDS prevention and control have existed. Regarding PMTCT, there is only available a national policy, Minister of Health Regulation No.52/2017 that

mandated all health facilities to implement elimination of HIV, syphilis and Hepatitis B transmission from mother to child. The local policies on PMTCT program management guidelines and standard operational procedures (SOPs) are not yet available. The government has issued Minister of Health Regulation No. 51/2013 on HIV and AIDS Management. Since 2010, South Sulawesi has released the Local Regulation (*Perda*) No. 4/2010 about the Prevention and Control of HIV and AIDS. For HIV treatment, at the national level there is a Minister of Health Regulation No. 87/2014 and it should be implemented in all health facilities, including primary health center. Primary health center that implement HIV testing and treatment called comprehensive sustainable service (*Layanan Komprehensif Berkesinambungan/LKB*), unfortunately, in Denpasar City the number of LKB primary health center is still limited compared to the need for PMTCT services include HIV testing for

pregnant women, if she is HIV positive, she will immediately treated with ARV, as well as for ARVs and HIV testing for children.

## 1.2. Program Management Guidelines.

There are no program management guidelines for HIV program managers, especially for managers at the Health Office level and at the primary health center level. There are no standardized SOP for PMTCT services at the hospitals, primary health centers and midwives from private practices for pregnant women. The service procedures or flow of PMTCT are still different between the observed primary health centres. Integrated internal referral between programs at the primary health centre is already running, for example patients with abnormal vaginal discharge can be tested for syphilis, tuberculosis patients are required to have an HIV test.

### **1.3. Comprehensive Sustainable Services.**

In Denpasar City, there are 5 primary health centers that are able to provide HIV and AIDS prevention and treatment, including for PMTCT services. It seems that Denpasar City still needs the addition of a primary health center with Comprehensive Sustainable Services (LKB) to be able to serve HIV positive pregnant women. However, there is no strong mechanism to decide the criteria for the establishment of the LKB primary health center, there is no supervision from the center. Up to now, the criteria used by the Health Office to add LKB primary health center is based on the readiness of human resources and logistics as well as the presence of HIV patients.

### **1.4. Program Coverage.**

The coverage of HIV testing in pregnant women has not reached 100%. The Health Office in Denpasar City has not involved private hospitals and clinics yet. Those facilities only refer pregnant

women to undergo HIV testing to primary health center or local public hospital but most of these pregnant women did not test HIV. It is estimated that if the infrastructure and capacity of PMTCT's programs and services are still like this, the next coverage will not be able to reach 100%. The Health Office in Denpasar City is planned to conduct training for private sector (hospitals, clinics, midwives) to implement PMTCT services at the end of January 2020 with support from UNICEF. The HIV testing in the Daya Hospital has been widespread to all community, including pregnant women, but it has not been able to reach its full extent so there are still children who are infected with HIV. Children with chronic diarrhea and fever, oral candidiasis, bronchopneumonia will also be tested for HIV and it proves that not all pregnant women were tested for HIV. Besides providing the HIV testing at ANC services, patients who come to the hospital with diarrhea, TB, STIs, swollen glands, BB dropped dramatically,

low Hemoglobin, Hepatitis B, transvestites and MSM will also be tested for HIV. To check viral load, they will be referred to Local Health Laboratory (*Labkesda*) and it is free for patients who have just been treated for 6 months. Another problem in examining pregnant women is that they do not have complete knowledge about HIV before testing and the health worker only emphasizes that this is mandatory. The reason is because there are many patients and long queues so they cannot provide complete information to their patients. As a result, many pregnant women who have been tested for HIV do not fully understand why the test should be carried out.

### **1.5. Funding.**

Funds are available for the PMTCT program, except for further laboratory examinations. The availability of logistics and funding so far has been good, because it has been budgeted by the local government and patients to have health insurance, but if possible BPJS or APBD support further

examinations for HIV patients, such as liver function (SGOT, SGPT), creatinine and X rays. Even though there was one case where a woman did not pay BPJS premium, thus delaying ANC services.

### **1.6. Positive Rate.**

The proportion of HIV positive among pregnant women cannot be known exactly given the data collected is still in limited scope. It is suspected that the data obtained are still underestimate. According to PMTCT data in 2019, the coverage of pregnant women who tested for HIV in Denpasar City was still below 80%, pregnant women having HIV positive status ranging from 0.03% to 0.12%. Pregnant women who received ARV therapy were 100% in Denpasar City.

### **1.7. Private Sector Involvement.**

Empowerment of midwives to be involved in the PMTCT program is still limited. In terms of human resources, all midwives in primary health center in Denpasar City have been able to do so, in contrast to the

midwives from private practices who have not received training, so their patients must be referred to the primary health center. There is a weakness for that referral system where patients did not come to primary health center as referred. There are several reasons given by patients who did not come to the primary health centers, including long queues, long distances and no one to assist their children in homes. A pregnant woman with HIV will be given ARV at the LKB's primary health center and given an explanation by a doctor. In Denpasar, a patient with HIV from a non-LKB primary health center, she will be referred to the LKB Puskesmas. Whereas in Denpasar, all primary health centers have not been LKB, thus patients will be referred to the City Hospital which has risk to be non-compliant to take medication due to access and side effects.

### **1.8. Support Mechanism.**

Assistance mechanisms for compliance with medication are still limited. For HIV testing, the

primary health centers do not assist or accompany positive pregnant women and will only be accompanied by NGOs in Denpasar if they are HIV positive, especially to monitor ARV adherence. In Daya Hospital, an obstetric gynecologist who has been trained was transferred to other places so there are no skilled doctors. For midwives, all of them can provide the services well, from MCH unit they will be referred to the laboratory for tests and if positive, they will be counseled by nurses. However, head of unit or program managers rarely have the opportunity to attend training.

### **1.9. Stigma and Discrimination.**

Stigma and discrimination against HIV women is still high. They HIV experienced stigma and discrimination from health workers (midwives and dentists) and this was also admitted by the midwives from primary health centers and private practices. The midwives rejected HIV patients or even if they did not refuse, they felt worried in serving them. Besides



from health workers, HIV women were also discriminated by the community around their homes, so they closed their status. Fortunately, there was one case that after 2 years the neighbors could accept their existence because of their personal approach and maintain good communication. In Denpasar there is an HIV positive woman who does not want to take drugs to avoid stigma and discrimination from her environment so that she took other hospital to take ARV. In Denpasar, there were social factors such as the low involvement of men to access ANC in health facilities.

#### **1.10. Data input.**

There are some obstacles in data input. HIV data is recorded manually and then uploaded at the end of the month. If an input error occurs after the report is uploaded, then it cannot be opened, they should contact health office staff to open and edit it. Data from each unit has not been integrated, for example if one person checks in several units then the recording

staff must re-input all her/his individual characteristics such as place and date of birth, sex, etc. For supervision there is no standard for program management and supervision.

## **2. Strategic Steps to Eliminate HIV Transmission from Mother to Child, in Denpasar City.**

### **2.1. Improve coverage of pregnant women to be 100% HIV tested.**

The coverage of pregnant women tested for HIV must be 100% and it has been done by primary health centers, but it has not been done by private services (clinics, hospitals and midwives). For primary health centers that have LKB, it is necessary to provide refreshing training to strengthen knowledge and skills to provide PMTCT services.

### **2.2. Improve the quality of ARV treatment in service site.\**

To improve the quality of HIV treatment, a LKB primary health centers must have refreshing training related to PMTCT to increase the coverage of HIV test

and treatment, including test and treatment for infants. It also needs to be considered to increase the number of LKB primary health center in Denpasar, there must be a minimum of 1-2 LKB primary health center, with consideration of the capacity, capability and burden of the manager which must begin with a site assessment. To ensure adherence for ARV, actually there is assistance, but there is a need to strengthen the capacity of the assistants in several aspects, first in terms of adherence to take medication, second, in handling complications and thirdly in women who are taking medication must be able to handle their daily activities. It would be very difficult to expect daily supervision from health workers, so it is highly needed a social support from peers.

### **2.3. Improve the Capacity of Human Resources in PMTCT Services.**

Human resources should get competency-based training suitable to service site in one teamwork, because OJT is still very limited. In addition, management guidelines

and SOPs are needed at each service site (hospitals, health centers, midwives from private practices).

### **2.4. Commitment from Local Government.**

Local governments should conduct community-based training, for example the *Darling* program (*Bidan Sadar Lingkungan*) that is already running in Denpasar City where the midwives from primary health centers shows curiosity to all pregnant women to childbirth by using the MCH book as a standard. In addition, the local government is also expected to be able to increase human resource capacity and budget allocation.

### **2.5. Data Input.**

PMTCT data is not available at all levels, but directly to the central.

### **Conclusion**

The results conclude that there is no specific local policy for PMTCT programs and services. There is no PMTCT program management guideline or SOP for PMTCT services at the Health Office and primary

health centers. In Denpasar City there are already 5 primary health centers that provide comprehensive HIV and AIDS prevention and treatment services (LKB), and this includes providing PMTCT services consisting of HIV testing and ARV treatment for pregnant women. However, there is no ARV treatment for infant, this service must be obtained at Wahidin General Hospital through a referral mechanism. There is funding from local government (APBD) to buy diagnostic test for HIV and to capacity strengthening of human resources, but no support for further laboratory examinations. The empowerment for midwives to be involved in PMTCT program is limited, there has never been a comprehensive training on PMTCT and no empowerment of private practice midwives for PMTCT. The assistance's activities to ensure ARV adherence is limited. There has been assistance for HIV positive mothers by NGOs in Denpasar City. Women with HIV still get stigma and discrimination from the community and health workers. There are also some challenges in data input, including error in inputting the data that need permission to edit it.

### Suggestion

It is recommended to improve: the HIV test coverage to 100% for pregnant women (for the first 90); the coverage and quality of ARV treatment (for the second 90); the capacity of PMTCT human resources; the commitment of local government; and data utilization.

### Reference

- Audureau, E., Kahn, J. G., Besson, M.-H., Saba, J., & Ladner, J. (2013). *Scaling up prevention of mother-to-child HIV transmission programs in sub-Saharan African countries: a multilevel assessment of site-, program- and country-level determinants of performance*. *BMC Public Health*, *13*, 286. <https://doi.org/10.1186/1471-2458-13-286>
- Deressa, W., Seme, A., Asefa, A., Teshome, G., & Enqusellassie, F. (2014). *Utilization of EMTCT services and associated factors among pregnant women attending antenatal clinics in Addis Ababa, Ethiopia*. *BMC Pregnancy and Childbirth*, *14*(1), 328. <https://doi.org/10.1186/1471-2393-14-328>
- Ejigu, Y., & Tadesse, B. (2018). *HIV testing during pregnancy for prevention of mother-to-child transmission of HIV in Ethiopia*. *PLoS One*, *13*(8). <https://doi.org/http://dx.doi.org/10.1371/journal.pone.0201886>.

- Gliddon, H. D., Peeling, R. W., Kamb, M. L., Toskin, I., Wi, T. E., & Taylor, M. M. (2017). *A systematic review and meta-analysis of studies evaluating the performance and operational characteristics of dual point-of-care tests for HIV and syphilis*. *PMC*, 93(4), 3–15. <https://doi.org/10.1136/sextrans-2016-053069>
- Kementerian Kesehatan RI. (2015). *Pedoman pelaksanaan pencegahan penularan HIV dan sifilis dari ibu ke anak bagi tenaga kesehatan*. Jakarta: Kementerian Kesehatan.
- Ministry of Health RI. (2019). *Indonesia health profile at 2018*.
- Muyunda, B., Mee, P., Todd, J., Musonda, P., & Michelo, C. (2018). *Estimating levels of HIV testing coverage and use in prevention of mother-to-child transmission among women of reproductive age in Zambia*. *Archives of Public Health*, 76(1), 80. <https://doi.org/10.1186/s13690-018-0325-x>
- Ndege, S., Washington, S., Kaaria, A., Prudhomme-O'Meara, W., Were, E., Nyambura, M., ... Braitstein, P. (2016). *HIV prevalence and antenatal care attendance among pregnant women in a large home-based HIV counseling and testing program in Western Kenya*. *PLoS One*, 11(1). <https://doi.org/https://doi.org/10.1371/journal.pone.0144618>
- UNAIDS. (2014). *To help end the AIDS epidemic*. Retrieved from [http://www.unaids.org/sites/default/files/media\\_asset/90-90-90\\_en.pdf](http://www.unaids.org/sites/default/files/media_asset/90-90-90_en.pdf).
- UNAIDS. (2017). *Prevention of mother-to-child transmission ( PMTCT ) of HIV*. Retrieved from <https://www.avert.org/professionals/hiv-programming/prevention/prevention-mother-child>
- Wariki, W., Ota, E., Mori, R., Wiysonge, C., Horvath, H., & Read, J. (2017). *Interventions for preventing mother-to-child HIV transmission: protocol of an overview of systematic reviews*. *BMJ Open*, 7(6), e014332. <https://doi.org/10.1136/bmjopen-2016-014332>
- WHO. (2015). *EMTCT strategic vision 2010–2015 : preventing mother-to-child transmission of HIV to reach the UNGASS and Millennium Development Goals*. World Health Organization. <https://doi.org/10.1016/j.apmr.2011.11.034>



**THE EFFECT OF PROVIDING EDUCATION USING ONLINE MEDIA  
FOR PREGNANT WOMEN ON MOTHER'S KNOWLEDGE,  
SUCCESS OF BREASTFEEDING ONLY FOR ONE  
MONTH AND MOTHER'S SELF EFFICACY**

Ririn Riyadussolihat, Neli Nurlina

Poltekkes Kemenkes Tasikmalaya

*r2ririnrs@gmail.com*

**Abstract**

**Introduction:** Breastmilk is the first food for newborns and is the main nutrition for babies. The low level of exclusive breastfeeding is due to the lack of knowledge of mothers about exclusive breastfeeding. Therefore, in order for mother's knowledge to be good, it can be done by providing education about exclusive breastfeeding. The purpose of this study was to determine the effect of providing education using online media for pregnant women on the knowledge of mothers in breastfeeding, self-efficacy and the success of breastfeeding alone for one month. **Methods:** This study used a quasi-experimental design with a pre and post-test nonequivalent control group approach. The sampling technique used probability sampling, which consisted of 44 pregnant women in the third trimester. Collection using a questionnaire and analyzed using the chi square test with a significance level of  $\alpha \leq 0.05$ . **Results:** This study shows that there is no significant relationship between the provision of online education and maternal knowledge with a p value of 0.056 ( $\alpha \geq 0.05$ ). There is a significant relationship between providing online education with maternal self-efficacy with a p value of 0.001 ( $\alpha \leq 0.05$ ). There was no significant relationship between the provision of education and the success of breastfeeding for 1 month with a p value of 0.186 ( $\alpha \geq 0.05$ ). **Conclusion:** It is suggested that health walkers can increase educational activities regarding exclusive breastfeeding by using any method and in an appropriate, structured and continuous way with direct or indirect interactions so that the knowledge and self-efficacy of mothers about exclusive breastfeeding will be better.

**Keywords:** education; online; knowledge; self efficacy; breastfeeding success.

---

## Introduction

According to WHO (2018), Sarinengsih (2020) citation, the impact that occurs if babies are not given exclusive breastfeeding, namely, can increase infant mortality 3-4 times greater than babies who are given exclusive breastfeeding, low all intellectual functions including verbal abilities and visual motor skills of babies, babies will be susceptible to various kinds of infectious diseases and cause stunting (Qoyyimah and Rohmawati, 2017).

In Indonesia, 29.5% of babies who have been exclusively breastfed until the age of six months (Kemenkes RI, 2017). This is not in accordance with the Ministry of Health's Strategic Plan target for 2015-2019, namely the percentage of 6 month babies who receive exclusive breastfeeding is 50% (Istianingsih, 2018).

The low level of exclusive breastfeeding is due to the lack of knowledge of mothers and family support. Therefore, so that mothers have good knowledge, it can be done by providing education about exclusive breastfeeding to the parents of the baby, not only to the mother but also to the father involved. Because the process of breastfeeding does not only involve mothers and babies (Amalia, 2017).

Education about exclusive breastfeeding should be able to increase knowledge, because health education aims to increase knowledge and ability in breastfeeding. Besides that, it also affects a positive attitude in breastfeeding. This is evidenced research by Merdhika, Mardji and Devi (2014) with a p value of 0.000. Supported research by Suhertusi, Desmiwanti and Nurjasmii (2015) with a p value of 0.001. From these two studies, it shows that there is an effect of counseling on increasing the knowledge of mothers in exclusive breastfeeding.

Besides influencing knowledge, education also affects the success of exclusive breastfeeding. This is supported research by Rosidi (2017) which is marked with a p value of 0.036. The results of this study indicate an effect of lactation counselor education on breastfeeding success. Another study conducted by Risnaningsih (2012) showed that there was an effect of nurse education on late trimester primigravida mothers on the success of first week breastfeeding at PKU Muhammadiyah Bantul Hospital in 2012 with a p value of 0.024.

Education also affects the mother's self-efficacy in exclusive breastfeeding. According to Riyanti, Nurlaila and

Astutiningrum (2018) Self-efficacy will provide positive values for mothers in breastfeeding, the breastfeeding process, the success of breastfeeding, and bonding between mother and baby. From this impact, self-efficacy has a positive value for breastfeeding mothers. It is also supported by research conducted by Martika, Wahyuntari and Utami (2019) which shows the influence of breastfeeding education on the self-efficacy of mothers to breastfeed babies at PKU Muhammadiyah Yogyakarta Hospital with a p value of 0.04.

Education will be effective if it uses the right media and methods. Many previous studies have examined the use of educational media to increase knowledge, the success of exclusive breastfeeding and maternal self-efficacy. The media used were leaflets, powerpoints, booklets, videos. This is evidenced by the results of research by Afriyani and Salafas (2019) which are marked with a p value of 0.002. With the results there is an increase in knowledge after treatment, indicated by differences in knowledge before and after health promotion with leaflet media. Likewise, the research of Ismawati and Abdulrahman (2017) shows that there is an effect of using leaflet media on the level of knowledge of postpartum mothers about

infant breastfeeding techniques with a p value of 0.000. Similar to Safitri (2018) research, with the results of the effect of providing booklets on increasing husband's knowledge, attitudes, and support for exclusive breastfeeding in third trimester pregnant women with a p value of 0.018.

### Method

This research is a quantitative study using a quasi-experimental design or quasi-experimental research with a pre and post-test nonequivalent control group approach. Quasi experiment is a research method that aims to try out intervention or treatment in a group without comparisons and randomization (random allocation) with a control or comparison group. The pre and post-test nonequivalent control group is a quasi-experimental research design in which the implementation of the study divides respondents into two or more groups, namely the treatment and control groups (Dharma, 2017).

In the research design, the intervention and control groups were given pretest before the treatment was carried out, aiming to assess the knowledge of mothers in breastfeeding and the success of breastfeeding alone for one month, after being given the intervention in the



treatment and control groups, an assessment of the results was carried out through post-test. The interventions carried out in this study were providing education about exclusive breastfeeding online (via the WhatsApp application) to the treatment group (intervention) and giving leaflets through the WhatsApp application to the control group.

The sampling technique used in this research is probability sampling, namely simple random sampling. How to collect it using lottery numbers. To determine the minimum sample size, it can be calculated using the Lemeshow *et al.*, (1997). Based on the sample size formula, the minimum sample for each group is 20 people. If there is a *sample drop out*, then the sample correction for each group is 10%, so the number of samples is 22 for each group.

Online education is provided using the Whatsapp application in the form of video calls and voice calls. In the intervention group and the control group, the WA group was made, the intervention group was carried out 3 times with a break of 4 days and 1 evaluation at term mothers for 1 month, in providing education, it must pay attention to delivery time and activity level so that education can be conveyed and understood by respondents. At the first

meeting discussing what exclusive breastfeeding is and the benefits of exclusive breastfeeding, at the second meeting discussed the impact and management of lack of breastfeeding in infants and problems in breastfeeding or breastfeeding such as blistered nipples, breast milk does not come out and insufficient breast milk so that the mother switches to formula milk. The third meeting before the evaluation conveyed about the position and attachment of breastfeeding in the form of a video, the last was an evaluation of whether the mother gave breast milk only to her baby for 1 month.

This research was conducted by creating 2 separate WhatsApp groups between the intervention group and the control group. In the intervention group, education was provided through messages and group voice calls were carried out every 5 respondents out of 22 respondents. In the control group, leaflets were given after the pretest through the WhatsApp application and leaflets containing an explanation of exclusive breastfeeding, the benefits or benefits and impacts of not being breastfed if the baby was given breastfeeding, also accompanied by a picture of the good and correct latch

position Data collection in the intervention group was carried out every day and carried out pretest and posttest, while in the control group, leaflets were given only once and carried out pretest and posttest, after obtaining permission from the Tirtamulya Health Center.

Data collection tools used in this study were research instruments in the form of questionnaires and observation sheets. The questionnaire contains a spreadsheet related to the dependent variable, namely the knowledge of mothers in breastfeeding and the success of breastfeeding alone for one month and the mother's self-efficacy.

The questionnaire contains variables of mother's knowledge in breastfeeding, which were given before and after the intervention was given to education through online media to mothers in the intervention group, and after giving leaflets to the control group. Distribution of questionnaires through online media using google form.

Univariate analysis was carried out by analyzing the frequency distribution and percentage of variables. This type of bivariate analysis is used to see the relationship between two variables by using the Chi Square test analysis.

## Results

**Table 1. The Relationship Between Education Using Online Media With Mother's Knowledge at Tirtamulya Public Health Center, Karawang Regency in 2020**

Group	Knowledge				Total		<i>P value</i>	CI 95%
	Good		Less		F	%		
	F	%	F	%				
Control	11	37,9	11	73,3	22	100	0,056	1,14 – 17,67
Intervention	18	62,1	4	26,7	22	100		

Based on Table 1, it shows that there is no significant relationship between the provision of online education and the knowledge of mothers about exclusive breastfeeding which is marked with a p

value of 0.056 ( $\alpha \geq 0.05$ ). These statistical results not only apply to the sample but also apply to populations marked with a CI not exceeding 1, where the CI is in the range 1.14 - 17.67.

**Table 2. The relationship between education using online media and breastfeeding success at Tirtamulya Public Health Center, Karawang Regency, 2020**

Group	Success of Breastfeeding	Total	<i>P value</i>	95%CI
-------	--------------------------	-------	----------------	-------

	Yes		No		F	%	P value	95% CI
	F	%	F	%				
Control	13	41,9	9	69,2	22	100	0,186	0,78 –
Intervention	18	58,1	4	30,8	22	100		12,34

Based on Table 2, it shows that there is no significant relationship between providing online education with the success of one month breastfeeding marked with a p value of 0.186 ( $\alpha \geq 0.05$ ). These statistical

results only apply to the study sample and do not apply to populations marked with a CI exceeding 1, where the CI is in the range 0.78 - 12.34.

**Table 3. The Relationship Between Education Using Online Media With Self Efficacy at Tirtamulya Health Center, Karawang Regency, 2020**

Group	Self Efficacy				Total		P value	95% CI
	Good		Less		F	%		
	F	%	F	%				
Control	9	31,0	13	86,7	22	100	0,001	2,68 –
Intervention	20	69,0	2	13,3	22	100		

Based on Table 3, it shows that there is a significant relationship between providing online education with maternal self-efficacy in exclusive breastfeeding marked with a p value of 0.001 ( $\alpha \leq 0.05$ ).

These statistical results not only apply to the sample but also apply to populations marked with a CI not exceeding 1, where the CI is in the range 2.68 - 77.79.

## Discussion

The results of the study statistically using the chi square test showed p value = 0.056 ( $\alpha \geq 0.05$ ). This shows that there is no significant relationship between providing online education with maternal knowledge. These statistical results not only apply to the sample but also apply to populations marked with a CI not exceeding 1, where the CI is in the range 1.14 - 17.67. The

results of this study are not in line with the research of Amalia, Nugrahaeni and Kartini (2018) which states that there is a relationship between the provision of nutritional education to the knowledge of prospective mothers in preventing chronic energy deficiency in pregnant women which is marked with a p value of 0.001 ( $\alpha \leq 0.05$ ).

Based on the results of research and existing theories, the researchers can

conclude that education given using any method, either online or leaflets or directly or indirectly, will increase the mother's knowledge as long as it is given education in the right way and method.

The results of the study statistically using the chi square test showed p value = 0.186 ( $\alpha \geq 0.05$ ). This shows that there is no significant relationship between providing online education with the success of breastfeeding. These statistical results only apply to samples and do not apply to populations marked with a CI exceeding 1, where the CI is in the range 0.78 - 12.34. The results of this study are not in line with the research of Risnaningsih (2012) which states that there is a relationship providing nurse education to late trimester primigravida pregnant women to the success of first week breastfeeding at PKU Muhammadiyah Bantul Hospital with a p value of 0.024 ( $\alpha \leq 0.05$ ) with a CI limit of 0.028. - 0.997.

The results of this study indicate that there is no relationship with the success of breastfeeding. The results of this study only apply to 44 respondents but do not apply to the population of 396 pregnant women. The reason online education is not related to the success of breastfeeding is because the selection of respondents is not

homogeneous. Respondents have different parities, namely primiparous and multiparous. This can lead to the success of exclusive breastfeeding not only by providing education alone, but positive or negative breastfeeding experiences can also affect it.

Based on the results and existing theories, the researcher can conclude that education can increase the success of exclusive breastfeeding as long as the education is given with the right method, time and way. In addition, education must be carried out continuously with assistance by health workers so that mothers have a pleasant and positive experience during breastfeeding so that they have the opportunity to provide exclusive breastfeeding to the next child.

The results of the study statistically using the chi square test showed p value = 0.001 ( $\alpha \leq 0.05$ ). This shows that there is a significant relationship between providing online education with maternal self-efficacy in breastfeeding. These statistical results not only apply to the sample but also apply to populations marked with the CI not exceeding 1, where the CI is in the range 2.68 - 77.79. This is in line with the results of Martika, Wahyuntari and Utami (2019) research which states that there is an effect

of breastfeeding education on mothers' self-efficacy for breastfeeding babies with a p value of 0.04 ( $\alpha \leq 0.05$ ).

Self-confidence will increase if there is contact or interaction between health workers and pregnant women and when there is support or support. This is evidenced by the research of Bonsaksen, Lerdar and Fagermoen (2012) which states that external factors that can increase a person's self-efficacy are the presence of interaction and a good support system.

Based on the results of research and existing theories, the researcher can conclude that education will increase a person's self-efficacy if education is carried out in a structured manner and there is direct contact or interaction between health workers and mothers.

### **Conclusion**

Before giving education, the majority of the 44 respondents had less knowledge and self-efficacy, but after the provision of education, the majority of knowledge and self-efficacy were good. As for the success of breastfeeding for 1 month, it shows that of the 44 respondents the majority gave exclusive breastfeeding for 1 month.

There is no significant relationship between providing online education to maternal knowledge about exclusive breastfeeding, as well as the success of breastfeeding for 1 month. However, the results differ on self-efficacy, where there is a significant relationship between providing online education to maternal self-efficacy in breastfeeding.

### **Suggestion**

#### 1. For health walkers

It is hoped that it can increase the activities of providing education or health education regarding exclusive breastfeeding. This can be done using any method and in an appropriate, structured and continuous way with direct or indirect interactions so that the knowledge and self-efficacy of mothers about exclusive breastfeeding are better.

#### 2. For further researchers

It is expected to consider the selection of respondents who are homogeneous or have the same characteristics. In addition, it considers the larger number of respondents and uses different methods and analyzes.

## Reference

- Afriyani, L. D. and Salafas, E. (2019) 'Efektifitas Media Promosi Kesehatan ASI Perah Terhadap Peningkatan Pengetahuan Ibu Bekerja Untuk Memberikan ASI Eksklusif', *Jurnal SIKLUS*, 8(1), pp. 60–66.
- Amalia, F., Nugrahaeni, S. A. and Kartini, A. (2018) 'Pengaruh Edukasi Gizi Terhadap Pengetahuan Dan Praktik Calon Ibu dalam Pencegahan Kurang Energi Kronik Ibu Hamil', *Jurnal Kesehatan Masyarakat*, 6(5), pp. 370–377.
- Amalia, S. (2017) 'Orang Tua Bekerja pun Bisa Sukses Memberi ASI Eksklusif', *Asosiasi Ibu Menyusui Indonesia*.
- Bonsaksen, T., Lerdar, A. and Fagermoen, M. A. Y. S. (2012) 'Factors associated with self-efficacy in persons with chronic illness Study design', *Scandinavian Journal of Psychology*, pp. 333–339.
- Dharma, K. (2017) *Metodologi penelitian keperawatan: Panduan melaksanakan dan menerapkan hasil penelitian (Revisi)*. Jakarta: Trans Info Media.
- Ismawati and Abdulrahman, N. K. (2017) 'Pengaruh Penggunaan Media Leaflet Terhadap Tingkat Pengetahuan Ibu Nifas Tentang Teknik Menyusui Bayi Di Puskesmas Mamajang Makassar', *Jurnal Ilmiah Media Bidan*, 2(2).
- Istianingsih, A. (2018) 'Hubungan Breastfeeding Self-Efficacy dengan Pemberian ASI Eksklusif di Wilayah Puskesmas Air Dingin Kota Padang Tahun 2018', *Diploma Thesis, Universitas Andalas*, pp. 1–7.
- Kemendes RI (2017) *Profil Kesehatan Indonesia Tahun 2017*.
- Lemeshow, S. *et al.* (1997) *Besar Sampel dalam Penelitian Kesehatan*. Pertama. Edited by D. Pramono. Yogyakarta: Fakultas Kedokteran Universitas Gadjah Mada.
- Martika, A., Wahyuntari, E. and Utami, I. (2019) 'Pengaruh Edukasi Pemberian Air Susu Ibu ( ASI ) Terhadap Self Efficacy Ibu Untuk Menyusui Bayi Di RS PKU Muhammadiyah Yogyakarta Tahun 2019', *Universitas 'Aisyiyah Yogyakarta*.
- Merdhika, W. A. R., Mardji and Devi, M. (2014) 'Pengaruh penyuluhan asi eksklusif terhadap pengetahuan ibu tentang asi eksklusif dan sikap ibu menyusui di kecamatan kanigoro kabupaten blitar', *Teknologi Dan Kejuruan*, 37(1), pp. 65–72.
- Qoyyimah, A. U. and Rohmawati, W. (2017) 'Dampak Pemberian ASI Eksklusif Terhadap Kejadian Sakit Pada Bayi 6-12 Bulan Di Kabupaten Klaten', *Universitas Ahmad Dahlan Yogyakarta*.
- Risnaningsih, S. Y. (2012) *Pengaruh Edukasi Perawat Pada Ibu Primigravida Trimester Akhir Terhadap Keberhasilan Pemberian ASI Minggu Pertama Di RS PKU Muhammadiyah Bantul, STIKES 'Aisyiyah Yogyakarta*.
- Riyanti, E., Nurlaila and Astutiningrum, D. (2018) 'Pengaruh edukasi breastfeeding ibu post partum terhadap breastfeeding self efficacy', *Jurnal Ilmiah Kesehatan Keperawatan*, 14(3).

- Rosidi, I. Y. D. (2017) 'Pengaruh Edukasi Konselor Laktasi Terhadap Keberhasilan Menyusui 3 Bulan Pertama Di Puskesmas Bontomarannu', *Jurnal Kebidanan Vokasional*, pp. 83–88.
- Safitri, D. F. (2018) *Pengaruh Pemberian Booklet Terhadap Peningkatan Pengetahuan, Sikap, Dan Dukungan Suami Terhadap ASI Eksklusif Pada Ibu Hamil Di Puskesmas Ngampilan Dan Puskesmas Wirobrajan, Poltekkes Kemenkes Yogyakarta*. doi: 10.1017/CBO9781107415324.004.
- Sarinengsih, Y. (2020) 'Hubungan Pemberian Asi Eksklusif Dengan Kejadian Stunting Pada Balita Usia 1-5 Tahun Dipuskesmas Sukahening Kecamatan Sukahening Kabupaten Tasikmalaya', *Jurnal Ilmu Kesehatan Immanuel*, 13(2), p. 109. doi: 10.36051/jiki.v13i2.102.
- Suhertusi, B., Desmiwanti and Nurjasmii, E. (2015) 'Pengaruh Media Promosi Kesehatan tentang ASI Eksklusif terhadap Peningkatan Pengetahuan Ibu di Wilayah Kerja Puskesmas Lubuk Begalung Padang Tahun 2014', *Jurnal Kesehatan Andalas*, 4(1), pp. 17–22.

## A. GENERAL DESCRIPTION

Writing articles generally have an international standard format known as AIMRaD, which stands for Abstract, Introduction, Materials and Methods, Results, and Discussion. Format for writing this article can vary based on the discipline of knowledge but in general, it still refers to that format.

*\*Pay attention to the general formatting rules to make it easier to choose and consider acceptance of your script.*

**For writing uniformity, especially the original research manuscript must follow the following systematics:**

1. Title
2. Authors and Institution
3. Abstract
4. Manuscript, which consists of:
  - a. Introduction
  - b. Methods
  - c. Results
  - d. Discussion
  - e. Conclusion
  - f. Suggestion
5. Reference

## B. DETAILED EXPLANATION

### 1. Title

Title writing briefly, clearly, and concisely will describe the contents of the script (maximum of 20 words). Title writing in the upper center with UPPERCASE (all caps), not underlined, not between quotation marks, not ending with a period (.), Give a Bold effect, without abbreviations, except for usual abbreviations.

Example:

**PROSTAGLANDIN AND ENDORPHIN LEVELS IN ADOLESCENT  
PRIMARY DISMENORE GIVEN WARM HYDROTHERAPY**



## 2. Author and Institution

The author's name should be written without a degree and accompanied by an explanation of the institution or university. Writing the author's name starts from the main author. The email address listed is only the email of the main author

Example :

<sup>1</sup>Aditiya Puspanegara, <sup>2</sup>Nita Ike Dwi Kurniasih, <sup>3</sup>Asrina

Sekolah Tinggi Ilmu Kesehatan Kuningan Garawangi

[adit@pintarword.com](mailto:adit@pintarword.com)

## 3. Abstract

The abstract is a miniature of the article as the main picture of the reader of your script. The abstract contains all components of the script briefly (objectives, methods, results, discussion, and conclusions). The maximum length of 300 words (must not be outside of this provision), do not write a citation and written in one paragraph. Equipped with keywords as much as 3-5 words.

## 4. Introduction

The introduction takes the reader to the main topic. The background or introduction answers why the research was carried out, what previous researchers did or scientific articles are currently developing, problems, and objectives. This chapter also emphasizes the clarity of the disclosure of the background of the problem, and the differences with previous research.

## 5. Method

Writing methods contain research design, place and time, population and sample, data measurement techniques, and data analysis. It's best to use the passive voice and narrative sentences, not command sentences.

## 6. Result

Writing the results of research is written which contains the research data or the result of field observations. This section describes without giving discussion, write it in logical sentences. The Presentation of results and sharpness of analysis (can be accompanied by tables and figures).

## 7. Discussion

Discussion is the most important part of the entire scientific article content. The purpose of the discussion is to answer the research problem. Emphasize new and important aspects. Write down what is the results but do not repeat the results. Explain the meaning of the statistic (eg.  $P < 0.001$ , what does that mean? And discuss what the meaning is. Include a discussion of the impact of the study and its limitations.

## 8. Conclusion

The conclusion contains the answers to the research questions. The conclusion must answer the research objectives. Write in essay form and do not contain numbers.

## 9. Suggestion

Suggestions can be (input/advice) for the next researcher, it could also be implicative recommendations of the research findings.

## 10. Table writing instruction

Table should be original (not as embedded figure), no vertical border (only horizontal border and bold), use single line spacing, font size 10 as shown in Table 1. Tables should be centered and numbered accordingly.

Example:

Table 1. Number of receptors in each container

xxxx	xxxx	xx
xxxx	50	0,001
xxxx	50	0,002

### 11. Writing Pictures

The image title is written under the image.

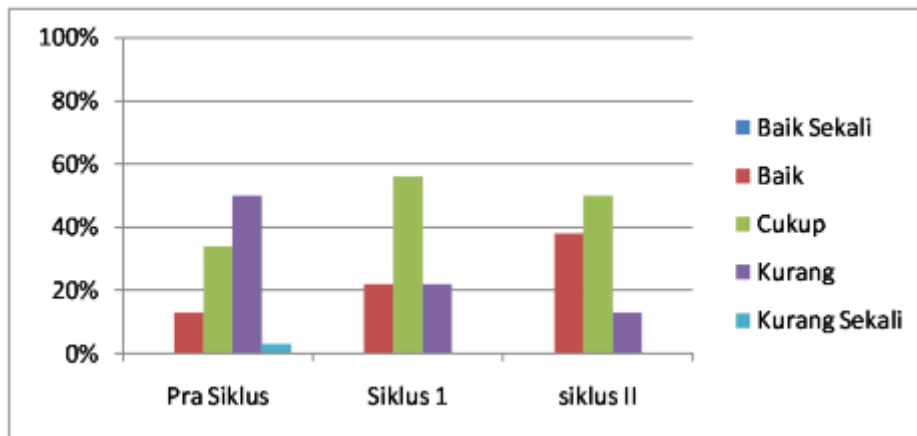


Figure 1. xxxxxxxx

### 12. Reference

References in the article minimum 15 sources and use the APA 7th Edition. Listed in alphabetical order (A-Z) of author's last name, year. Title of the Article. Journal's Title, Volume(issue), pp. page-page.

**C. EXAMPLE OF MANUSCRIPT**

**ARTICLE TITLE THAT PRESENTS THE WHOLE ARTICLE CONTENT  
 (REVERSE TRIANGLE CONTROL)**

Author 1, Author 2, Author 3 (maximum of 5 authors)

Affiliations

[your\\_email@gmail.com](mailto:your_email@gmail.com)  
 (first author's email address)

**Abstract**

Abstract with no more than 300 words should be supplied to reflect the content of the paper. A concise and factual abstract is required. The abstract should state briefly the context of the problem (background), purpose/aim of the research, the principal methods, the results and major conclusion (contribution). An abstract is often presented separately from the article, so it must be able to stand-alone. For this reason, References/citation should be avoided. Also, non-standard or uncommon abbreviations should be avoided, but if essential they must be defined at their first mention in the abstract itself.

*Keywords: Alphabetically sorted; Capitalized first word; From a to z; Maximum 5 keywords; Sentence case; Separate by semicolon (;) between keyword*

<p><b>Introduction</b></p> <p>Provide an adequate background, context of the problems based on the literature review. State the objectives of the work and emphasize the originality (state of the art).          Introduction text - Introduction text -          Introduction text - Introduction text -          Introduction text - Introduction text -</p>	<p>Introduction text - Introduction text -          Introduction text.</p> <p>Citation more than one cited article/reference should be written in order by year - Citation more than one cited article/reference should be written in order by year - Citation more than one cited article/reference should be written in order by year - (Badriah et al., 2018; Indriyani, 2019; Rastipiati et al.,</p>
---	--

2020) Introduction text - Introduction text (Aditiya, 2018) Introduction text - Introduction text - Introduction text (Asrina, 2020) Introduction text - Introduction text (Nita and Vera, 2019) - Introduction text - Introduction text - Introduction text - Introduction text (Nurdewi et al., 2019). Introduction text - Introduction text - Introduction text - Introduction text - Introduction text (Hikmah et al., 2019).

**Method**

Provide sufficient detail methods to allow the work to be reproduced. Methods already published should be indicated by a reference: only relevant modifications should be described.

Methodology text -methodology text -methodology text -methodology text -methodology text -methodology text -methodology text -Methodology text - methodology text -methodology text - methodology text (Badriah., 2019).

**Results**

Results should be clear and concise. Show only the most significant or main findings of the research.

Result text -Result text - Result text - Result text - Result text - Figure 1. Result text -Result text - Result text - Result text - Result text - Result text - Result text - Result text - Result text - Result text - Result text.

**Table 1. xxxxxxxxxxxx**

xxxxx	xxxxxxxxxxxxxxxxxxxxxxxxxxxx				Total		P Value
	xxxxx		xxxxx		N	%	
	F	%	F	%			
xxxxx	22	64,7	12	35,3	34	100	<b>0,001</b>
xxxxx	0	0	0	0	0	0	
xxxxx	0	0	15	100	15	100	

Short explanation regarding the Table's meaning and significant – Experimental methods can be supported with a diagram, clearly shown the process and completed with legend, scale/dimension if required (Figure 1).

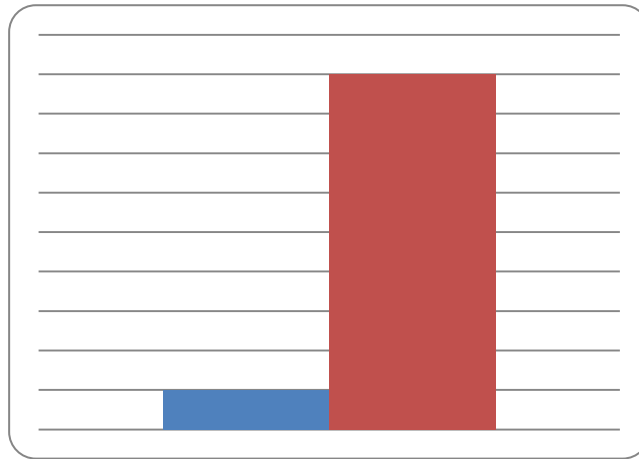
**Discussion**

Discussion must explore the significance of the results of the work. Adequate discussion or comparison of the current results to the previous

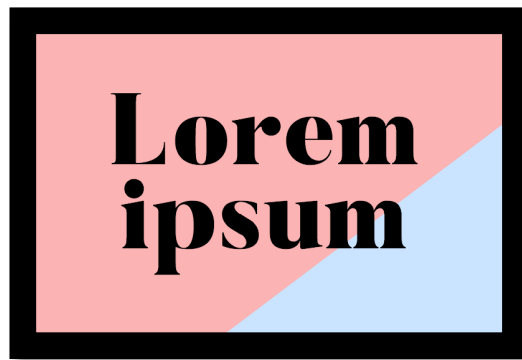
similar published articles should be provided to shows the positioning of the present research (if available).

Discussion text - Discussion text  
 - Discussion text - Discussion text -  
 Discussion text - Discussion text -

Discussion text - Discussion text -  
 Discussion text - Discussion text -  
 Discussion text - Discussion text -  
 Discussion text - Discussion text -  
 (Asrina et al., 2016).



**Figure 1. xxxxxxxxxxxx**



**Figure 2. xxxxxxxxxxxx**

**Conclusion**

The main conclusion of the study may be presented in a short Conclusions section, which may stand-alone. It should not repeat

the Results, instead provide significant findings and contribution of the study.

Conclusion text - Conclusion text - Conclusion text - Conclusion

text - Conclusion text - Conclusion  
 text - Conclusion text - Conclusion  
 text - Conclusion text - Conclusion  
 text - Conclusion text - Conclusion  
 text - Conclusion text - Conclusion  
 text.

**Suggestion**

Suggestions can be (input/advice) for the next researcher, it could also be implicative recommendations of the research findings.

**Reference**

References in the article minimum 15 sources and use the APA 7th Edition. Listed in alphabetical order (A-Z) of author's last name, year. Title of the Article. *Journal's Title*, Volume(issue), pp. page-page

**Journal:**

Hanief, Y. N. dan Sugito. (2015). Membentuk Gerak Dasar Pada Siswa Sekolah dasar Melalui Permainan Tradisional. *Jurnal SPORTIF* 1(1); 60-73.

**Text Book:**

Maksum, A. (2008). *Metodologi Penelitian*. Surabaya: Univesity Press.

**Proceedings:**

Nurkholis, Moh. (2015). Kontribusi

Pendidikan Jasmani dalam Menciptakan SDM yang Berdaya Saing di Era Global. *Prosiding. Seminar Nasional Olahraga UNY* Yogyakarta; 192-201.

**Thesis/Dissertation:**

Hanief, Y.N. (2014). Pengaruh Latihan Pliometrik dan Panjang Tungkai Terhadap Kecepatan Renang Gaya Dada 50 M. *Skripsi*. Program Studi Pendidikan Kepelatihan Universitas Sebelas Maret Surakarta.

**Website:**

Asnaldi, Arie. Pendidikan Jasmani. <http://artikel-olahraga.blogspot.co.id/> Diakses tanggal 1 Januari 2015

1<sup>st</sup> International Seminar of Gender Equity,  
Maternal and Child Health



**Focus and scope It'S GeMICH Proceeding is :**

- **Maternal and child health,**
- **Mental health,**
- **Empowerment of women,**
- **Family health.**

**Sekretariat:**

Sekolah Tinggi Ilmu Kesehatan Kuningan  
Jl.Lingkar Kadugede No.02 Kab. Kuningan-Jawa Barat  
Telp. (0232) 875847, email: gemich@stikku.ac.id

ISSN 2798-7086

