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THE COMPREHENSIVE MIDWIFERY CARE IN MIDWIFE'S INDEPENDENT PRACTICE: A CASE REPORT

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Abstract

Background: Maternal mortality rate in Indonesia in 2022 was 189 / 100 thousand live births. This figure is still high when compared to the MMR target in 2024, there are 183/100 thousand live births. One of the midwives' efforts to reduce MMR is by providing comprehensive/ sustainable midwifery care (CoC). The purpose of this case study is to describe the results of implementing CoC midwifery care on a women from pregnancy until postnatal. **Method:** This midwifery care case study uses a descriptive method, where Mrs. R is given care starting from the third trimester of pregnancy, childbirth, newborns, postpartum to family planning. CoC midwifery care is provided to Mrs. R is standard midwifery care. **Result:** After giving midwifery care to Mrs. R, it was found that the condition of the mother and baby was still within normal limits without any complications until the end of the implementation of the care. During the postpartum period, there is a cold compress on the suture area of Mrs. R. The reason for doing a cold compress is because Mrs. R complained of pain in her perineal suture wound. After applying a cold compress to the wound, Mrs. R subsides over time. **Conclusion:** The midwifery care provided to the subject was in accordance with applicable standard midwifery care procedures. So that no complications occur in the subject when midwifery care is provided.

keyword : Midwifery, Postpartum, Antenatal

INTRODUCTION

Maternal mortality rate (MMR) is the death of a woman while pregnant or dies within 42 days of the termination of her pregnancy, regardless of gestational age or where the woman gave birth (Central Statistics Agency, 2023). MMR is an indicator of a country's welfare (Fitria, et al., 2021). According to the World Health Organization (WHO), from 2000 to 2022, the global maternal mortality rate decreased by 34%, namely from 342 to 223 deaths in 100 thousand live births. The causes of maternal death on average are postpartum hemorrhage, pre-eclampsia, hypertensive disorders, pregnancy infections, unsafe abortion complications and pre-existing medical conditions that are worsened by pregnancy (UNICEF, 2023).

The MMR target in Indonesia in 2024 is 183/100 thousand live births, while the results of the 2015 Inter-Census Population Survey found that the MMR was 305/100 thousand live births and in 2022 the number of MMR will decrease to 189/100 thousand live births. The top three causes of maternal death are eclampsia (37.1%), bleeding (27.3%), and infection (10.4%) (Kemenkes RI, 2023). The maternal mortality rate in East Java Province has significantly decreased, where in 2021 the number of MMR was 234.7 / 100 thousand live births and in 2022 the number of MMR was 93 / 100 thousand live births. The maternal mortality rate in 2022 could exceed the East Java MMR target for 2022, namely 96.42 / 100 thousand live births (Dinkes Prov. Jatim, 2023).

The number of maternal deaths in 2021 - 2022 in Sidoarjo Regency has decreased by 22.39 points, where in 2021 the MMR number was 59.69 / 100 thousand live births and in 2022 the MMR number was 37.3 / 100 thousand live births. The total MMR in Sidoarjo Regency in 2022 is 13 mothers who died, which consists of 2 deaths of pregnant women and 11 deaths of postpartum women. If we look at each health center in Sidoarjo Regency, it is found that Candi Health Center has the highest number of deaths in Sidoarjo Regency, namely 3 mothers died. The causes of maternal death in Sidoarjo Regency in 2022 are caused by hypertension (38.46%), bleeding (23.08%) and (30.77%) caused by other things such as tuberculosis, HIV and dengue fever (Dinkes Kab. Sidoarjo, 2023).

In an effort to reduce MMR in the world, the World Health Organization (WHO) recommends that health workers provide comprehensive and sustainable services for mothers and babies called Continuity of Care (CoC), one of these services is assigned to midwives, namely Midwife-led continuity of care (MLCC) (UNICEF, 2023). Continuous midwifery care (CoC) is provided from pregnancy, childbirth, newborn, postpartum and family planning for mothers and babies. This care aims to monitor development of the condition of the mother and baby in a good and focused manner (Fitria, et al., 2021).

Based on the description and data above, the author is interested in conducting a case study which aims to describe midwifery care management comprehensive information that has been given to Mrs. R with complaints of pain in the perineal suture wound at Nuril's Midwifery Independent Practice Sidoarjo.

METHOD

This midwifery care case study was taken using descriptive methods. The purpose of this case study is to describe the results of implementing midwifery care on the subject Mrs. R aged 29 years at Nuril's Independent Midwifery Practice Sidoarjo. Mrs. R was married with a duration of 1 year and this is the first pregnancy for her. History of First Day of Last Menstruation Mrs. R on 12 September 2022 with Expected Birth Day on 19 June 2023. The approach used in this case study is a comprehensive, continuous and complementary analysis of midwifery care consisting of five midwifery care starting from the third trimester of pregnancy, childbirth, postpartum newborns and family planning. Data collection was carried out by carrying out introductions, informed consent, anamnesis, physical examination focused on pregnancy, childbirth, newborns and postpartum, data analysis, management and documentation, which then compared the data obtained with existing theory. The instrument used in collecting data for this case study was the SOAP midwifery care format. The timing of the pregnancy care case study in the third trimester was carried out on 20 April 2023, which was then continued with midwifery care for childbirth, newborns, postpartum and family planning on 23 June 2023.

RESULT

Midwifery care for the third trimester of pregnancy was carried out on 16 June 2023, Mrs. R made a return visit to TPMB Nuril Sidoarjo with no complaints at this time. From the results of the anamnesis, it was found that the marital status was married with a duration of 1 year, Muslim, and the last educational status was a bachelor's degree. History of First Day of Last Menstruation on 12 September 2022 with Expected Birth Day on 19 June 2023, this is the first pregnancy with complaints from previous pregnancies, namely nausea and vomiting in the first trimester of pregnancy and coughs and colds in the second trimester of pregnancy, had done Antenatal Care (ANC) 2 times in the first trimester, 2 times in the second trimester and 3 times in the third trimester, fetal movement was felt more than 10 times in the last 3 hours, strong on the upper right

side of the mother's abdomen, and no pain, apart from that there is no history of family disease, contraception, past and current health.

The results of the physical examination showed that her general condition was good, her weight before pregnancy was 60 kg, currently 75 kg, height 160 cm with the results of the Body Mass Index (BMI) calculation being 23.44. Vital signs showed blood pressure 118/73 mmHg, RR 20 times/minute, pulse 80 times/minute, temperature 36.7°C, breasts clean, enlarged, nipples prominent, colostrum present, no lumps in the breasts. In the obstetric abdomen, it was found that the abdomen was enlarged longitudinally, fetal movement was visible, Leopold I palpated the buttocks of the fetus at the mother's uterine fundal height (TFU), namely 3 fingers below the processus xiphoideus, Leopold II palpated the back of the fetus on the mother's left and a small part on the mother's right, Leopold III felt the head and had entered the pelvis, Leopold IV was found to be parallel, the mother's TFU was 32 cm, FHR 135 times/minute with a Doppler, the mother's upper and lower extremities were not swollen and there were no varices.

From supporting examination data, blood and urine laboratory results were obtained on 1 June 2023, namely Hb 12.6 gr/dL, blood type A positive, urine protein and albumin negative, HIV and HBsAg non-reactive, blood sugar 90 mg/dL. Meanwhile, the results of the ultrasound examination carried out on 6 June 2023 showed that the BPD was 9.23 cm, single fetus, positive FHR, head position, sufficient amniotic fluid, female gender and estimated fetal weight of 3,643 grams. The results of the analysis showed GI - P00000, gestational age 39 weeks, the fetus was alive, single, the head was positioned and had entered the pelvic inlet, intrauterine, the pelvic impression had not been tested, the general condition of the mother and fetus was within normal limits. The management provided is conveying examination results, providing Communication, Information and Education (IEC) related to nutrition, signs of labor, breast milk supplements, preparation for childbirth, and referrals, reminding pregnant women about danger signs, providing multivitamins (Gestiamin Plus and Kalk), and schedule a repeat visit in 1 week, namely on 23 June 2023 or immediately if there are danger signs of pregnancy or signs of labor.

Midwifery care for childbirth was carried out on 23 June 2023 at 02.15 WIB, Mrs. R visited TPMB Nuril Sidoarjo with complaints of water coming out of his genitals since 02.00 WIB and the liquid was white clear and loud since yesterday. From the results of the physical examination, it was found that his general condition was good, blood pressure 123/88 mmHg, breathing 20 times/minute, pulse 88 times/minute, temperature 36.5°C. In the obstetric abdomen, leopold I was found to be palpated on the buttocks with TFU 3 fingers below the xiphoid process, leopold II was palpable on the back of the fetus on the mother's left and a small part on the mother's right, leopold III was palpated on the head and had entered the pelvis, leopold IV was found to be divergent, head descent 2 /5, mother's TFU is 33 cm, FHR 140 times/minute with a doppler, hiss 5 times with a duration of 42 seconds in 10 minutes and strong intensity, the mother's upper and lower extremities are not swollen and there are no varices. The results of the vaginal toucher examination showed that the opening was 6 cm, effecement 80%, clear amniotic fluid, back of the head presentation, front left small fontanel denominator, decreased H-II +, no small parts besides the lowest part of the fetus and infiltration 0.

From the results of this examination, an analysis of the gestational age of 40 weeks was obtained, the general condition of the mother and fetus was within normal limits during the 1st stage of the active phase of maximum dilatation with rupture of the membranes. The management given to Mrs. R, namely conveying the results of examinations, providing midwifery care for the mother and family, observing the progress of labor, fetal well-being and danger signs, documentation and preparation of birth equipment and medicines. At 06.15 WIB, Mrs. R wanted to push and the loudness became stronger, there were signs of the second stage of labor, the results of a vital signs examination showed blood pressure 120/85 mmHg, breathing 20 times/minute, pulse 80 times/minute, temperature 36.7°C, FHR 145 times/minute, hiss 5 times with a duration of 48 seconds within 10 minutes, head descent 0/5, vaginal toucher results obtained 10 cm opening, 100% effecement, clear amniotic fluid, back of the head presentation, small fontanel denominator in front, decreased H- IV, there are no small parts besides the lowest part of the fetus and infiltration is 0. The analysis obtained from the examination results is the

second stage of labor with the general condition of the mother and fetus within normal limits.

The management given was 60 steps of Normal Childbirth Care (APN) and an episiotomy was performed on the perineum with indications of a stiff perineum. At 06.55 WIB the baby was born spontaneously, female with Apgar Score 7-8. The baby is immediately treated for newborns and IMD immediately, then given active management care in the third stage to Mrs. R. The results of the examination of the mother's blood pressure were 115/70 mmHg, there was no second fetus when palpated, the contractions were hard, an oxytocin injection was given and the placenta was born spontaneously at 07.00 WIB, the membranes and cotyledons were complete. After the placenta is born, the mother's general condition is good, contractions are strong, the bladder is empty, TFU is at the level of the navel, then heacting is carried out on the mother's perineum with a 2nd degree episotomy laceration, followed by providing midwifery care, anti-pain medication, antibiotics, vitamin A, juice. Breast milk and observation of the fourth stage of labor during the first 2 hours postpartum. The results of the fourth stage of labor showed that the mother's condition was within normal limits.

Midwifery care for the newborn baby was carried out on 23 June 2023 at 07.20 WIB. The results of the examination of the general condition of the newborn were obtained, temperature 36.7°C, breathing 48 times/minute, pulse 140 times/minute, birth weight 3,700 grams, body length 48 cm , head circumference 34 cm, chest circumference 32 cm, and immediately IMD, reddish skin color, no abnormalities. The analysis obtained from the examination results was a term neonate aged 0 days with general conditions within normal limits. Standard midwifery care for newborn babies was carried out as well as the injection of 1 mg vitamin K into the baby's left thigh. R, giving eye ointment, bathing the baby at 15.30 WIB, giving Hepatitis B immunization after the baby is bathed, fulfilling exclusive breastfeeding and making observations.

Postpartum midwifery care was carried out on 23 June 2023 at 13.00 WIB. The mother complained of pain in the sutured area of the perineum, had breastfed her baby twice, urinated twice, had eaten and slept. The results of the examination showed that the general condition was good, vital signs were within normal limits,

the breasts were clean, enlarged, the nipples were prominent, colostrum was present, there were no lumps in the breasts, the consistency was supple. In the obstetric abdomen, TFU was found 2 fingers below the navel, strong contractions. Genitourinary examination revealed lochea rubra with an estimated number of 1 full pad, the perineal suture wound was wet, the sutures were still neat, there was no edema and no discharge, the urinary bladder was empty, the upper and lower extremities were not edematous. The analysis obtained from the examination results was P10001, 6 hours postpartum with complaints of pain in the perineal suture wound.

The management carried out is to convey the results of the examination, provide IEC related to pain in the perineal suture wound which is still physiological, providing IEC and applying cold compresses to perineal suture wounds, providing postpartum midwifery care such as IEC nutrition, ambulation, rest and sleep, good and correct breastfeeding methods, breastfeeding the baby on demand, danger signs for postpartum and newborn babies, and telling the mother that can go home at 16.00 WIB if the condition of the mother and baby is stable.

Family planning midwifery care was carried out at 15.00 WIB, Mrs. R said she didn't know whether to use contraception that didn't interfere with breast milk production. The results of the physical examination showed vital signs, blood pressure 118/78 mmHg, breathing 20 times/minute, pulse 80 times/minute, temperature 36.6°C, obstetric abdomen, TFU 2 fingers below the navel, strong contractions. Genito-urinary examination revealed lochea rubra with approximately half a full bandage, the perineal suture wound was wet, the sutures were still neat, there was no edema and no discharge, the urinary bladder was empty, the upper and lower extremities were not edematous. The analysis obtained from the examination results is that prospective MAL new family planning acceptors have general conditions within normal limits. The management carried out is conveying the results of the examination, providing IEC related to various types of contraception that do not interfere with breast milk production, providing IEC related to MAL contraception including understanding, how to use it, terms of use, effectiveness, disadvantages and advantages, scheduling repeat visits.

DISCUSSION

Based on the results of the pregnancy examination, it was found that ANC visits were carried out during pregnancy, namely 2 times in the 1st trimester, 2 times in the 2nd trimester and 3 times in the 3rd trimester. The ANC visits carried out included routine ANC visits, this is in accordance with (Zuchro, et al., 2022), in her research on ANC analysis in pregnant women. The number of routine ANC checks for pregnant women is at least 1 time at 1 - 3 months of pregnancy, 1 time at 4 - 6 months of pregnancy and 2 times at 7 - 9 months of pregnancy. If pregnant women do not have an examination, then the mother does not know whether the pregnancy is going well, there are high risks and obstetric complications which can endanger the lives of the mother and fetus and can cause death.

Based on the results of blood and urine laboratory investigations carried out on 1 June 2023, the Hb level was 12.6 gr/dL. According to an online journal article in (Anon, 2020), in his research, a description of hemoglobin levels in third trimester pregnant women at the Robert Wolter Mongisidi Hospital in Manado. Blood hemoglobin is a parameter used to determine anemia. The normal Hb value in the third trimester of pregnancy is an average of 12.5 g/dL. From this, the Hb level in this case study was within normal limits and she did not experience anemia during her pregnancy.

During delivery care, it was found that there was an episiotomy which was caused by the mother's stiff perineum, so an episiotomy was carried out to reduce and prevent perineal rupture. This is in accordance with the online journal article (Vanisa & Ulfah, 2022), in their research on The Effectiveness of Episiotomy Actions in Accelerating The Labor Process. The research results obtained were that episiotomy is an action that is not carried out routinely. An episiotomy can be performed if there are indications for fetal safety, prolonged labor, labor with buttock pretension, shoulder dystocia, forceps extraction, vacuum extraction, scar tissue on the perineum or vagina, stiff and short perineum, presence of a rupture that is likely to occur in the perineum, premature pregnancy to reduce pressure on the fetal head. The aim of an episiotomy is to reduce injury to the perineum and anal sphincter rupture by controlling the direction and level of damage to the

perineal tissue. An episiotomy is easier to perform a heacting procedure compared to a spontaneous tear.

In the care of newborns, it was found that the midwifery care given to Mrs. R is immediate administration of IMD. According to an online journal article (Rezky & Adisasmita, 2019), about The Association of Early Initiation of Breastfeeding and Neonatal Mortality in Babies Born Weighing >2500 Grams and Low Birth Weight Babies. IMD is one part of newborn care. Newborns or neonates get their first colostrum when IMD is performed. The nutrition from the colostrum obtained increases the baby's body resistance, so this can reduce the risk of neonatal death. All neonates are advised to have IMD immediately after birth. However there are several conditions in neonates, such as very premature babies whose condition is unstable, so it is not possible to carry out IMD immediately. It is more advisable to provide assistance first until the baby's condition is stable, then after the baby's condition is stable, IMD can be carried out.

There were complaints when midwifery care during the postpartum period took place. At 6 hours postpartum, she complained of pain in the perineal suture wound. IEC was given regarding pain in perineal suture wounds and a way to treat the pain, namely by applying compresses to the wound area, was also carried out. So it is found that the pain felt has begun to decrease, and the pain felt can be tolerated. According to an online journal article (Wahyuni & Pitriani, 2022), regarding midwifery care for postpartum mothers by giving compresses to reduce perineal wound pain, the results showed that the perineal wound pain felt by postpartum mothers before being given compresses was on a scale of 4 with a REEDA scale value of 3. After compression was applied, the pain scale became 0 and the REEDA scale 0. So it can be concluded that there was an effect of reducing pain in perineal wounds after giving compress treatment to perineal wounds for 4 days.

In family planning midwifery care, IEC is provided regarding various types of family planning that are safe for breastfeeding mothers. From the IEC, it was found that Mrs. R chose to use MAL contraception for now, so that the mother is not disturbed in the breastfeeding process if she uses this contraceptive. This is in accordance with the online journal article (Aprillian, et al., 2023), regarding

maternal attitudes related to the success of MAL contraception in exclusively breastfeeding mothers. One type of simple contraception that can support the family planning program by taking advantage of the breastfeeding period is by using MAL. The Lactational Amenorrhea Method is a type of contraception that uses breast milk exclusively, so this contraceptive method will be effective when the baby is only given breast milk without any additional food or drink..

CONCLUSION AND RECOMMENDATIONS

Carrying out a case study on Mrs. R with COC midwifery care it can be concluded that care is carried out smoothly, mother and baby are healthy and normal. Midwifery care provided during pregnancy, childbirth, newborns, postpartum and family planning is carried out according to standards and theory.

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PREGNANCY LEAVE'S IMPACT ON ENERGY BALANCE AND LABOR PERIOD IN WORKING MOTHERS

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Abstract

Background: The government has given female workers the right to maternity leave. Law No. 13 of 2003 states that expectant mothers have the right to 1.5 months of rest both before and after giving birth. If a pregnant woman takes her maternity leave later than expected, she may have a lengthier second period. The purpose of this research is to ascertain how long the second stage of labor lasts and how energy balance relates to maternity leave. **Method:** The study's strategy uses a comparative study methodology because the energy balance and length of the second stage of labor in working mothers who take maternity leave with those who defer taking maternity leave will be compared. Mothers who matched the inclusion criteria and were giving birth at RSI Jemursari Surabaya made up the study's sample. Data collecting sheets, partograph sheets, and medical record books were the tools employed. Fisher's exact test was used to examine research data. **Result:** The majority of respondents (80.9%) experienced the second stage of labor in less than 90 minutes, and the majority of respondents (77%) had a negative energy balance. The statistical test findings between the second stage of labor and the maternity leave period resulted in a value of $p = 0.421$, whereas the test results of the maternity leave period with energy balance resulted in a value of $p = 1.000$. **Conclusion:** According to these data, there is no correlation between the length of maternity leave and energy balance, and there is also no discernible correlation between the length of maternity leave and working mothers' second stage of labor.

Keywords: Maternity leave, energy balance, length of second stage of labor, working mother.

INTRODUCTION

The country's health can be assessed using metrics such as its infant and maternal mortality rates. Every event related to pregnancy, childbirth, and the postpartum period per 100,000 live births is known as the maternal mortality rate, or MMR. According to data from the Ministry of Health's family health program, 4,627 maternal fatalities occurred in Indonesia in 2020. This figure represents an increase above the 4,221 deaths in 2019 (Hardhana et al., 2021). Based on data from

2012 Indonesian Demographic and Health Survey (SDKI), there were 359 live births for every 100,000 births on average. Compared to the 2007 IDHS statistics, which showed 228 deaths per 100,000, the average mortality rate has grown dramatically. The leading causes of death are bleeding (42%), eclampsia/preeclampsia (13%), abortion (11%), infection (10%), delayed labor/labor traffic jam (9%), and other reasons (15%). A high MMR suggests that the health of the mother is at risk. In the meantime, 102 per 100,000 live births is the MMR target for the 2015 Millennium Development Goals (MDGs) set by the WHO (Yohanna, 2016).

Bleeding, toxemia gravidarum, infection, protracted labor, and complications from abortion account for 90% of maternal mortality. The majority of these deaths can be avoided because they happen during childbirth. It is evident from these data that protracted labor is one of the factors contributing to maternal death. Several things, including pushing (uterine inertia, an uncoordinated delivery, the mother's exhaustion from pushing, and errors made during the second stage), can contribute to prolonged labor, including force. Birth canal abnormalities include soft birth canal abnormalities, cephalopelvic imbalance, small pelvis, and pelvic deformities. Regarding the passengers, there are anomalies in the fetus's growth and form as well as anomalies in its head position (Qonitul & Nur Fadilah, 2019).

The rights of female workers to maternity leave are governed by Law No. 13 of 2003, specifically chapter 82. According to this rule, female employees are entitled to 1,5 months of rest both before and after giving birth. The family of the female worker is required to inform the child of the birth within seven days of the woman giving birth. Additionally, within six months of giving birth, female employees must produce a birth certificate or proof of birth from the hospital (Ardianto & Atalim, 2018).

In research by Istiqomah et al (2020), it was stated that most of the pregnant women who did not work did not experience chronic energy deficiency, that is, of the 64 respondents, 35 respondents experienced chronic energy deficiency, while 19 respondents who had working status mostly experienced KEK, 15 respondents (78.9%). Waiting to take maternity leave is one pattern among working women that is hypothesized to be associated with chronic energy shortage. Pregnant women

who delay taking leave and continue working are suspected of experiencing energy deficiency during pregnancy (especially the 3rd trimester) which results in low blood glucose levels, pain, and a prolonged second stage. Thus, research is needed that proves the effect of maternity leave on energy balance, low blood glucose levels, pain, and a prolonged second stage.

METHOD

This study involves a comparative study approach to comparing c the energy balance and duration of the second stage of labor in working moms who take maternity leave to those who delay taking maternity leave. The study's participants were expectant mothers who gave birth at RSI Jemursari Surabaya on a day off. Two types of criteria were used to select the sample: mothers with psychological disorders, birth mothers with pelvic abnormalities and large babies, mothers who received epidural administration, and primiparous mothers aged 20 to 35 with a normal BMI and a history of giving birth at RSI Jemursari Surabaya were among the exclusion criteria. A sample of 52 respondents was acquired after the sample size was determined using the sample size formula for an unpaired categorical comparative analytical study utilizing hypothesis testing. Sampling uses persuasive sampling. The location of this research is RSI Jemursari Surabaya and will be carried out in July – October 2023. Ethical is from RS Jemursari with number 099/KEPK-RSISJS/VII/2023 for an ethical test.

Partograph sheets, data collection sheets, and patient medical records were the equipment used to gather secondary data for the study. The data analysis method for this research uses univariate analysis to describe variables and bivariate analysis to determine the relationship between two variables using Fisher's exact test statistic. This study involves a comparative study approach because researchers will be comparing the energy balance and duration of the second stage of labor in working moms who take maternity leave to those who delay taking maternity leave. In reality, there is more than one Chi-square in the test formula.

RESULT AND DISCUSSION

Of the study's 44 participants, 84.7 percent were employed by private companies. The majority of respondents (86.3%) in the category of private employees took maternity leave; there were 38 of them. When maternity leave was broken down by respondent type, 44 (84.6%) of the respondents took maternity leave, while 8 (15.4%) did not.

Table 1. Frequency distribution of respondents by occupation

Profession	Maternity Leave				Total
	Take Leave		Not Taking Leave		
	n	%	n	%	
Private Employee	38	86,3	6	13,4	44
Civil Servant	2	66,7	1	33,3	3
Teacher	3	75	1	25	4
Lecturer	1	100	0	0	1
Amount	44	100	8	100	52

Table 2. Frequency Distribution of Respondents' Age

Age	Frequency	Percent (%)
20-35	52	100
Total	52	100

Based on Table 5.2, it can be seen that the ages of the respondents in this study were all (100%) respondents aged 20-35 years.

Table 3. Frequency Distribution of Length of Stage II and Energy Balance Based on Maternity Leave

	Maternity Leave				Total
	Take Leave		Not Taking Leave		
	n	%	n	%	n
II Stage					
II Stage > 90 minutes	9	90	1	10	10
II Stage < 90 minutes	33	78,6	9	21,4	42
Energy Balance					
Positive Energy	12	100	0	0	12
Negative Energy	30	75	10	25	40

Partograph sheets that were acquired from hospital data were used to evaluate the duration of the second phase of this investigation. The duration of the second

stage of labor can be divided into two categories: a long stage for primiparas if the second stage lasts more than 90 minutes, and a normal stage for primiparas if the second stage lasts less than 90 minutes.

The study's findings indicated that 12 respondents (23%) had greater energy balance and 40 respondents (77%) had less. Most moms (75%) in the group with poor energy balance took maternity leave.

Table 4. The Relationship Between Taking Maternity Leave and Energy Balance

Maternity Leave	Energy Balance				P Value
	Positive		Negative		
	n	%	n	%	
Yes	9	81	31	75,6	1,000
No	2	19	10	24,4	
Amount	11	100	41	100	

Maternity leave-taking and pregnant women's energy balance are not significantly correlated, according to the results of Fisher's exact test statistical test, which yielded a value of $p = 1,000$ ($p > \alpha$). This indicates that there is no statistically significant difference in energy balance between working women who take maternity leave and the reported findings.

Table 5. The Relationship Between Taking Maternity Leave and the Length of the Second Stage of Labor in Working Mothers

Maternity Leave	Length of Second Stage of Labor				P Value
	II Stage > 90 minutes		II Stage < 90 minutes		
	n	%	n	%	
Yes	10	90,9	30	73,2	0,421
No	1	9,1	11	26,8	
Amount	11	100	41	100	

The study's statistical tests, which employed Fisher's exact test, resulted in a value of $p = 0.421$ ($p > \alpha$), indicating that there is no significant correlation between working mothers' duration of the second stage after giving birth and their use of maternity leave. The findings do not support the existence of a statistical relationship because this indicates that taking maternity leave does not significantly alter the duration of the second stage of labor.

Respondent's Occupation

Based on the research findings, it was discovered that 44 respondents (84.6%) took maternity leave before giving delivery, whereas 8 respondents (15.4%) did not take maternity leave. The research findings revealed that 8 respondents (15.4%) did not take maternity leave, while 44 respondents (84.6%) did take time off before giving birth.

Number 13 of 2003 concerning Employment, especially articles 76, 81, 82, 83, 84, 93, and Minister of Manpower Decree No. 224 of 2003. Article 82 of Law Number 13 of 2003 concerning Employment regulates the issue of maternity leave. maternity leave protection for 1.5 months before giving birth and 1.5 months after giving birth with full pay (Kusumaningrum et al., 2023).

Indonesian women have shown that they are workers and have increased their involvement in the country's growth. Today's women can contribute to the betterment of their families by working in a variety of settings, including factories, offices, companies, and fields. Working women can change a decision made in their behavior, namely by accepting a dual role that will be carried out between obligations at work and home. Therefore, the government's provision of legal protection in the form of favorable legal regulations in the area of employment is one way that it shows its concern for the nature of women. This legal protection is provided by the inclusion of rights (such as the right to menstruation leave, childbirth, miscarriage, and breastfeeding) in Law No. 13 of 2003 concerning Employment paragraphs 81–83 that are especially granted to female workers. The goal of extending leave privileges is to uphold the fundamental rights of female employees about their ability to procreate (Ega, 2021).

Age

Three groups were created for the age variable in this study: age < 19 years, age 20–30 years, and age ≥ 31 years. As can be shown, the majority of respondents to this poll (96.2%) were between the ages of 20 and 30. the optimal age for a woman to conceive and give birth, particularly on her first attempt. The age range for pregnancy is twenty to thirty. If a woman chooses to become pregnant after that

age, she will probably go through a physically and mentally high-risk pregnancy (Cahyono, 2022).

Women can be classified as Women of Childbearing Age regardless of their marital status if they are between the ages of 19 and 49. The reproductive organs of fertile women still operate properly between the ages of 20 and 45. Reproductive age in women advances more quickly than in men. Ages 20 to 29 are considered to be the prime reproductive years. Women have a 95% likelihood of becoming pregnant at this age. Around thirty years of age, the percentage drops to ninety percent. (Ba'ka et al., 2023).

The reproductive system's maturity is correlated with a pregnant woman's age. According to Nisa and Apprilina's research (2019), 33 respondents, or 78.6%, of the 42 respondents were between the ages of 20 and 35. There is a safe age range of 20 to 30 years for pregnancy and childbirth in a healthy reproductive age. Since the reproductive system is developed at this age, pregnancy disruptions can be minimized.

Length of Stage II Based on Maternity Leave

The findings revealed that 10 respondents (19.2%) had a second stage lasting longer than 90 minutes (long second stage), while 42 respondents (80.8%) had a second stage lasting less than 90 minutes (regular second stage). Nearly all responders (78.6%) took maternity leave in the second stage group (less than 90 minutes, which is the typical second stage). According to Wulan's research from 2019, pregnancy-related activities, such as exercising, can have an impact on how long birth takes.

It is required of pregnant women who take maternity leave to prepare themselves physically and mentally to give birth naturally. Exercise throughout pregnancy has an impact on how long labor takes. It will be more difficult for pregnant women to move and perform daily tasks due to the growing weight of the womb. Pregnant ladies tend to be lethargic when it comes to doing everyday tasks and will instead relax and sleep more as a result. It is believed that indolent expectant mothers will have challenging labors. Pregnant women who engage in physical activity during their pregnancy are said to have shorter labor times than

those who do not. The risk of protracted labor is decreased during pregnancy when physical exercise has a favorable effect on cervical ripening before birth. Furthermore, exercise during pregnancy can lower the need for medical labor interventions such as amniotomies, labor inductions, and cesarean sections (Szumilewicz et al., 2013).

More energy is needed by pregnant women who move around than by those who remain immobile. Energy is required for all tasks, so the more activities a pregnant woman does, the more energy she will require (Ernawati, 2018).

Energy Balance Based on Maternity Leave

Three categories exist for energy balance: balanced energy balance, negative energy balance, and positive energy balance. When the body expends less energy than it takes in, there is a positive energy balance. When energy is discharged more than it is taken in by the body, there is a negative energy balance.

When the amount of energy consumed through food and the amount of energy spent through activity are roughly equal, an energy balance is reached. You will have the perfect body if the energy coming in and exiting out is balanced. A building of energy will occur if energy intake is excessive and not balanced with energy-consuming physical activity. This buildup will eventually affect body weight, leading to a fat body and the possibility of excess weight or obesity. In the meantime, an individual's energy imbalance might also result from energy use that exceeds energy intake. The person will lose weight as a result of feeling less energetic (Wiarto, 2013).

According to the study's findings, 12 respondents (23%) had greater energy balance than 40 respondents (77%) did. Seventy-five percent of moms in the group with poor energy balance took maternity leave. This study's findings contrast those of a study by Ernawati (2018), which found that pregnant women who work are less likely to have energy shortages than the group of mothers who do not work or care for their families 9,3 times more frequently. Working pregnant women have the power to make choices that will help them overcome their health issues. As a result, working women have access to more information that might influence

attitudes, behavior, income, and eating habits. These modifications may affect the mother's selection of food and how much of it she eats.

Another research that contradicts the results of this research is research conducted by Lestari (2021). Research conducted by Lestari (2021) states that pregnant women who do not work (housewives) are 2.9 times more likely to experience energy shortages compared to pregnant women who work. Employment status when a mother is pregnant is a risk factor for energy deficiency in pregnant women.

The Relationship Between Maternity Leave for Working Mothers and Energy Balance

Pregnant women's energy balance and taking maternity leave do not significantly correlate, according to Fisher's exact test statistic results, which gave a value of p = 1,000 (p > α). This indicates that there is no statistically significant difference in energy balance between working women who take maternity leave and the reported findings.

This study agrees with that of Haryanti et al. (2021), who found no particular correlation (p = 0.893, p > 0.05) between physical activity and nutritional status in pregnant women. Energy expenditure from physical activity is crucial for preserving one's physical, mental, and overall well-being. A physical activity's level is determined by how much energy is used in a given type of activity for a day.

The American College of Obstetricians and Gynecologists (ACOG) first recommended regular, moderate-intensity physical activity for women who were experiencing healthy pregnancies in 2015. The recommendation was then reiterated in 2017 and calls for at least 20 to 30 minutes of physical activity per day, or most days of the week. The purpose of this recommendation is to avoid several pregnancy-related complications. Among these complications are diabetes, gestational hypertensive disorders, and fetal growth disorders. These conditions are linked to a higher adult risk of cardiovascular disease as well as an increased risk of early mother and possibly offspring death.

The Relationship between the Maternity Leave Period and the Length of the Second Stage of Labor in Working Mothers

The study's statistical tests, which used Fisher's exact test, created a value of $p = 0.421$ ($p > \alpha$), indicating that there is no significant correlation between working mothers' duration of the second stage after giving birth and their use of maternity leave. This demonstrates that there is no discernible difference in the duration of the second stage of labor when taking maternity leave, thereby excluding any statistical relationship from the results.

According to research by Hasanah et al., (2021), mothers who engage in physical activities, such as pregnancy exercise, have a longer second stage of labor; this duration is a minimum of 2 minutes and a maximum of 80 minutes, with a standard deviation of 15.375. In contrast, mothers who do not engage in pregnancy exercise have a longer second stage of labor. The standard deviation is 16.042, with the shortest delivery time being 10 minutes and the longest being 75 minutes. Based on the statistical test results, it can be inferred that there is a significant difference between the duration of the second stage of labor for mothers who participated in pregnancy exercises and those who did not. Specifically, the p-value = <0.000 indicates that the p-value = $<\alpha$. It can be inferred from Hasanah's research that pregnant women who engage in greater physical activity before delivery may have an impact on the duration of the second stage of labor.

Work Law No. 13 of 2003 regarding employment regulates maternity leave for female employees as a special right granted to them as a means of protecting their reproductive function. Every female employee has an unalienable right to leave before and after giving birth. Many pregnant female employees waive their right to leave during their pregnancy because they can take longer leave after giving birth. This is because working women must devote their time, energy, and resources to caring for and nursing their newborns (Ega, 2021).

CONCLUSION AND SUGGESTION

Conclusion

This research concludes that there is no relationship between the period of maternity leave and energy balance and there is no relationship between the period of maternity leave and the length of the second stage of labor in working mothers.

Suggestion

Because in this study there was no relationship between maternity leave and energy balance and the second stage of labor in working mothers, the advice for working mothers is that mothers who take leave at the beginning or end are expected to still pay attention to food intake and physical activity carried out during pregnancy.

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CORRELATION BETWEEN FEMALE JUNIOR HIGH SCHOOL STUDENTS KNOWLEDGE AND BREAST SELF EXAMINATION BEHAVIOR

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Abstract

Background : Breast cancer is a painless lump, can develop and invade surrounding breast tissue then spread to nearby lymph nodes or to other organs in the body. The high mortality rate of breast cancer is due to a lack of knowledge about breast cancer and early detection so that it comes to health services at late stage. As recommended by the government, the most effective screening method is Breast Self Examination which is very easy but many teenagers do not know this method. The aim of this study is to know correlation between students knowledge and Breast Self Examination Behavior. **Method** : Descriptive quantitative reasearch through a cross sectional approach. Population in this study were 218 female students at Ananda Junior High School Bekasi City West Java in 2022 with 141 students for sample using simple random sampling technique. Research instruments using questionnaires about knowledge of pathophysiology and breast cancer prevention as independent variable and Breast Self Examination behavior as a dependent variable using the chi square statistical test. **Results** : Majority as many 91.5% of Ananda Junior High School students had never done Breast Self Examination, had poor knowledge about the pathophysiology of breast cancer (93.6%) and breast cancer prevention (83.7%). Then obtained a p value of 0.000 (p < 0.05) which means that there is a significant correlation between knowledge about the pathophysiology and breast cancer prevention with Breast Self Examination behavior. **Conclusion** : The proportion of Breast Self Examination behaviour of Ananda Bekasi junior high school students is very low (8.5%). Most respondents had less knowledge about the pathophysiology of breast cancer (93.6%) and breast cancer prevention (83.7%). **Suggestions**: Conduct ongoing research to see any changes in respondent behavior in the future.

Keyword : Breast Cancer, Knowledge, Student, BSE

INTRODUCTION

Breast cancer is a painless lump or thickening in the breast that appears in the lining (epithelial) cells of the ducts (85% of cases) or lobules (15% of cases) in the glandular tissue of the breast. Over time, it can develop and invade surrounding breast tissue (invasive breast cancer) and then spread to nearby lymph nodes (regional metastasis) or to other organs in the body (WHO, 2022).

Risk factors for breast cancer are family history, menstrual history, pregnancy, and benign breast disease. Other possible factors can be estrogen, oral

contraceptives, obesity, high fat diet, alcohol consumption, and smoking (Hero, 2021). According to the Collaborative Group on Hormonal Factor in Breast Cancer, 2012 in Susi Purwati, et al. (2021) risk factors for breast cancer in women include age of menarche, age of menopause, age of pregnancy, length of breastfeeding, hormonal contraception, physical activity, smoking history, stress levels, obesity, and diet.

Based on Globocan data in 2020, Indonesia placed the 3rd rank in Asia with an incidence rate of 8 cases, and a mortality rate of 3 cases of breast cancer at the age of 14 years. One of the factors that cause the high rate of breast cancer is the lack of knowledge of adolescents in detecting and preventing breast cancer on early stage. Breast Self Examination is an effective screening method but many teenagers didn't know this method. According on the background above, the aim of this study is to research about correlation between female student knowledge and Breast Self Examination behaviour in Ananda Junior High School Bekasi City.

METHOD

This research was a descriptive quantitative study with a cross sectional approach. The population for this study were 218 female Ananda Bekasi Junior High School students with 141 sample size students in 2022. The inclusion criteria for the research sample were female Junior High School students, can communicate well and writing, willing to participate in the research by filling out the Informed Consent and present at the time of the research. The exclusion criteria were female students inactive and unable to attend the research, experiencing illness during the research, not giving complete answers when filling out the questionnaire, not ready to fill out the questionnaire when the research was conducted. Ethichal clereance of this research is respect for persons, beneficence, and justice (Kemenkes RI, 2021).

The data collection process starts from the preparation stage, applying for a research permit and then conducting a preliminary survey. At the implementation stage, the author introduced herself to the respondents, then asked for informed consent and continued with the distribution of questionnaires to respondents. Researchers explained how to fill out the questionnaire so that respondents understood. The research instrument used is a questionnaire containing questions

to obtain accurate and objective data on the problems studied. In this study using a questionnaire that has been standardized by previous researchers about the independent variable, knowledge of breast cancer pathophysiology and breast cancer prevention. The questionnaire has been valid and reliable and has been researched by Nurul Amaliah at SMA Negeri 8 Takalar South Sulawesi. For the knowledge variable using the Guttman scale, by making multiple choices. (Masturoh, Imas. 2018). Knowledge is also divided into three categories: good, sufficient and insufficient. (Rachmawati, Windi Chusniah. 2019).

The data processing process in this study used the Statistical Package for Social Science (SPSS) 25 program and manually with the following stages of analysis: editing, coding, data entry, data tabulation, processing, and cleaning data. Data were analyzed univariately to see the description of the dependent variable, Sadari behavior and the independent variable, knowledge of pathophysiology and prevention of breast cancer. Analysis of the results of statistical tests using chi-square to conclude that the relationship between two variables is meaningful or not meaningful (Notoatmodjo, 2018).

RESULT AND DISCUSSION

The population in this study were all students at Ananda Bekasi Junior High School in 2022, total 218 student. The sample in this study were 141 female students.

Table 1
Frequency Distribution of Breast Self Examination Behavior (BSE) of Female Students at Ananda Junior High School Bekasi in 2022

BSE Behaviour	Frequency	Percentage (%)
Never	129	91.5
Ever	12	8.5
Total	141	100

Based on the table above, the majority of respondents (91,5 %) have never done Breast Self Examination. Respondents who had done Breast Self Examination were 8,5 % (12 respondents)

Different results were obtained in a study conducted by Mariyati, et al (2021) entitled "Relationship between Adolescent Knowledge and Breast Self-Examination Behavior". The results obtained from 40 respondents, 21 respondents

(52.5%) had done BSE and 19 respondents (47.5%) did not do BSE. Respondents who do BSE have followed counseling from schools and posyandu.

According to the researcher, this shows that many adolescents have a risk of developing breast cancer but do not have the awareness to do Breast Self Examination. One of the contributing factors is that they have not received any health information about Breast Self Examination. Even most students are hearing the term of Breast Self Examination for the first time. For 12 respondents who have had an examination, it is necessary to do further research whether the examination is carried out according to the procedure or not.

Table 2
Frequency Distribution of Students' Knowledge about Pathophysiology and Prevention of Breast Cancer at Ananda Junior High School Bekasi in 2022

Knowledge	Bad	%	Good	%	Total
Pathophysiology	132	93.6	9	6.3	141
Prevention	118	83.7	23	16.3	141

Based on the table above, it shows that the majority of respondents have bad knowledge about the pathophysiology of breast cancer as many as 132 respondents (93.6%) and breast cancer prevention as many as 118 respondents (83.7%). Respondents who had good knowledge about the pathophysiology of breast cancer were 9 respondents (6.3%) and breast cancer prevention was 23 respondents (16.3%).

Different results were obtained in a study conducted by Rini Deska, et al (2019) entitled "The Relationship of Knowledge About Breast Cancer with Sadari Behaviour." The results obtained from 57 Midwifery student respondents, most of the respondents were in the good knowledge category, namely 25 respondents (43.8%).

According to researchers, the low level of knowledge of female students about the pathophysiology and prevention of breast cancer can be caused by the lack of information they get either through the school curriculum, social media, or family environment. The level of knowledge of junior high school students is certainly very different from Midwifery Academy students who have been exposed to information about breast cancer.

Further research is needed whether respondents with good knowledge really understand about pathophysiology and breast cancer prevention or just happen to fill out the questionnaire with the correct answer. Therefore, it is necessary to understand about prevention efforts and early diagnosis so that breast cancer can be diagnosed as early as possible so that it is treated immediately and does not lead to death

Table 3
Relationship between Knowledge about Pathophysiology and Breast Cancer Prevention With Breast Self Examination Behavior

	Breast Self Examination							
	Never Do BSE		Ever Do BSE		Total		95% OR	P Value
Knowledge	f(n)	%	f(n)	%	f(n)	%	107.25	0.000
Bad	117	99.2	1	0.8	118	100	12.72 - 903.92	
Good	12	52.2	11	47.8	23	100		
Total	129		12		141			

Based on the table above, it shows that respondents who have bad knowledge and never do BSE are 117 respondents (99.2%). Respondents who had good knowledge and ever do BSE were 1 respondent (0.8%). Respondents who had good knowledge and never do BSE were 12 respondents (52.2%). Respondents who had good knowledge and ever do BSE were 11 respondents (47.8%).

Respondent with bad knowledge (99,2%) never do Breast Self Examination because of lack information and knowledge. Respondent with bad knowledge but ever do Breast Self Examination (0,8%) it is necessary to do further research whether the examination is carried out according to the procedure or not. Then for the 11 respondents who had good knowledge but had never done Breast Self Examination can be caused they didn't have a breast cancer family history or did not understand how to do Breast Self Examination in the right time. The decision to do Breast Self Examination or not is the result of a rational process that is directed at a specific goal and follows a sequence of thinking.

Next, data testing was conducted to examine the relationship between the level of knowledge about the pathophysiology and breast cancer prevention with Breast Self Examination behavior using the Chi Square test. From the test results, the p value is 0.000 (p value <0.05), with an Odd Ratio of 107.25, so Ho is rejected.

This means that there is a correlation between knowledge and the Breast Self Examination behaviour of female students at Ananda Junior High School Bekasi City in 2022.

According to Lawrance Green, one of the predisposing factors that influence behavior is the level of knowledge (Rahmawati, Windi Chusniah. 2019). From the results of research at Ananda Junior High School Bekasi City in 2022, data were obtained that the majority of female students had low knowledge about the pathophysiology and prevention of breast cancer. Thus affecting the low Breast Self Examination behavior .

Same result with previous research by Sarina (2020) entitled "Factors Associated with SADARI Behavior as Early Detection of Breast Cancer in FKM Students at Hasanudin University". The results of the analysis in this study that the level of knowledge of respondents obtained a p value = 0.000 (p value <0.05) which proves that there is a positive relationship between the level of knowledge and SADARI behavior. Another study conducted by Selvita, et al (2019) entitled "The Relationship between Knowledge and Attitudes of Adolescents with Breast Self Examination Behavior (SADARI) in Class X Adolescent Girls at RK Delimurni Bandar Baru High School in 2019", also states that there is a relationship between the knowledge of adolescent girls and SADARI behavior

CONCLUSION AND SUGGESTION

The proportion of Breast Self Examination behavior of female students at Ananda Junior High School Bekasi is very low. The majority of respondents had bad knowledge about breast cancer pathophysiology and breast cancer prevention. The conclusion is there is correlation between knowledge about the pathophysiology and prevention of breast cancer with BSE behavior. In future research, it is recommended to conducting ongoing research in order to see any chance in respondent behaviour in the future.

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EFFECTS OF PRENATAL YOGA ON THE ANXIETY OF PREGNANT WOMEN BEFORE BIRTH

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Abstract

Background: Anxiety in the last trimester of pregnancy will be different from anxiety in the previous trimester. Stress during pregnancy will affect the growth and development of the fetus. Anxiety is three times more likely to increase fear of childbirth and 1.7 times more likely to require a cesarean section. Stress during pregnancy can be reduced by exercising. One of the recommended sports is prenatal yoga. Practicing prenatal yoga during pregnancy is more effective in reducing stress and depression. Because in yoga, in addition to practicing, pregnant women also receive positive affirmations so that they can respond to physical changes during pregnancy and childbirth. The research aims to determine the effect of pregnancy yoga on the anxiety of pregnant women before birth. **Method:** A study uses a quasi-experimental design to examine the impact and effectiveness of treatment. The design of this study uses groups of subjects. Observations will be made before and after treatment. The sample for this study was pregnant women between 14 and 40 weeks of gestation. The instrument used to measure anxiety levels is the standard Hamilton Anxiety Rating Scale questionnaire (HARS). This research was carried out in the working area of Puskesmas Ngletih, Kediri Regency. The study population included all pregnant women who attended a yoga class for pregnant women at Puskesmas Ngletih Workspace**,** Kediri Regency, for a total of 12 people. Result**:** The results of a study conducted at Ngletih Community Health Center, Kediri Town, in 2023. **Result :** Practicing gentle yoga before giving birth has an effect on pregnant women's anxiety about labor, with a p value of <0.001 (p <0.05).**Conclusion :** It is hoped that all pregnant women with a gestational age of 14–40 weeks can do prenatal yoga.

keyword : anxiety, pregnant, yoga

INTRODUCTION

Anxiety is related to a state of worry in the form of fear, a feeling of uncertainty or helplessness, and an emotional state of uncertainty about certain things. During your first pregnancy, this fear often arises, especially before giving birth. A pregnant mother's mental load usually occurs in the third month of pregnancy. Women who are stressed during pregnancy will have a difficult job and

may experience problems that can lead to the death of the mother and the fetus (Ashari, Pongsibidang and Mikhrunnisai, 2019). During the third trimester, pregnant women who want to give birth may fear whether the birth will be successful or whether a cesarean section will be performed, which can cause anxiety that may occur. as they worry about themselves regnant women experience various psychological changes, including mood swings, feelings of fatigue, emotions, a need for more attention, anxiety, depression, anxiety, and stress   Women who experience anxiety and stress during the third trimester of pregnancy will have a greater chance of suffering from birth defects in the form of failure to close the mouth, the risk of cesarean section, delivery of equipment, premature birth, and low birth weight (LBW) is long-term associated with behavioral and emotional problems in children (Ashari, Pongsibidang and Mikhrunnisai, 2019) (Maharani and Hayati, 2020).

The United Nations International Children's Emergency Fund (UNICEF) reports data on pregnant women experiencing problems in the third trimester. A total of 12,230,142 million people, and 30% of them are worried. According to data from the Anxiety and Depression Association of America (ADAA), 52% of pregnant women reported feeling more anxious during pregnancy (Anxiety & Depression Associations of America, 2016).The incidence of anxiety among pregnant women in Indonesia is 107 million (28.7%) out of 373 million pregnant women with anxiety disorder (IDHS). In 2016, the risk of depression or anxiety was 10–15%, occurring in women aged 20–44. Depression and anxiety affect fertility by 10–15% (Syafrie, 2017).

Pregnancy anxiety is higher before giving birth than during the first and second trimesters. Stress related to pregnancy will affect the growth and development of the fetus. Anxiety is three times more likely to increase fear during childbirth and 1.7 times more likely to increase the risk of a cesarean section (Rubetsson, 2014). Stress during pregnancy can be reduced through exercise. One of the recommended sports is yoga because it is inexpensive, easy to do, and very beneficial for physical and mental health. Yoga during pregnancy is more effective in reducing stress and depression. because in yoga, in addition to exercise, pregnant

women also receive positive affirmations so that mothers can respond to physical changes during pregnancy and childbirth (Einion, 2016).

Yoga movements reduce anxiety levels in pregnant women by increasing blood flow to the hypothalamus, affecting the parasympathetic nervous system, affecting the heart organs, and normalizing blood pressure and breathing. Puskesmas Ngletih, Kediri City, offers antenatal classes for pregnant women held at the Ngletih Community Health Center. We hold regular monthly classes for pregnant women. So far, pregnant women are doing pregnancy gymnastics only in pregnancy classes. Therefore, researchers would like to conduct a study on prenatal yoga. Prenatal yoga is expected to revolutionize the way pregnant women can perform their own prenatal care.

METHOD

` A study uses a quasi-experimental design to examine the impact and effectiveness of treatment. The design of this study uses group of subjects. Observations will be made before and after treatment. The sample for this study was pregnant women between 14 and 40 weeks of gestation. The instrument used to measure anxiety levels is the standard Hamilton Anxiety Rating Scale questionnaire (HARS). In this study, respondents took a pre-test to assess their anxiety levels using the HARS questionnaire and received yoga-style therapy. Then, an exploratory analysis was conducted in the form of an assessment of anxiety using the HARS questionnaire. Childbirth yoga is taught by prenatal yoga teachers. This research was carried out in the working area of Puskesmas Ngletih, Regenc of Kediri. The research population was all pregnant women who took part in the pregnant women's yoga class in the working area of the Puskesmas Ngletih, Kediri Regency, totaling 12 people. The sampling technique in this research was carried out using the total sampling method. Data obtained from respondent response questionnaires were processed using a computer program and then analyzed in two forms, namely univariate analysis and bivariate analysis. The statistical test used is the unpaired t-test. This test is used to determine whether there is an influence between the requested frequency distribution and the expected frequency distribution at the 0.05 confidence level.

RESULT AND DISCUSSION

Based on the data collected and analyzed, the study "The influence of prenatal yoga on decision-making fear in pregnant women" found the following results:

Table 1. Characteristics of respondents

Age	Frequency	Precentage (%)
26-34	10	83,33
35-49	2	16,67
Total	**12**	**100**
Gestational Age	**Frequency**	**Precentage (%)**
15-28 week	4	33,33
29-40 week	8	66,67
Total	**12**	**100 %**
Paritas	**Frequency**	**Precentage (%)**
Primigravida	3	25
Multigravida	9	75
Total	**12**	**100 %**

According to the survey results in the table above, it was found that the largest number of respondents were between the ages of 26 and 34, with 10 (83,33%). Most gestational ages were between 29 and 40 weeks, with 8 respondents (66,67%). Among the respondents, the highest equality was among multiparous women, with 9 respondents (75%).

Table 2. Distribution of Pre-Test and Post-Test Results for Pregnant Women's Anxiety Levels

Pre-Test		
Anxiety Levels	**Frequency**	**Persentase (%)**
High	7	58,33
Medium	3	25
Low	2	16,67
Post-Test		
Anxiety Levels	**Frequency**	**Persentase (%)**
Medium	2	16,67
Low	9	75
not anxious	1	8,33

Based on the findings in the table above, 7 (58.33%) of the respondents provided data that pregnant women suffered from severe anxiety before practicing pregnancy

yoga. According to the survey results in the table above, pregnant women felt mild anxiety after practicing maternity yoga, with 9 respondents (75%).

The level of anxiety is a response to the threat of pain or that the outside world is not ready to deal with it and serves to warn the individual of danger. According to the data obtained, we found that 7 respondents reported a moderate level of anxiety. This is not expected, as it will affect the health and development of the fetus. And 7 respondents said the factors that worried them were complex, including age, environment, and circumstances. The results of the qualitative analysis showed that pregnant women experienced several forms of anxiety, including doubts about the normal birth process and anxiety levels while waiting for their due date. The effects of this level of anxiety can be seen in everyday activities such as feeling stressed during pregnancy, becoming more sensitive and irritable, and having difficulty sleeping. This is consistent with the hypothesis that during the third trimester, pregnant women encounter new disturbances in the birth process and the mother's sense of responsibility (Delgado, 2012).

Table 3. Normality Test Results for Pregnant Women's Anxiety Levels

	N	Mean	Nilai p
Pre-Test	12	12,46	0,001
Post-Test	12	6,81	

The data in Table 3, which is the result of the analysis, shows that there is a difference in the anxiety level of the 4,444 respondents before and after the prenatal yoga treatment, with a p-value of 0.001. The null hypothesis is rejected because p<0.05. The difference in anxiety levels is illustrated by the mean value of anxiety levels before treatment, which is 12,46. The average score after the test was 6,81. Average anxiety levels decreased by 5,65%. Moderate anxiety levels decreased by 8,33%, and severe anxiety levels decreased by 100%. This is consistent with the theory that prenatal yoga has an effect on reducing anxiety levels (Sindhu, 2014).

There was a statistical reduction in anxiety levels, suggesting that yoga may reduce anxiety levels in pregnant women. After doing prenatal yoga exercises, it turned out that the mother's anxiety level was better than before. Pregnant women also need adequate exercise to help them achieve optimal health throughout

pregnancy and the ability to endure childbirth. Practicing yoga, in addition to physical training, also has the effect of nourishing the soul so that pregnant women always feel calm and at peace. In addition, it also increases the ability of pregnant women to concentrate and pay attention so they can admire and communicate with their baby. This is consistent with Sri Maharani (2020) study, which found that yoga is an alternative treatment for pregnant women experiencing high levels of anxiety. Yoga not only reduces anxiety levels but also eliminates some of the vegetative symptoms that cause anxiety. In this study, research was conducted in the work area of the Putri Ayu Public Health Center in Jambi. The data collected will be analyzed univariately and bivariately. Prenatal gentle yoga has an effect on pregnant women's fear of labor with a p-value <0.001 (95% CI). Gentle prenatal yoga can have a huge impact on pregnancy anxiety during childbirth (Maharani and Hayati, 2020)

CONCLUSION AND SUGGESTION

The results of a study conducted at Ngletih Community Health Center, Kediri Town, in 2023. On average, pregnant women who practice gentle yoga before giving birth experience severe anxiety. On average, pregnant women who practice gentle yoga before giving birth experience mild anxiety, and the effect of prenatal yoga on anxiety in pregnant women before giving birth has a p-value of 0.001.

ACKNOWLEDGMENT

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THE CORRELATION BEETWEEN MOTHER'S NUTRITIONAL STATUS AND PARITY WITH THE INCIDENT OF LOW BIRTH WEIGHT (LBW) AT A PUBLIC HEALTH CENTER SURABAYA

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Abstract

Background: One of the highest causative factors of neonatal death in Indonesia is low birth weight (LBW), around 7,150 (35.3%) cases. Even though the trend of LBW incidents in East Java is decreasing, in the city of Surabaya itself the death rate due to LBW has increased from 31 deaths to 51 deaths. Simomulyo Public Health Center was ranked first with the highest incidence of LBW in Surabaya with 45 cases in 2019. Even though there was a decrease in cases in 2020, the death rate actually increased from 1 death to 4 deaths. WHO (2017) defines LBW as babies born weighing $\leq$ 2500 gr. Nutritional status and parity are two of the many risk factors for LBW. Knowing the causal relationship with the occurrence of LBW is important to do at the public Health Center as a first step in preventing LBW in the future. **Method:** This research is quantitative with an analytical observational design using a cross-sectional approach. Samples were taken using probability sampling techniques, namely random sampling. The total samples taken were 96 samples. **Result:** The results of the research was found that there was a relationship between nutritional status and the incidence of LBW with a value of p=0.005 (p<0.05) and the relationship between parity and the incidence of LBW with a value of p=0.001 (p < 0.05). **Conclusion:** there is a correlation between nutritional status and parity and the incidence of LBW at the Simomulyo Public Health Center Surabaya.

keyword: LBW, nutritional status, parity

INTRODUCTION

One indicator of the success of health development in a country is to reduce the Maternal Mortality Rate (MMR) and also Infant Mortality Rate (IMR) (Kemenkes, 2020). In 2015, approximately 20 million newborns, an estimated 14.6% of all babies born globally that year, suffered from LBW (UNICEF, 2019). The results of the 2017 Indonesian Demographic and Health Survey (SDKI) showed that the Neonatal Mortality Rate (AKN) was 15 per 1000 live births and the IMR was 24 per 1000 live births (Profil Kesehatan Indonesia, 2018). Based on Indonesian health profile data, it shows that the highest cause of neonatal death is LBW, namely 7,150 (35.3%) cases (Kemenkes, 2020).

In East Java, the number of infant deaths was 3,614 babies (Dinkes Prov. Jatim, 2020). The factors that influence IMR in East Java are the number of health centers, percentage of poor population, LBW and percentage of birth attendants (Cabral et al., 2019). The trend in the incidence of LBW in East Java tends to decrease. This is shown by the decrease in the number of LBW deaths from 1,164 deaths and 20,627 LBW incidents in 2020 to 987 deaths and 18,665 LBW incidents in 2021 (Profil Kesehatan Prov. Jawa Timur, 2020; Profil Kesehatan Prov. Jawa Timur, 2021). Meanwhile in Surabaya, the death rate due to LBW increased in 2020 to 51 deaths from 31 deaths in 2019 (Profil Kesehatan Kota Surabaya, 2019; Profil Kesehatan Kota Surabaya, 2020). Likewise with the incidence of LBW incidents in Surabaya, although it decreased to 394 in 2021 from the previous 550 in 2020, the percentage of LBW incidents increased from 3.7% in 2020 to 3.8% in 2021 (Profil Kesehatan Prov. Jawa Timur, 2020; Profil Kesehatan Prov. Jawa Timur, 2021). A working area in one of the sub-districts in Surabaya, namely the Simomulyo Public Health Center, had the first rank with the highest incidence of LBW in the city of Surabaya with an incidence of 45 cases (3.82%) (Profil Kesehatan Kota Surabaya, 2019). Even though it decreased to 13 cases (1.19%) in 2020, the death rate actually increased from 1 case in 2019 to 4 cases in 2020 (Profil Kesehatan Kota Surabaya, 2020).

The WHO definition (2017) regarding LBW is as a baby born weighing ≤ 2500 grams. In childhood, babies with lower body weight (LBW) have a higher risk of stunting, lower intellectual capacity, which can pose a threat to the quality of

human resources in the future, and can even cause death. Various factors can influence the occurrence of LBW, including maternal factors and fetal factors. Maternal factors that predispose the incidence of LBW include the mother's age at pregnancy being too young or too old (35 years), nutritional status, diseases directly related to pregnancy, interval between pregnancy, maternal parity, socio-economic conditions while foetal factors that can influence are multiple pregnancies, infections and chromosomal abnormalities (Wahyuni et al., 2021).

The nutritional status of the mother is closely related to the incidence of LBW, it is because the fetus obtains nutrition for growth and development from the nutrition consumed by the mother. In other words, the quality of the baby is very dependent on the mother's nutritional status of the fetus conceived during pregnancy (Mardiaturrahmah, 2020).

Meanwhile, mothers who have a high parity status can increase the risk of LBW. This is because every pregnancy followed by childbirth will lead to abnormalities in the uterus. Repeated pregnancies will also affect the circulation of nutrients to the fetus, this situation causes fetal growth disorders resulting in LBW. Knowing the causal relationship with the occurrence of LBW is important to do at the Public Health Center as a first step in preventing LBW in the future. Therefore, this study aims to determine the relationship between nutritional status and maternal parity with the incidence of LBW at the Simomulyo Public Health Center Surabaya.

METHOD

This research is a quantitative research using an analytical observational research design, when the researcher only makes observations of the variables studied without carrying out treatment and using a cross-sectional approach. Data was taken in August 2023. The samples from this study were mothers who underwent ANC examinations and gave birth at the Simomulyo Public Health Center Surabaya in January – December 2022, there were 96 samples in total using random sampling techniques from 123 total populations. Data were taken from the mother's medical records and analyzed univariate and bivariate using spearman test with a confidence level of 95%.

RESULT AND DISCUSSION

Result

In general, the majority of mothers who undergo ANC and give birth at the Simomulyo Public Health Center Surabaya come from Javanese ethnicity, are Muslim and housewives with more than 78% percentage. From the data that has been collected, the characteristics of the respondents are obtained in the form of the age of the respondents in this study which is in the range 17 - 42 years.

Table 1 Frequency Distribution of Nutritional Status of Mothers Who Undergo ANC and Give Birth at the Simomulyo Public Health Center Surabaya in January – December 2022.

Parity	Frequency	Percentage (%)
Underweight	5	5
Normal	61	64
Overweight	25	26
Obesitas	5	5
Total	96	100

Table 1 shows that only 5 out of 96 respondents (5%) of mothers who undergo ANC and gave birth at the Simomulyo Public Health Center Surabaya were mothers in the underweight BMI category.

Table 2 Parity Frequency Distribution of Mothers Who Undergo ANC and Give Birth at Simomulyo Public Health Center Surabaya in January – December 2022

Parity	Frequency	Percentage (%)
Primiparous	27	28
Multiparous	69	72
Grandemultiparous	0	0
Total	96	100

Table 2 shows that almost half of the respondents, namely 27 (28%) mothers who undergo ANC and gave birth at the Simomulyo Public Health Center Surabaya, were mothers with primiparous parity.

Table 3 Frequency Distribution of LBW Events from Mothers Who Undergo ANC and Give Birth at the Simomulyo Public Health Center Surabaya in January – December 2022

Birth Weight	Frequency	Percentage (%)
LBW	7	7
Non LBW	89	93
Total	96	100

Table 3 shows that only 7 of the 96 respondents (7%) weighed babies from mothers who gave birth at the Simomulyo Public Health Center Surabaya had LBW.

Table 4 Correlation between nutritional status and LBW incidence at Simomulyo Public Health Center Surabaya for the period January – December 2022

Birth Weight	Nutritional Status								Total		p value	r
	Underweight	%	Normal	%	Overweight	%	Obesity	%	N	%		
LBW	2	2	5	5,3	0	0	0	0	7	7,3		
Non LBW	3	3,1	56	58,3	25	26	5	5,3	89	92.7	0,005	0,284
Total	5	5,1	61	63,6	25	26	5	5,3	96	100		

Table 4 shows that of the 96 mothers who gave birth at the Simomulyo Public Health Center Surabaya, 7 (7.3%) of the babies born were LBW and came from 2 (2%) mothers with underweight nutritional status and 5 (5.3%) mothers with underweight nutritional status. The results of the research were analyzed bivariate using the IBM SPSS Statistics 25 program with the Spearman test, obtained a value of p=0.005 (p<0.05) which means there is a relationship between nutritional status and the incidence of LBW at the Simomulyo Public Health Center Surabaya. In the results of the contingency coefficient (r) between the variable incidence of LBW and nutritional status, it has a value of 0.284, which means that the relationship between the incidence of LBW and nutritional status has a low correlation.

Table 5 Correlation between parity and LBW incidence at Simomulyo Public Health Center Surabaya for the period January – December 2022

Birth Weight	Parity						Total		*p value*	r
	Primiparous	%	Multiparous	%	Grandemultiparous	%	N	%		
LBW	6	6,2	1	1	0	0	7	7,2		
Non LBW	21	21,9	68	70,9	0	0	89	92.8	0,001	0,326
Total	27	28,1	69	81,9	0	0	96	100		

Table 5 shows that of the 96 mothers who gave birth at the Simomulyo Public Health Center Surabaya, 7 (7.2%) babies were born with LBW and came from 6 (6.2%) mothers with primiparous parity and 1 (1%) mother with multiparous parity. The results of the research were analyzed bivariate using the IBM SPSS Statistics 25 program with the Spearman correlation test, obtained a value of p=0.001 (p<0.05) which means there is a relationship between parity and the incidence of LBW at the Simomulyo Public Health Center Surabaya. In the results of the contingency coefficient (r) between the variable incidence of LBW and nutritional status, it has a value of 0.326, which means that the relationship between the incidence of LBW and nutritional status has a low correlation.

Discussion

The nutritional status of the mother greatly influences the mother's ability to provide nutrition for herself and the fetus. If the mother's nutrition is in optimal condition, then the mother will have the ability to provide adequate nutrition for the baby, so that the risks in pregnancy will be reduced, meanwhile, if the mother cannot fulfill the nutrition optimally, then the fetus will also not get adequate nutritional intake, causing its growth to be obstructed and the risk of pregnancy and childbirth such as LBW will increase (Pramudieta, 2019). The results of this study also represent that the incidence of LBW does not only occur in mothers with underweight BMI because it was also found that 5 out of 7 mothers who gave birth to LBW had a normal BMI. In mothers with normal nutritional status, the incidence of LBW can be influenced by various other factors. Several studies indicate that the factors causing LBW are multifactorial. For example, mother-related factors include demographics; race, education, occupation, physical activity, behavior; smoking habits and alcohol consumption. Meanwhile, biomedical factors include body weight, maternal age, interval between pregnancy, obstetric history, mobility

during pregnancy, blood pressure and hemoglobin levels during pregnancy. Meanwhile, factors related to the fetus include gemelli pregnancy, chromosomal abnormalities, and hydramnios (Ani et al., 2020). In other words, maternal risk nutritional status has a significant impact on the incidence of LBW, but nutritional status does not have the biggest influence on the occurrence of LBW and can be influenced by other risk factors. This is proven by the occurrence of several cases of LBW in mothers with normal nutritional status.

Meanwhile, for parity, parity 2 and 3 are considered safer from the point of view of maternal mortality. Because at this parity, the mother is considered to have sufficient knowledge and experience regarding pregnancy and childbirth and is in good physical condition so that the risk of LBW incidents can be prevented (Prawirohardjo, 2019). Risk parities such as 1 and ≥ 4 can increase the risk of preterm birth, thereby impacting the incidence of LBW. In parity 1 or primipara, this is related to the mother's lack of experience in pregnancy, which can lead to a lack of maternal knowledge about providing adequate nutrition for both mother and baby and can give rise to the risk of LBW. Meanwhile, according to Fitriani and Lestari (2019), high parity can also increase the possibility of complications because it can result in abnormalities in the uterus and disruption in the circulation of nutrients to the fetus. Another risk at high parity is bleeding which can occur due to abnormalities in the blood vessels and scar tissue resulting from repeated pregnancies and childbirth and can affect the tensile strength of the uterus. In this study, data was obtained on one mother with multiparous parity who experienced an LBW event, but no data was obtained on mothers with grand multiparous parity, so the risk parity was only represented by mothers with primiparous parity. However, this is also in line with research conducted by Riska, et al. (2020), namely that primiparous parity is related to the occurrence of LBW with P = 0,001 and OR 4 (95%CI 2,004-8,704) shows that there is a strong relationship between parity and primiparous with a LBW incidence with a risk 4 times greater. In other words, maternal risk parity has a significant influence on the incidence of LBW, but parity does not have the biggest influence on the occurrence of LBW and can be influenced by other risk factors. This is proven by the occurrence of several cases of LBW in multiparous mothers who are not included in the risk category.

Nutritional status and parity take a mutually sustainable role in the baby's weight gain during pregnancy. This is because the mother's parity can also determine the mother's nutritional status during pregnancy. If the interval of the parities are short, then the mother does not have enough time to prepare optimal nutrition for the next fetus conceived and can lead to LBW.

CONCLUSION AND SUGGESTION

There is a correlation between nutritional status and parity and the incidence of LBW at the Simomulyo Public Health Center Surabaya with Spearman test values of 0.005 and 0.001 respectively. For future researchers, this research can be developed in depth by involving data supporting and with variables, instruments and statistical testing techniques to obtain more specific results.

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There was some research supporting data that was not recorded completely in the patient medical records obtained by the researchers, such as; latest educational history, occupation and interval between pregnancies so that researchers could not analyze the variables more deeply in terms of the more diverse characteristics of the respondents.

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THE EFFECTIVENESS OF HOLISTIC CARE-BASED HEALTH EDUCATION PREVENTS EARLY TEENAGE MARRIAGE AT ISLAMIC SENIOR HIGH SCHOOL 4 BAOURNO BOJONEGORO

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Abstract
Background: Teenage marriage increase in Bojonegoro East Java Indonesia, it can be have an impact on reproductive health. There are many factors for influence early marriage. Low education and poor economic conditions also cause early marriage. The teenager knowledge about early teenage marriage and its impact is lacking. Early marriages less than 19 years should not be carried out considering the many risks that may occur to the mother and baby. Therefore, it is important to understand the impact of comprehensive holistic care education on efforts to prevent marriage among early teens. **Method**: The design of this study was quasi-experimental with a pre-posttest control group design. The research population was students of at Islamic High School 4 in Baureno Bojonegoro, with a total of 313 respondents. The sample consisted of 70 respondents using non-probability method using purposive sampling technique. The sample was determined based on the inclusion criteria, namely school-age students was 13-15 years. Data were collected using a questionnaire and Wilcoxon Sign Ranks test was performed at a significance level of 0.05. **Result**: The results of the Wilcoxon Signed Ranks Test showed a value of p = 0.000 (p<0.05) meaning that there was a significant difference in the level of knowledge after holistic care education was carried out. **Conclusion** : Holistic care-based education can increase knowledge. Holistic care-based education seen from a biological, psychological, social and spiritual perspective is very suitable for health education, health services and health development that is suitable for adolescent children.

Keywords : health education, holistic care, early marriage

INTRODUCTION

According to the World Health Organization (WHO), adolescents are between the ages of 10 and 19, which is also different from Kemenkes No. 25 of 2014 where teenagers are residents in the age range of 10-18 years. Young people can also be classified as unmarried (BKKBN,2020) aged 10-24. On the other hand, adolescence is a developmental transition period from childhood to adulthood. that it will influence holistic changes both biologically, psychologically, socially and spiritually. Early

marriage occurs at the age of under 19 years or adolescence. Early marriage has an impact on youth related to the lack of developmental tasks. This allows for factors that cause individuals to decide to marry early (Nabila, Roswiyani and Satyadi, 2022). Early marriage is a serious violation of children's rights. It is every child's right to learn so they can continue their studies at university. Children's rights are not fulfilled because of early marriage, so that one's potential is not fulfilled either. In general, early marriage will raise concerns ~~both~~ from a biological, psychological and socio-economic perspective. Biological problems which have an impact on women's reproductive health. Reproductive health side effects for women when deciding to marry at an early age include abortion, anemia, intrauterine fetal death, prematurity, sexual violence, uterine atony, and cervical cancer. (Eka Radiyani et,al, 2018). Mental health issues are increasing stressors that affect the mental health of wives and husbands. This is also one of the effects of the rising divorce rate.

In 2020 Census Data. The number of teenagers (10-24 years old) is 67 million, representing 24% of Indonesia's total population. Almost a quarter of Indonesia's population are teenagers. According to the National Socio-Economic Survey (Susenas) conducted by the Central Bureau of Statistics (BPS) in 2022, data from multiple studies shows that 25% of married women between the ages of 20 and 24 were married before the age of 18. Based on the Indonesian Demographic and Health (SDKI) 2022 Survey, 17% of married women aged 20-24 were married before 18 years old. (Badan Pusat Statistik, 2020)

There are many factors for influence early marriage. Low education and poor economic conditions can also cause early marriage. So early marriage reduces the burden on parents both from an economic and other perspective. Low-income parents are more likely to marry early, and economic factors become a barrier to sending their children to higher education. Girls aged 10 to 14 are five times higher to die a result of her reproductive health disorder than women aged 20 to 24. (Wijayati, Soemanto and Pamungkasari, 2017). Globally, death caused by pregnancy is the main cause of death for girls aged <19 years. Parents don't know about negative impacts like this when marrying off their children. The importance of children or teenagers knowing the negative impacts

of self-marriage through holistic health education is expected to minimize cases of self-marriage in the region.

Indonesia is one example of global progress towards eliminating the practice of child marriage with a five percent decline in prevalence among the published IDHS between 2007 and 2012. However, little is known about trends in The prevalence of child marriage at the local level and how it compares with the national prevalence. Therefore, it is important to know the impact of Comprehensive care educational on efforts to prevents marriage among her pre-teens at Islamic High School 4 in Baureno, Bojonegoro

METHOD

The design of this study was quasi-experimental with a pre-posttest control group design. The research population was students of at Islamic High School 4 in Baureno Bojonegoro, with a total of 313 respondents. The sample consisted of 70 respondents using non-probability method using purposive sampling technique. The sample was determined based on the inclusion criteria, namely school-age students was 13-15 years, early adolescents who have pre-test knowledge scores below 50, and students who could communicate well and were willing to be respondents with a inform consent, The exclusion criteria in this study were students who could not read. The students health condition was getting worse, for example being sick, not attendance. The independent variable of this research was early marriage education, while dependent variable is the growing child's level of knowledge. Data were collected using a questionnaire to measure the depend variable is levels of knowledge teenagers early marriages comprehensive holistic care educational giver before and after. The questionnaire was validity and reliability. Data analyses with Wilcoxon Sign Ranks test was performed at a significance level of 0.05 meaning that there was a significant difference in the level of knowledge after comprehensive holistic care educational was carried out.

RESULT AND DISCUSSION

In this section, the results of the study about the effectiveness of holistic care-based health education prevent early teenage marriage at Islamic Senior High School 4 Baourno Bojonegoro, are explained as follows.

Table 1

Knowledge early marriage student at Islamic Senior High School 4 Baourno Bojonegoro

Groups	Intervention				Control			
	Pre		Post		Pre		Post	
High Knowledge Level	0	0%	5	14%	0	0%	0	0%
Moderate Knowledge Level	5	14%	18	52%	4	11%	2	6%
Low Knowledge Level	30	86%	12	34%	31	89%	33	94%
Total	35	100%	35	100%	35	100%	35	100%

The table above shows that 30 respondents (86%)s in the intervention group had low knowledge about early marriage before comprehensive holistic care education, whereas 5 (14%) respondents in the intervention group had moderate knowledge about early marriage. After the intervention, the knowledge level of 23 respondents improved, with a total of 5 (14%) respondents having a high level of knowledge, 18 (51%) respondents having a medium level of knowledge; 12 (34%) respondents had an intermediate level of knowledge.

In contrast to the control group, the control group who experienced a moderate level of knowledge were 4 (11%) respondents and those who experienced a low level of knowledge were 31 (89%) respondents. The control group experienced a decrease in scoring from the questionnaire so that 2 (6%) respondents had a moderate level of knowledge. Meanwhile, the low level of knowledge increased by 2 respondents, so that the total were 33 (94%) respondents. In this way, there is a large difference in the level of knowledge regarding early marriage before and after implementing early marriage education based on holistic care**.**

Table 2

Pre-test and post-test measurement knowledge after comprehensive holistic care education at Islamic Senior High School 4 Baourno Bojonegoro

Groups	N		Mean(Min-Max)	SD	Z	p value
Intervention	35	Pre	7 (2-13)	3,04	-4,999	0,00
		Post	13 (5-25)	4,85		
Control	35	Pre	6 (2-13)	2,86	-0,154	0,877
		Post	7 (1-20)	3,97		

The table above shows that at the knowledge level at pretest was low in all respondents both the control or treatments groups. After 180 minutes of training, it has improvement. The mean value before (pre-test) was 7 and after treatment (post-test) was 13. The result of the Wilcoxon signed rank test is p = 0.000 (p<0,05)

No intervention was given to the control group. The mean value before treatment (pre) was 6 and after treatment (post) was 7. The Wilcoxon signed rank test result showed a value of p = 0.877 (p > 0.05). This means that there was no significant difference before treatment. The knowledge problem and its aftermath.

Education is an interactive process that facilitates learning, which is an attempt to expand new knowledge, attitudes, and skills by reinforcing specific practices and experiences (Potter & Perry, 2009). Health education is a dynamic process of changing behavior, and the change is not based on a set of steps, but occurs through awareness within an individual, group, or society (Mubarak and Chayatin, 2009). Education may also take the form of researching the effects of early marriage. The negative effects of early marriage on men and women according to Maulidina, 2019, the effects of early marriage generally include the psychological aspects of feeling burdened, anxious and stressed. Similarly, from a health perspective, there are things like premature birth, bleeding, and high blood pressure. Finally, there are the socio-economic consequences of not socializing and the shame of marrying young due to out-of-wedlock pregnancies. From an economic point of view, they are not yet independent and are still dependent on their parents (Maulidina, 2019).

People's understanding of the conditions for marriage is diminished due to low educational attainment {Formatting Citation}. Holistic care education is one of the aims of providing knowledge about the requirements for marriage so that it can be directly associated with a decline in early marriage. This is consistent with research findings that participants' knowledge increased after training. Low educational attainment is also one of the effects of wrong decision-makers (Siti Nurjannah, 2018). Many things require education because one of the goals of education is to be able to make decisions correctly. Education here makes individuals know the impact of making the wrong decision so that it can affect it from a bio-psycho-social and cultural perspective.

The aim of education is to increase public knowledge and awareness. Holistic care-based Health Education Program, a program that includes biological, psychological, social and spiritual aspects can be used as a tool to prevent early marriage and violent behavior in teenagers. This can increase teenagers' knowledge regarding early marriage. When teenagers know the negative impacts of early marriage, it is hoped that teenagers will be able to prevent early marriage. Research by Natalia, 2015 shows that education reproductive health effect on adolecents associated knowledge of early merriage (Natalia, 2014)

CONCLUSION AND SUGGESTION

Holistic care-based education can increase knowledge. Holistic care-based education consist of a biological, psychological, social and spiritual perspective is very suitable for health education, health services and health development that is suitable for teenagers. So this education can be carried out to prevent early teenage marriage. As time goes by, teenagers are able to turn education into knowledge and apply it in everyday life.

ACKNOWLEDGMENT

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FACTORS AFFECTING EARLY COMPLEMENTARY FEEDING OF MOTHERS WITH BABIES AGED 0-6 MONTHS

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Abstract

Background: Exclusive breastfeeding for babies from 0 to 6 months of age and continued until 2 years of age can promote healthy growth and development. According to the WHO, in 2020, if a child receives complementary foods before 6 months of age, their growth will be delayed, and the risk of diarrhea is 17 times higher and the risk of upper respiratory tract infection is 3 times higher. The problem of this study is that the rate of early complementary food distribution for babies aged 0–6 months is still high. This study aims to determine factors affecting early complementary feeding for babies from 0 to 6 months of age. **Method:** The design of this research is descriptive with a cross-sectional approach. The research was carried out in July–September 2023 in Banaran Village, Kediri East Java, with a sample of 32 respondents consisting of mothers with babies aged 0–6 months who had been given early complementary feeding. Sampling is done by consecutive sampling. The variables in this study are factors that influence the provision of early complementary feeding for mothers with babies aged 0–6 months. Data was obtained through direct interviews with respondents using a questionnaire. **Results**: This study showed that the factors affecting early complementary feeding are socio-cultural factors with high category (81.3%), knowledge level factors with medium category (50%), personal factors with low category (87.6%) and promotional advertising for infant formula and baby food have medium category (71.9%). **Conclusion:** research results shows that the factors affecting early complementary feeding for babies from aged 0-6 months are socio-cultural factors, personal factors, and promotional advertising factors.
Keywords: Factors Affecting Early Complementary Feeding

INTRODUCTION

Breast milk is the best food for young babies because the ingredients in breast milk are the most perfect and natural. Exclusive breastfeeding from 0 to 6 months of age and continuing until 2 years of age can promote healthy growth and development (Nisa & Merben, 2023). After the first 6 months, babies should be supplemented with complementary foods. Complementary foods are transitional foods between breast milk and the family's diet. Feeding and providing

complementary foods should be done gradually in form and quantity, depending on the child's digestive ability (Juliarti & Affriyani, 2019). Research from 42 developing countries shows that exclusive breastfeeding for 6 months is the public health intervention with the greatest positive impact in reducing child mortality by approximately 13% (Hamim, 2020). The infant mortality rate (IMR) has increased from 24 deaths per 1,000 live births (SDKI, 2017) to 16.85 deaths per 1,000 live births (Census, 2020). These results show a significant reduction, even exceeding the 2022 target of 18.6% deaths per 1,000 live births. This must be maintained to support the 2024 target of 16 deaths per 1,000 live births and 12 deaths per 1,000 live births by 2030. (Kemenkes RI, 2022). According to the WHO, in 2023, the exclusive breastfeeding coverage rate in Indonesia in 2022 was recorded at only 67.96%, compared to 69.7% in 2021. This shows that support is needed. More specialized support to increase coverage. (WHO, 2023).

Meanwhile, exclusive breastfeeding from 0 to 5 months has not increased and is stagnant at 52%. Hopefully, the exclusive breastfeeding coverage rate can reach over 70%. Exclusive breastfeeding is currently the only specific intervention target because, by 2022, this target has not yet been achieved. Research results show that exclusive breastfeeding in Indonesia has decreased in the past three months. It is true that mothers often return to work and don't reach their 0–5 month goal. Although many mothers may not be able to exclusively breastfeed their babies in the third month, it still takes a lot of effort to provide the best intervention, especially in the early stages of their baby's life. (Kemenkes RI, 2023).

Breastfeeding is very beneficial for babies and families, but exclusive breastfeeding in Indonesia is still not considered. In addition to the lack of awareness among mothers and their families, myths developed in society also affect breastfeeding (Haryati, et al., 2022). Exclusive breastfeeding coverage in Indonesia in 2022 was recorded at only 67.96%, compared to 69.7% in 2021, indicating the need for more intensive support as this coverage rate increases. (WHO, 2023). Kediri Town Health Department data on the achievement or scope of exclusive breastfeeding in Kediri Town health centers in 2023 is detailed in Table 1 as follows:

Table 1. Rate of Exclusive Breastfeeding at Kediri town Health Centers in 2023

Medical Center	Number of babies	Exclusively breastfeeding	Proportion of exclusive breastfeeding
Mrican	235	102	45,40%
Sukorame	598	267	44,64%
Campurejo	385	158	41,03%
Baluwerti	400	248	53,91%
Puskesmas wilayah utara	430	143	33,25%
Puskesmas wilayah selatan	345	133	38,55%
Pesantren I	322	138	42,85%
Pesantren II	461	146	31,67%
Ngletih	204	96	47,05%

Source : Dinkes Kediri, 2023.

Based on Table 1.1, it appears that the exclusive breastfeeding rate at some community health centers in Kediri town is still low or below the exclusive breastfeeding target of 80%. The exclusive breastfeeding rate at Banaran Village Health Center in Kediri Town also remains very low, at 25.8%. A preliminary study conducted on June 14, 2023, in Banaran village, Kediri town, showed that 23 mothers were breastfeeding, 19 of whom said they did not exclusively breastfeed until 6 months of age and are given complementary foods when their babies aged 3-4 months. Thus, the data obtained shows that the rate of babies 0–6 months old using complementary foods (MP-ASI) too early in Banaran village, Kediri town, is high.

According to respondents, the high rate of early complementary feeding (MPASI) use is due to a number of obstacles, which are erroneous myths that are still considered true by society or the ignorance of up to 5 mothers (26.3%), baby is not gaining weight up to 2 people (10.6%), the baby still seems hungry or continues to cry despite still breastfeeding up to 8 people (42.1%), and the preparation of the baby's digestive organs is considered ready receiving other foods was difficult for 3 people (15.8%), and because breast milk was difficult to come out of, 1 person (5.2%) cried while breastfeeding. This is the reason why the rate of improper use of MP-ASI remains high.

Exclusive breastfeeding can protect your baby from gastrointestinal infections. Mothers who do not exclusively breastfeed may increase the risk of infant death from diarrhea or other infections. Some studies show that exclusive

breastfeeding may not be optimal due to mothers' lack of understanding of the importance of exclusive breastfeeding, medical staff's lack of attention to its importance, and also due to environmental influences (Fitri & Shofiya, 2020) . It should be noted that introducing complementary foods too early can reduce the amount of breast milk consumed, and the baby may have digestive disorders or diarrhea. In addition, exclusive breastfeeding can reduce infant mortality. Because complementary feeding is introduced too early, it is not surprising that the mortality rate of babies aged 9 to 11 months in developing countries is 40% higher than that of breastfed babies. Meanwhile, babies under 2 months old reach a rate 48% higher than breastfed babies. It is emphasized that babies from 0 to 6 months of age should only be fed breast milk, unless the baby's mother has passed away. Alternative solutions that can be implemented include researching the possibility of providing breast milk to breastfeeding mothers, providing special infant formula for babies under 6 months of age without using rolled bottles. Then, after the baby is 6 to 12 months old, breastfeeding should still be given along with complementary feeding (Nisa & Merben, 2023). Based on the phenomenon of high rates of early complementary feeding (MP-ASI) use for babies aged 0–6 months, research can be conducted and is useful for respondents as an alternative.

METHODS

Based on the scope of the study using descriptive techniques, including field studies and cross-sectional designs, based on the presence or absence of treatment, including type of post-facto research, including quantitative descriptive designs. The population of this study included all mothers with babies aged 0-6 months who received early complementary feeding in Banaran village, Kediri town in 2023. The sample of this study included mothers with babies aged 0–6 months who received early complementary feeding and came to Posyandu in Banaran village, Kediri town, in 2023, for a total of 32 respondents. Sampling in this study uses non-probability sampling techniques, which are random sampling by consecutive sampling. The variables in this study are factors that influence the early provision of complementary feeding for mothers with babies aged 0-6 months. Data are obtained through direct interviews with respondents, the type of interview chosen

is a guided interview using a questionnaire. The tool used in this study is a questionnaire. The location of this study was conducted at Banaran village, Kediri town, from July to September 2023.

RESULT AND DISCUSSION

1. Sociocultural factors

The influence of sociocultural factors on the early provision of complementary foods can be seen in the following table:

Table 1. Distribution of Sociocultural Factors

Category	Frequency	Percentage(%)
High	26	81,3
Medium	4	12,5
Low	2	6,2
Total	**32**	**100**

Based on Table 1, that out of 32 respondents, the majority were 26 mothers (81.3%) believe that socio-cultural factors have a high category on factors affecting the early provision of complementary foods. This shows that socio-cultural factors are of high influence in mothers' attitudes towards giving babies complementary foods early or before 6 months of age in Banaran village, Kediri town. This was evidenced by 26 people (81.3%) who provided complementary foods for early breastfeeding because it is influenced by socio-cultural factors. Most mothers in Banaran village who feed their babies early complementary foods are housewives who should be exclusively breastfed. However many mother raising babies from 0 to 6 months old also believe in social customs, saying that if they do not give complementary foods immediately, their babies will not gain weight.

Thus, the high rate of early complementary feeding in Banaran village may be due to the influence of socio-cultural factors or long-standing customs. One of the issues that mothers are concerned about is the concept that babies can be fed Tim rice mixed with bananas from 3–4 months old, especially so that the baby can gain weight quickly and be healthy. People believe that it is necessary to give babies complementary foods before 6 months of age because they think that breast milk alone is not enough nutrition for babies and that babies will sleep well and not be picky eaters if given additional food.

The results of this study are consistent with the research of Aprilina et al. (2018), who found that the Chi-squared test results obtained p-value of 0.0000 ($<\alpha=$ 0.05), meaning Ho is rejected and Ha is a accepted, thus it can be concluded that there is a relational culture in providing early complementary foods in Pengalusan village, Mrebet subdistrict and Purbalingga District. Most mothers were influenced by cultural factors, up to 24 mothers (60.0%) gave their babies complementary feeding from the beginning. Culture can determine a person's attitudes and behavior when making decisions, especially regarding exclusive breastfeeding. (Aprilina & Rahmawati, 2018).

2. **Knowledge factors**
   The influence of knowledge-level factors on early complementary feeding can be seen in the following table:

Table 2. Distribution of Knowledge Level Factors

Category	Frequency	Percentage (%)
High	7	21,9
Medium	16	50
Low	9	28,1
Total	**32**	**100**

Based on Table 2, it shows a medium category of knowledge about mothers' attitudes towards giving babies complementary feeding early or before 6 months of age in Banaran village, Kediri town; this has been proven by 16 people (50%).

This research result is consistent with the research of Yuliani (2019). The research results obtained from the chi-square statistical test, p-value = 0.000 < α (0.05), can be used to conclude that there is a significant difference in the correlation between knowledge and giving early complementary feeding with an OR value of 10.5, meaning mothers with low knowledge are 10.5 times more likely to introduce early complementary feeding than mothers with good knowledge. (Yuliani, 2019). The results of this study are consistent with Adelina et al.'s (2018) study showing that mothers with poor knowledge about early complementary feeding (83.3%) had a higher rate than mothers with good knowledge about early complementary feeding, up to 5 respondents (16.7%). The statistical test results obtained the value þ = 0.004. This shows that there is a significant correlation between the knowledge variable and early complementary feeding. Therefore, the

hypothesis that there is a correlation between knowledge and early complementary feeding has been statistically supported. (Pratiwi & Sari, 2020)

3. Personal Factors

The influence of personal factors in providing complementary foods for early breastfeeding can be seen in the following table:

Table 3: Distribution of Personal Factors

Category	Frequency	Percentage (%)
High	2	6,2
Medium	2	6,2
Low	28	87,6
Total	**32**	**100**

Based on Table 3, it shows that individual factors are low or weakly related to mothers' attitudes towards introducing complementary foods early or before 6 months of age in Banaran village, Kediri town. This was proven by 28 people (87.6%).

The conditions do not affect the intake of complementary foods. From very early on, this situation is reinforced by the fact that the majority of mothers do not experience any problems with their personal conditions. The fear of losing women's attractiveness is not a top priority for mothers in Banaran village because the majority of respondents are housewives, and their husbands do not criticize their wives' appearance after labor and during breastfeeding. In addition, there are a number of other individual factors in early complementary feeding, one of which is that infant formula is the solution for feeding babies when they are left at home or when the mother leaves home for work. The mother feels that the breastmilk does not come out easily, making it difficult for the baby to suckle, and the baby continues to cry.

This statement is consistent with the research of Elis et al. (2020), who showed that the chi-square test result has a level of error (α) = 0.05 and a value of ρ of 0.000, in which ρ value < 0.05 or the hypothesis is rejected, which means there is an effect of lack of breast milk production on early complementary feeding in Majauleng Community Health Centre, Wajo Regency. This may happen because they think their breast milk supply is low. (Elis, et al., 2022).

4. Promotional Factors

The influence of promotional factors on infant formula and baby food in early complementary feeding can be seen in the following table:

Table 4. Distribution of Promotional Factors

Category	Frequency	Percentage (%)
High	5	15,6
Medium	23	71,9
Low	4	12,5
Total	**32**	**100**

Based on Table 4, it shows that the promotional advertising factors that encourage the use of infant formula and baby food are in the medium category in terms of mothers' attitudes towards giving early complementary feeding or before the baby is 6 months old. This is evidenced by the majority, 23 (71.9%) of those providing early complementary foods, being influenced by promotions or advertisements for infant formula and baby food for babies, sometimes even on the recommendation of medical staff. The convenience afforded by technological advances in baby food production, such as making powder and bottled milk, has encouraged mothers to replace breast milk with bottled milk or other complementary foods. Misleading promotional advertising for baby food products leads mothers to believe that the supplement is better than breast milk. Although promoting the addition of AA, DHA, ARA, etc., which are already in the composition of breast milk, in addition to having immune substances (antibodies) to increase the child's body's resistance, there are no substances in infant formula. The composition of breast milk will always adapt to the baby's needs from morning to night, from the first feeding, and will change with the breastfeeding process.

CONCLUSION, SUGGESTION

The conclusion of this study is that the factors influencing early complementary feeding are sociocultural factors, showing that the majority of 26 people (81.3%) have a high category or strong influence on early complementary feeding for babies aged 0–6 months. The level of knowledge about the factors shows that half of them, 16 people (50%), have a medium or moderate influence on early complementary feeding for babies aged 0–6 months. The personal

factor showed that almost all of them, 28 people (87.6%), had a low category on early complementary feeding for babies aged 0–6 months, and promotional advertising factors showed that the majority, specifically 23 people (71.9%), had a medium category or moderate influence on the early complementary feeding for babies aged 0–6 months in Banaran village, Kediri town.

In addition, health care workers should regularly and continuously provide health services and activities that support exclusive breastfeeding programs or provide age-appropriate complementary foods with the hope that this can change people's behavior for the better. It is hoped that future researchers will be able to develop further research to explore other factors that influence the early provision of complementary foods to mothers of babies aged 0-6 months. For mothers who are willing to accept the advice of health care providers on providing age-appropriate complementary foods, we can change the mother's behavior and habits to breastfeed only until 6 months old, and we hope that mothers will not be easily influenced by the many promotional advertisements on infant formula.

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SNOWBALL-THROWING METHOD EDUCATION INCREASES THE KNOWLEDGE AND ATTITUDES OF ADOLESCENTS ABOUT THE MATURATION OF MARRIAGE AGE

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Abstract
Background: Maturation of Marital Age is an effort to raise the age of child marriage. The number of underage marriages results in rapid population development, high maternal and infant mortality rates, low maternal and child health, families are often not harmonious, domestic violence occurs, and is prone to divorce. The rate of child marriage in Central Sulawesi is very high, one of which is in Donggala district. Donggala Regency ranks 3rd with 196 child marriages in 2022. A contributing factor is the lack of knowledge and attitudes of adolescents about maturing marriage age. The purpose of the study was to determine the effect of snowball throwing method counseling on the management and attitudes of adolescents about the maturation of marriage age at SMKS Al-Amin Wani **Method:** The pre-experimental research with *one group pretest-posttest design* was conducted from April 14 to May 20, 2023, at SMKS Al-Amin Wani. *Proportional stratified random sampling* technique of 75 respondents. Analyzes data through *the Wilcoxon* test. **Result:** 31 respondents (41.3%) is 16 years old, 55 respondents (73.3%) is female. the most dominant knowledge was in a good category, 75 respondents (100%). Average increase in knowledge and attitude score of 38.00 and p-value of 0.000. **Conclusion:** Education on snowball throwing method can improve teenagers' knowledge and attitudes about *marriage-age maturity* at SMKS Al-Amin Wani.

keyword: *Marriage Age Maturity, Snowball Throwing, Knowledge, Attitude*

INTRODUCTION

Marriage Age Maturity is an effort to raise the age of early marriage to at least 25 years for men and 20 years for women when marrying, this age range is considered emotionally and physically ready for family life (Rohman, 2021). Based on Law No. 16 of 2019, marriage is only allowed if both parties are at least 19 years old (Rosyadi, 2022). This modification is carried out to be by Law No. 23 of 2002 concerning child protection which characterizes children as individuals under the age of 18 years classified as children who are in the womb (Candra, 2018).

According to (Unicef, 2020) there are 61.3 thousand women in Indonesia aged between 20 and 24 years who were married for the first time before the age of 15 and more than 1 million women aged between 20 and 24 years whose first marriage was right when they were under the age of 18. Development Economic And Social Affairs (UNDESA) in (Raehan et al., 2021) the highest child marriage in the world is in Indonesia, which is ranked 37th. Indonesia ranks 2nd overall in ASEAN, as evidenced by the increase in child marriage cases in several provinces including Central Sulawesi Province with a percentage of 16.3 percent. (Unicef, 2020)(Raehan et al., 2021)

Based on data on the number of Couples of childbearing age according to the age of first marriage, Indonesian family data collection sourced from the BKKBN (2022) states that the highest first marriage age of <19 years is in Parigi Moutong Regency with 55,648 people, the 2nd Banggai Regency with 55,648 people, the 3rd Donggala Regency with 48,023 people.

Donggala Regency is ranked 3rd in terms of child marriage. The results of the recapitulation of underage marriage data (<18 years) in 2019-2022 taken from the Ministry of Kementerian Agama Provinsi Sulawesi Tengah (2022) recorded that 178 women in Donggala Regency who married at the age of <18 years while men married at the age of <18 years were 18 people. Based on data obtained by researchers from the Donggala Regency Ministry of Religious Affairs Office in 2021-2022, the highest related to child marriage is in Sindue District and followed by Tanantovea District. In Tanantovea District, there are Senior High Schools (SMA), Wani National High School and Vocational High Schools (SMK), Al-Amin Wani High School.

Child marriage is one of the most highlighted problems around the world and a phenomenon that occurs in society, because this happened since a long time. Factor related this problem are of lack of religious understanding, economic conditions, low education levels and low knowledge of adolescents on maturation of marriage age (Nindyasari & Herawati, 2019). Based on research (Redjeki et al., 2016) The most dominant factors that cause child marriage are knowledge, education and cultural factors. This is further supported by research findings (Liesmayani et al., 2022)

Marital Age Maturity must be immediately socialized among adolescents to provide understanding and awareness of adolescents in order to prepare themselves for family planning and can consider various aspects related to family life, physical, mental, emotional, educational, social, economic readiness, and determine the number and distance of births (Istawati, 2019). The purpose of marriage age maturity like this has consequences for the necessity of the age of marriage to be raised to more mature in order to have an impact on reducing overall fertility rates (Putri & Rosida, 2019).

Various efforts shown to adolescents in responding to the phenomenon of child marriage are by providing education to increase adolescent knowledge of maturation of marriage age. One of the factors that influence education is that the method of delivering the message used must be right on target so that the message to be conveyed can be received optimally, to target small groups suitable methods include snowball *(Snowball)* and game simulation (Erniati & Hayati, 2022). The application of an active learning approach known as *snowball throwing* includes many responses from respondents (Nurhayati, 2020). The *snowball-throwing* learning paradigm has advantages over other learning models, such as inviting respondents to actively participate in learning by developing their courage and readiness to ask and respond to questions from friends (Yuliadi, 2020; Saputri et al., 2019).

According to (Nurhayati, 2020) counseling on snowball throwing techniques has succeeded in changing teenagers' views on marriage anak. The results of research by using(Erniati & Hayati, 2022) the type of *snowball throwing* can help adolescents learn concepts better and the results of research (Handayani et al., 2017) show that learning cooperatives with *snowball throwing* types can improve learning outcomes. The purpose of this study was to analyze the effect of counseling using *snowball throwing* on adolescents' knowledge and attitudes about maturation of marriage age at SMK Al-Amin Wani.

METHOD

This research is a quantitative research using the type of *experimental research* method where the design form used is *one group pretest* and *posttest.* The

study time starts from April 14 to May 20, 2023. The research was conducted at SMKS Al-Amin Wani. The population in this study was all 93 students of grades X and XI, the sample in this study was 75 students. Sampling technique by means of *Proportional stratified random sampling*. The independent variable in this study is education with the snowball-throwing method. The dependent variable is adolescent knowledge and attitudes about Marital Age Maturity. Knowledge is measured through questionnaires using the Guttman scale with as many as 10 question items, while attitude measurement tools are questionnaires using the Likert scale. The questionnaire was adapted based on (Nurhayati, 2020). This research has received an ethical permit from the Research Ethics Commission of the Ministry of Health Palu with number 0076/KEPK-KPK/IV/2023.

RESULT AND DISCUSSION

1. Univariate Analysis

Table 1 Characteristics of respondents by age and gender at SMKS Al Amin Wani

Characteristics	Frequency(*f*)	Percentage (%)
Age		
15 years	12	16
16 years	31	41,3
17 years	25	33,3
18 years	7	9,4
Gender		
Woman	55	73,3
Man	20	26,7
Sum	75	100

Table 1 above obtained data based on the age of almost 16 years old, 31 respondents (41.3%), and based on the gender of most female respondents, 55 respondents (73.3%).

Table 2 knowledge and attitudes before and after snowball throwing education

Variable		Before		After	
		f	*%*	*f*	*%*
Knowledge					
	Good	9	12	75	100
	Enough	52	69,3	0	0
	Less	14	18,9	0	0
Attitude					
	Positive	5	6,7	68	90,7
	Negative	70	93,3	7	9,3

Table 2 was obtained after education, the most dominant knowledge was in a good category, 75 respondents (100%). Meanwhile, attitudes after education were most in the positive category as many as 68 respondents (93.3%).

2. Bivariate Analysis

Table 3 bivariate analysis of knowledge and attitudes before and after education

Variable	N	Mean Rank	Sum of Ranks	Z	Asymp. Sig (2-tailed)
Knowledge				-7.604	0.000
Negative Ranks	0	0.00	0.00		
Positive Ranks	75	38.00	2850.00		
Ties		0			
Attitude					
Negativ Ranks	0	0.00	0.00	-7.535	0.000
Positive Ranks	75	38.00	2850.00		
Ties	0				

Based on Table 3, it is known that the analysis of both knowledge and attitudes using the Wilcoxon test shows that p = 0.000 (p < 0.05), then (Ho) is rejected and (Ha) is accepted which means that there is an influence of *snowball throwing* method education on the knowledge and attitudes of adolescents about maturing marriage age at SMKS Al-amin wani.

DISCUSSION

The results of the analysis showed that there was an influence of *snowball throwing* method education on adolescent knowledge about the maturation of marriage age at SMKS Al-Amin Wani. In the opinion of researchers, the increase in one's knowledge can be influenced by the health education provided by researchers. Providing education and health education will be easier if you use learning methods that can help someone understand well, one of which is the *snowball-throwing method.*

According to the learning process, good learning requires the right media and methods to achieve effective and efficient learning objectives. This is in line with the statement that fun learning is a learning process that must take place in a fun and memorable atmosphere so that it will attract students to be actively involved, and learning objectives will be maximally achieved. (Saputri et al., 2019)

Snowball throwing method counseling has the advantage of being able to make students become more eager to understand the material by working in groups so that more interaction and contribution occur. This is in line with research there are significant differences between student learning outcomes and interests (Saputri et al., 2019).The results of the study using a cooperative approach type of snowball throwing (Erniati & Hayati, 2022) help adolescents learn concepts better and the results show that cooperative learning with the type of *snowball throwing* (Handayani et al., 2017) can improve the learning outcomes of respondents.

Based on observations during the counseling process using the *snowball throwing* method after delivering the material, it can be seen that adolescents are able to answer correctly and correctly and are able to explain concepts in their own language. This counseling provides more opportunities for adolescents to be able to find alone or in groups the resolution of each question. The advantages of *snowball throwing* method counseling are training in formal operational thinking processes, training cooperation and competitive spirit, and improving communication skills.

Health counseling through *the snowball throwing* method provides a different counseling experience from the conventional method of lectures. Health counseling through the snowball throwing method provides a fun experience for adolescents because the learning of the snowball throwing cooperative group game is designed to change the picture that learning must be individual and cannot be done while playing. (Nurhayati, 2020)

The results of the analysis using the Wilcoxon test showed that there was an influence of counseling using the *snowball throwing* method on adolescents' attitudes about maturing the age of marriage at SMKS Al-Amin Wani. The formation or factors that influence attitudes are personal experiences, the influence of others who are considered important, cultural influences, mass media, educational institutions, religion, and emotional factors. Attitude is a closed response to a stimulus or object, and involves the relevant opinion and emotion factors (Azwar S. 2017). So there are some respondents who do not pay attention to the information conveyed by researchers, to respondent factors, the absorption

of information that varies from person to person and the intensity of attention or willingness of respondents to listen to the information conveyed by researchers.

Attitude can also be influenced by knowledge according to (Walgito, 2013) several factors influence a person's attitude, one of which is knowledge. The knowledge possessed by respondents becomes the basis for determining attitudes. If the respondent's knowledge is good, the respondent's attitude will be positive, and vice versa if the respondent's knowledge is poor, the respondent's attitude can also be negative. According to counseling research, (Nurhayati, 2020)*snowball throwing* techniques have succeeded in changing teenagers' views on child marriage. The results of the study using a cooperative approach type of snowball throwing (Erniati & Hayati, 2022) help adolescents learn concepts better and the results show that cooperative learning with the type of *snowball throwing*(Handayani et al., 2017) can improve the learning outcomes of respondents.

This study is in line with research that there is a relationship between adolescent attitudes about maturing marriage age. This is due to the attitude towards Marriage Age Maturity education to increase the ideal marriage age, it is hoped that students will not get misinformation about Marriage Age Maturity. Then another study conducted showed that there was a significant influence of the use of the snowball-throwing learning model on students' responsible attitudes in Civics subjects in grade III SD Muhammadiyah Mutihan Wates Kulon Progo. (Hartati, S., Acquisition, M., & Ernawati, 2019; Hartati, S., Acquisition, M., & Ernawati, 2019)

CONCLUSION AND SUGGESTION

There is an influence of *snowball throwing* method counseling on adolescents' knowledge and attitudes about maturing marriage age at SMKS Al-Amin Wani. It is expected to increase the provision of more in-depth health promotion to increase the knowledge and attitudes of adolescents towards MARRIAGE AGE MATURITY and can reduce the rate of child marriage.

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FACTORS RELATED TO INCIDENCE OF MALNUTRITION IN UNDER FIVE CHILDREN

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Abstract

Background: Malnutrition is one of the main nutritional problems in Indonesia and East Java. Malnutrition is the cause of more than 1/3 of 9.2 million deaths in children under the age of 5 in the world. Toddlers are a very vulnerable group related to nutrition in society. If the nutrition of children under five is not fulfilled continuously it will cause stunting. **Method:** This study uses descriptive analysis to overview of the problem of factors related to the incidence of undernutrition in children under five at Posyandu Randugading, Tajinan District, Malang Regency. The sample consisted of 36 children under five using a total sampling technique. This data was obtained from the nutritional status report of the Tajinan Community Health Center which met the nutritional criteria of less than -3 SD to <-2 SD based on the z-score formula. This research instrument used a questionnaire, data collection was carried out by interviews to obtain data on variables Frequency of giving MP-ASI, Infectious diseases, Exclusive breastfeeding, Mother's weight gain during pregnancy, and Number of siblings. The data collection period was carried out on 18 April 2023–25 April 2023. **Result:** from 36 children showed that 30.55% giving MP-ASI at most was according to the child's request, children who have had history of an infectious disease 58.33%, exclusive breastfeeding was 50 %, weight gain during pregnancy less as it shouls was 50%, children who have siblirng is more than 2 was 63.89%. **Conclusion:** Malnutrition children under five year old in Posyandu Randugading, Tajinan District, Malang Regency have characteristic related to feeding meals was most of them according to the child's request, majority children have history of an infectious disease, Mother wight gain during pregnancy lower as it should, majority children have more than 2 sibling.

keyword : Malnutrition, Toddlers, Under five

INTRODUCTION

The national prevalence of undernutrition based on the weight/age index for Indonesian toddlers is still high. Based on the results of the 2022 Indonesian Nutritional Status Survey conducted by the Ministry of Health, 17.1% of children under the age of five experience nutritional problems, different from the previous year. Where from the 2018 data shows that there is an improvement in the nutritional status of toddlers, namely down with details of 3.9% of Indonesian toddlers experiencing malnutrition and 13.8% in the category of malnutrition. The

prevalence of undernourished toddlers based on East Java Province in 2022 will reach 15.8%. Data collected by the Malang Regency Health Office in 2022, children suffering from malnutrition reached 13.4% (SSGI 2022).

.The results of a preliminary study conducted by researchers at the Tajinan Health Center found that the Indonesian Government's Toddler Nutrition Status program based on SSGI 2022 found that the nutritional status value could not be 13.4%.Areas where more than 13.4% of children under five are malnourished can be called nutrient-prone areas. Data on Nutrition Indicators of the Tajinan Health Center, the incidence of malnutrition is the second highest in Tajinan District, Malang Regency. In 2021 as many as 10% of children under five are undernourished out of a total of 357 under five, even in 2022 there is an increase of 15% under five under five out of a total of 299 under five. This shows an increase in malnutrition problems at Posyandu Randugading by 5% in one year. The incidence rate at Posyandu Randugading can lead to nutrition-prone areas if it is not handled immediately. The data collection that has been done shows the characteristics of toddlers who experience malnutrition with a vulnerable age of 12-59 months.

In 2019 there was an event that was affected by the Covid-19 pandemic which resulted in a large reduction in the workforce. So that the community's economy continues to decline and results in the inability to provide good nutrition to their babies. The reality on the ground regarding the provision of food to toddlers has not provided an overview of the problems that need to be paid attention to proportionally due to the impact of the Covid-19 pandemic. Likewise alternatives that might be suggested in promoting ways to feed toddlers properly to meet nutritional requirements, still easily served in the household in a simple and hygienic way adapted to the situation and conditions in the area so that efforts can be given correctly according to the indications. And advise people who have toddlers with malnutrition to be able to take advantage of local crops that can meet the nutrition of their toddlers. This is an effort that needs to be supported, because it is one way to prepare quality future generations. The purpose of this study was to Identify the factors associated with the incidence of malnutrition in children under five year old at Posyandu Randugading, Tajinan District, Malang Regency.

METHOD

This study uses descriptive analysis used by collecting data in accordance with the truth then the data is compiled, processed and analyzed to be able to provide an overview of the problem of factors related to the incidence of undernutrition in children under five at Posyandu Randugading, Tajinan District, Malang Regency. Bivariate analysis is an analysis used to link two variables, independent variables with variables Bivariate analysis is bound in this case researchers look for factors related to the incidence of undernutrition in children under five year old at Posyandu Randugading, Tajinan District, Malang Regency. This research instrument used a questionnaire, data collection was carried out by interviews to obtain data on variables Frequency of giving MP-ASI, Infectious diseases, Exclusive breastfeeding, Mother's weight gain during pregnancy, and Number of siblings and other data that supports the research. The variables that will be examined as the focus of this research study are independent variables consisting of frequency of complementary feeding, infectious diseases, exclusive breastfeeding, mother's weight during pregnancy, and number of siblings. The research subjects planned in the research carried out are: The nutritional status of children (malnutrition status), Children under five who are cared for by their own mothers for at least 2 hours/day. Then analyze using descriptive univariate to see factor related malnutrition. The researcher's ethical licensing was approved by the Malang Ministry of Health Polytechnic Ethics Committee with no 628/VI/KEPK POLKESMA/2023.

RESULT AND DISCUSSION

The general data of the respondents which contains the characteristics of the respondents but are not included in the research variables. In this section, data will be presented which are the characteristics of respondents based on the distribution of the sex of children under five and mother's education can be seen in the table below:

Table 1.Frequency distribution of children under five based on gender and level of education of mothers in children under five.

Gender	N	%

1. Boy	14	38.89
2. Girls	22	61,11
Total	**36**	**100**
Mother's Education Background	**N**	**%**
1. Elementary Education	13	36,11
2. Middle school education	10	27,78
3. High school education	10	27,78
4. Education S1	3	8,33
Total	**36**	**100**

From Table 1.1 the distribution of respondents based on the sex of the majority of children under five was 22 people (61.11%). Based on the distribution of respondents based on the education level of the mother, the majority were elementary schooled 13 people (36.11%) and the minority were educated S1 as many as 3 people (8 ,33%).

Table 2 Distribution of the frequency of giving MP-ASI, medical history, giving MP-ASI, increase in body weight during pregnancy, and the number of children they have at Posyandu Randugading in 2023.

Variable	N	%
MP ASI Frequency		
1. On demand	11	30,55
2. 1 time a day	8	22,22
3. 2 times a day	9	25,00
4. 3 times a day	8	22,22
Total	**36**	**100**
History of Disease		
1. Yes	21	58,33
2. No	15	41,67
Total	**36**	**100**
Exclusive Breastfeeding		
1. Yes	18	50,00
2. No	18	50,00
Total	**36**	**100**
Pregnancy Weight Gain		
1. Less	18	50,00
2. Normal	13	36,11
3. Excessive	5	13,89
Total	**36**	**100**
Number of Siblings Owned		
1. ≤ 2	23	63,83
2. > 2	13	36,11
Total	**36**	**100**

From Table 2 of giving MP-ASI at most was according to the child's request as many as 11 people (30.55%). It can be seen that the distribution of respondents based on a history of infectious diseases, the majority are toddlers who have had an infectious disease as many as 21 people (58.33%) and the minority are toddlers who do not have infectious diseases as many as 15 people (41.67%). It can be seen that the distribution of respondents based on breastfeeding was 18 children (50.00%) who were breastfed and 18 children (50.00%) who were not breastfed. It can be seen that the distribution of respondents based on the highest weight gain during pregnancy is less than 18 people (50.00%). It can be seen that the distribution of respondents based on the number of siblings that the majority of toddlers have is ≤ 2 as many as 23 people (63.89%), and more than 2 as many as 13 people (36.11%).

Incidence of Undernutrition in Randugading Village

The incidence of malnutrition in Randugading Village, Tajinan District, which meets the criteria based on z-score from -3 elementary school to <-2 elementary school, there are 36 children under five. According to researchers, the incidence of undernutrition is influenced by several factors, namely the frequency of breastfeeding, infectious diseases, exclusive breastfeeding, maternal weight gain during pregnancy, and the number of siblings. These factors will be explained further in the following points.

Khaidirmuhaj (2009), said that undernutrition is a health disorder due to an imbalance of nutrients needed for life such as growth, thinking activities, and others. While malnourished toddlers according to the Ministry of Health (2012) are toddlers with malnutrition status seen based on the BB / U indicator with z-score values are <-2 SD to -3 SD. Children with less nutritional intake will experience stunted growth and development than children with adequate nutritional intake. As in growth which includes low height, weight, brain development, intelligence level, and psychic is also low and susceptible to infectious diseases (Hasdianah, 2014). The growth and development of the child's brain is very rapid at the age of toddlers. In fact, the rapid growth spurt phase of the brain only occurs until the age of 18 months (1.5 years). Although then the brain still continues to develop until the child is 5 years old, but the speed has begun to decline (Khomsan, 2017).

Complementary feeding, infectious diseases, exclusive breastfeeding, mother's weight during pregnancy, and number of siblings on undernutrition in children under five

The distribution of respondents based on the history of infectious diseases was the majority of children under five who had had infectious diseases as many as 21 people (58.33%) and minorities are children under five who do not have infectious diseases as many as 15 people (41.67%). Infectious diseases that have been suffered by children under five include ARI, diarrhea, and tuberculosis. Malnutrition will result in children susceptible to disease, The presence of infectious diseases suffered by toddlers results in decreased body resistance and has an impact on weight loss and energy loss in the body. So that malnutrition in children under five becomes increasing. The results of this study are in line with the results of research from Fitria and Silvia (2021) which states that there is a significant relationship between infectious diseases, knowledge, socio-economic, and food intake with the incidence of undernutrition in children under five in PKM Batoh Aceh. In the study, there was a relationship between the frequency of breastfeeding and the incidence of malnutrition. The habit of toddlers who do not eat dinner and only consume biscuits, bread, or other snacks results in an imbalance between energy intake and energy expended. Insufficient energy intake can cause energy imbalance. Setyawati (2018) that toddlers affected by infectious diseases tend to experience weight loss, this is because there is an increase in metabolism in the toddler's body and usually also followed by a decrease in appetite. Continuous weight loss can lead to a decrease in nutritional status.

The distribution of respondents based on exclusive breastfeeding was 18 children under five (50.00%) and 18 people who were not exclusively breastfed (50.00%). Exclusive breastfeeding on the nutritional status of toddlers is very influential. The first 4-6 months after the baby is born, the best method to exclusively breastfeed. At the age of four months, the baby's weight can be doubled, after which the growth and length of the baby's body will slow down slightly. The results of this study are in line with the results of research by Abdurrahman S, R. and Amadea D.S.F. (2022) " which states that there is a relationship between exclusive breastfeeding and the nutritional status of toddlers. Exclusive breastfeeding with the nutritional status of toddlers in this study showed a

statistically influential relationship with a p-value of 0.024. In addition, Hanifah (2020) in her research also stated that the majority of toddlers who get exclusive breastfeeding from their mothers have normal nutritional status, with a p-value of 0.000. These results show that there is significance between exclusive breastfeeding and the nutritional status of toddlers. The first 4-6 months after the baby is born, the best method to exclusively breastfeed.

The distribution of respondents based on weight gain during pregnancy was the majority of less than 18 people (50.00%), Normal as many as 13 people (36.11%) and more as many as 5 people (13.89%). The more pregnant women who experience underweight, the incidence of undernutrition increases in children under five, because the intake channeled during pregnancy to the fetus is not properly exposed. The results of this study are in line with the results of research from Ratna, et al (2020) states that the results of the analysis using chi-square, obtained P-Value = 0.004 so that P-Value <α (0.000 <0.05) it can be concluded that there is a relationship between the mother's BB history during pregnancy and the incidence of stunting in children aged 1-3 years in the Working Area of Kalirejo Health Center, Pesawaran Regency in 2019, with an OR value of 7,667 which means that mothers with weight do not increase 7 times the risk of giving birth to children with a risk of stunting, compared to mothers who have a history of increased weight.

The distribution of respondents based on the number of siblings owned by the majority of children under five was ≤ 2 as many as 23 people (63.89%), and more than 2 as many as 13 people (36.11%). The greater the number of siblings, the more chances of experiencing undernutrition. This is because the intake obtained is uneven. The results of this study are in line with the results of Linda, S (2017) research which stated that the results of the study obtained 72.6% of respondents had 5-6 family members. The number of children in a family affects the family's food availability. Different income levels will result in different levels of food availability. A large number of children in families with low economic status have the opportunity for children to suffer from malnutrition. This research is also in line with the results of research from Teguh A and Dedi S (2021) which states that there is a relationship between the number of family members and the incidence of underweight. The number of family members in one house greatly determines the amount of family food needs, the more the number of family members means the

more the number of needs that must be met including food. Vice versa, the fewer family members in one house means fewer needs that must be met, so that families can allocate income to buy good quality foodstuffs. The larger the size of the household means that more household members will eventually have a heavier burden on the household to meet their daily needs.

CONCLUSION AND SUGGESTION

Malnutrition children under five year old in Posyandu Randugading, Tajinan District, Malang Regency have characteristic related to feeding meals was most of them according to the child's request, majority children have history of an infectious disease, Mother wight gain during pregnancy lower as it should, majority children have more than 2 sibling. Therefore, nutrition transfer workers play a very important role in providing information about nutrition to the community, especially mothers in providing nutritious food to their children under five. Midwives can make preventive efforts to socialize exclusive breastfeeding and family planning to regulate the number of children.

ACKNOWLEDGMENT

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THE RELATIONSHIP BETWEEN EXCLUSIVE BREASTFEEDING AND THE INCIDENCE OF STUNTED GROWTH IN INFANTS IN THE VILLAGE OF TALANGKUSKO, TUREN DISTRICT, MALANG

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Abstract

Background: Stunted is a chronic malnutrition problem caused by malnutrition in the first 1,000 days of life. One of the risk factors for stunted growth is suboptimal exclusive breastfeeding. This study aimed to determine the relationship between exclusive breastfeeding and stunted growth incidence in infants in Talangsuko Village, Turen District, Malang. **Methods:** This study used an analytical observational research design with a cross-sectional approach. The research sample was 118 respondents of mothers with infants aged 6-24 months in Talangsuko Village, Turen District, Malang. The measured variables are stunted status and exclusive breastfeeding. Data was collected through questionnaires and height measurements. The research data was processed using SPSS with Chi-square analysis. **Results:** The results showed that 16 (13,6%) child stunted, 73 respondents (61.9%) received exclusive breastfeeding, while 45 respondents (38.1%) did not receive exclusive breastfeeding. The results of the chi-square test showed that there was a significant relationship between exclusive breastfeeding and stunted growth incidence (p=0,000). **Conclusion:** The conclusion of this study is that there is a significant relationship between exclusive breastfeeding and stunted growth incidence in infants in Talangsuko Village, Turen District, Malang. Therefore, exclusive breastfeeding is one of the important efforts to prevent stunted growth in infants.

keywords: Exclusive breastfeeding, stunted growth, infants

INTRODUCTION

Stunted growth in infants and children is one of the most pressing public health issues in many countries, including Indonesia. Being stunted is characterized by low height for age and is often the result of chronic malnutrition, which can affect a child's cognitive and physical development (Al-Taiar *et al.*, 2020). Stunted is the result of a combination of factors working together over a long period of time. This includes insufficient nutritional intake, particularly of protein and essential nutrients, recurrent infections that disrupt nutrient absorption, inappropriate feeding practices, environmental factors such as poor sanitation, genetic factors, and the influence of poverty and economic inequality within society. Being stunted often

arises from the complex interaction of these factors and requires a holistic approach for prevention and management (McMaughan, Oloruntoba and Smith, 2020).

Exclusive breastfeeding for the first six months of life has been recognized by numerous studies as a key factor in supporting healthy growth and development in infants. Suboptimal or inhibited breastfeeding practices can be a risk factor associated with the etiology of child stunting. Insufficient exclusive breastfeeding or early cessation of breastfeeding can result in malnutrition in infants, which is one of the primary causes of stunting. Factors influencing breastfeeding practices include a lack of knowledge and support from family and society, maternal health issues that may hinder breastfeeding capacity, workplace policies that do not support breastfeeding, cultural and social norms that may favor formula milk use, gender inequality that burdens mothers, aggressive promotion of formula milk by companies, and a lack of healthcare support during prenatal and postnatal care (Danty, Anwar and Rachman, 2023). Additionally, breast milk contains antibodies that help protect infants from various diseases and infections (Millward, 2017). Therefore, exclusive breastfeeding plays a crucial role in preventing being stunted.

However, there is still uncertainty regarding how significant the impact of exclusive breastfeeding is on reducing the risk of being stunted. Although some studies have shown a positive relationship between exclusive breastfeeding and better growth in infants, other studies have found less consistent results (Hikmahrachim, Rohsiswatmo and Ronoatmodjo, 2020). This could be due to differences in research methodology, geographical context, socioeconomic factors, and environmental conditions. This research aims to investigate the relationship between exclusive breastfeeding and the incidence of being stunted in infants. It will provide a deeper understanding of the extent to which exclusive breastfeeding can reduce the risk of being stunted, as well as its implications for health policy and breastfeeding practices in Indonesia.

METHOD

This research was an observational analytical study with a cross-sectional approach. The population in this study consists of all infants aged 6-24 months in Talangsuko Village, Turen District, Malang Regency. The sample in this study

includes all infants aged 6-24 months who met the inclusion criteria, healthy infants aged 6-24 months, having a normal birth weight, and born at term. The exclusion criteria applied were infants aged 6-24 months with a history of comorbid diseases. The sample size calculation for the study used the Slovin formula with a margin error of 0.1%, resulting in a minimum sample of 63 respondents. The sampling technique used was accidental sampling.

The dependent variable in this study was the stunted status of the children. Stunted is defined based on the length or height of children aged 6-24 months relative to their age (Height-for-Age). A child is considered stunted if their measurement is less than -2 Standard Deviations (SD) from the expected height. Stunted measurements were conducted using anthropometry. The independent variable in this study is exclusive breastfeeding, which refers to the history of exclusive breastfeeding during the age of 0-6 months without additional food. Data collection for breastfeeding was carried out using a questionnaire. Data processing in this study was conducted using SPSS software, where the Chi-square correlation test was applied with a significance level (α) of 0.05. This research has undergone ethical clearance with ethical clearance number No.244/EC/KEPK/FKUA/2023.

RESULT AND DISCUSSION

Talangsuko Village is one of the villages located in the Turen District, Malang Regency. Talangsuko Village has 10 active Posyandu (integrated health service posts) with a routine schedule for monitoring child growth and development conducted every month. The number of infants aged 6-24 months in Talangsuko Village, Malang is 167, with a proportion of 86 male infants and 81 female infants. During the data collection process at the 10 Posyandu, this study obtained 118 mother respondents and 118 infants who met the criteria for research subjects.

Table 1 Frequency distribution of respondent characteristics

Characteristic	Category	Frequency	%
Mother's Age	15-19 years	22	18.6
	20-30 years	59	50.0
	>30 years	37	31.4
Education	Elementary School	9	7.6
	Junior High School	61	51.7
	Senior High School	42	35.6
	Higher Education	6	5.1
Employment Status	Employed	39	33.1
	Unemployed	79	66.9
Household Income per Month	> Minimum Wage of Malang Regency	36	30.5
	< Minimum Wage of Malang Regency	82	69.5
Child's Age	6-12 months	43	36.4
	13-24 months	75	63.6
Child's Gender	Male	61	51.7
	Female	57	48.3
Breastfeeding Status	Exclusive	73	61.9
	Non-Exclusive	45	38.1
Stunted Status	Not Stunted	102	86.4
	Stunted	16	13.6

Table 1 explains the frequency distribution of respondent characteristics. The majority of the mother respondents are aged between 20-30 years. Most respondents have completed junior high school, and the majority are housewives. Some studies have associated low education with the failure of exclusive breastfeeding (Neves *et al.*, 2021). Mothers with lower education levels may have difficulty receiving information and guidance on exclusive breastfeeding, which can lead to failure in providing exclusive breastfeeding (Goodman *et al.*, 2016; Laksono *et al.*, 2021).

The minimum wage in Malang Regency in 2023 is IDR 3,194,143.98. In this study, it was found that the monthly household income of most respondents is still below the minimum wage of Malang Regency (69.5%). This data reflects the daily situation experienced by mothers and children in Talangsuko village. There are many factors that influence the failure of exclusive breastfeeding and the high incidence of stunting, one of which is the low household income. Higher income enables families to better meet living needs, including health aspects. Additionally, employment status also affects the family's social status, allowing greater access to quality health services. The social and economic welfare of the family also plays a

role in improving health quality, with better access to medical services, healthy food, decent housing, and quality education (McMaughan, Oloruntoba and Smith, 2020; Kustanto, 2021).

The percentage of infants receiving exclusive breastfeeding in Talangsuko village is quite high, at 61.9%. However, this percentage is still below the national exclusive breastfeeding achievement rate, where the percentage reached 67.96% in 2022 (WHO, 2023). Some studies indicate that one of the barriers to exclusive breastfeeding is sociodemographic factors. Some demographic characteristics that have an impact include the mother's age, the educational level of both the mother and father, parity, place of residence, employment status, and socio-cultural factors (Thet *et al.*, 2016; Patil *et al.*, 2020).

The stunted status variable is determined through a Z-Score assessment obtained from the measurement of (Height-for-Age)/Age of the child. In this study, data showed that 16 children experienced stunting (13.6%). Poverty has been identified as a very significant factor in the occurrence of stunting in toddlers (Siddiqui *et al.*, 2020). This is supported by household income data, which is mostly below the minimum wage. Households facing limited economic conditions tend to struggle in meeting the necessary nutritional intake for their children's growth and development. When financial resources are limited, the likelihood for children to receive adequate nutrition is reduced, which can contribute to abnormal growth, known as stunting (Goudet *et al.*, 2019). Parental education can also influence stunted status. Mothers with higher education levels tend to have better nutritional knowledge, thereby providing proper nutrition for their children (Beal *et al.*, 2018; Titaley *et al.*, 2019).

Table 2 Crosstabulation of breastfeeding status and stunted Status

Breastfeeding Status * Stunted Status Crosstabulation					
			Stunted Status		
			Not Stunted	Stunted	Total
Breastfeeding Status	Exclusive	*Count*	70	3	73
		Expected Count	63.1	9.9	73.0
	Non-Exclusive	*Count*	32	13	45
		Expected Count	38.9	6.1	45.0
Total		*Count*	102	16	118
		Expected Count	102.0	16.0	118.0

The bivariate analysis of the relationship between exclusive breastfeeding and the occurrence of stunting, as depicted in Tables 2 and 3, provides a comprehensive overview of how these two variables interact in the context of infant health and development. Table 2 offers a revealing look at the distribution of stunting in relation to exclusive breastfeeding among the respondents. Notably, a significant majority of respondents who fell into the Stunted category, totaling 13 individuals or 28.9%, did not receive exclusive breastfeeding. This statistic highlights a potential correlation between the lack of exclusive breastfeeding and stunted growth in infants.

On the other hand, the scenario appears quite different for the respondents in the Not Stunted category. Here, a vast majority, accounting for 70 respondents or 95.9%, were recipients of exclusive breastfeeding. This high percentage suggests a strong association between exclusive breastfeeding and normal growth patterns, contrasting sharply with the stunted group. Additionally, within the subgroup of respondents who were categorized as Not Stunted but who did not receive exclusive breastfeeding, there were 32 individuals, representing 71.1% of that subgroup. This indicates that while exclusive breastfeeding is a significant factor, it is not the sole determinant of stunted growth, suggesting the influence of other contributing factors.

Conversely, in the small subset of respondents who were categorized as Stunted yet had received exclusive breastfeeding, there were only 3 individuals, making up a mere 4.1% of that group. This low figure reinforces the notion that while exclusive breastfeeding does not categorically prevent stunting, it appears to significantly reduce its likelihood.

Importantly, Table 2 also reveals that the expected count value for each variable is above the threshold of 5, a key statistical benchmark. This detail is crucial as it underscores the validity and reliability of the data, ensuring that the Chi-Square analysis results derived from it, as detailed in Table 3, are robust and statistically sound. The significance of these findings lies in their implications for infant health practices and public health policies, emphasizing the critical role of exclusive breastfeeding in the early stages of a child's development and its potential impact on mitigating growth-related issues such as stunting.

Table 3 Chi-Square analysis of the relationship between exclusive breastfeeding and the incidence of stunted

Chi-Square Tests					
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	14.584ᵃ	1	.000		
Continuity Correctionᵇ	12.546	1	.000		
Likelihood Ratio	14.534	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	14.460	1	.000		
N of Valid Cases	118				
a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 6,10.					

The Chi-square analysis results show a p-value of 0.000 (0.000 < 0.05), indicating a significant relationship between exclusive breastfeeding and the occurrence of stunting in infants and toddlers aged 6-24 months in Talangsuko Village, Turen District, Malang Regency. This finding suggests that the practice of exclusive breastfeeding has implications on the stunted condition of toddlers aged 6-24 months.

Breast milk plays a crucial role in providing the appropriate nutritional intake needed to support a child's growth and development. Infants who do not receive adequate breast milk intake are at risk of insufficient nutrition, which in turn can lead to growth disorders, including stunting (Goudet SM and Griffiths, 2019; Mutasa *et al.*, 2022). One of the primary benefits of exclusive breastfeeding is support for infant growth, particularly in terms of height development. The calcium content in breast milk is more efficiently absorbed compared to formula milk (Martin, Ling and Blackburn, 2016). Therefore, infants who are exclusively breastfed tend to have height growth that corresponds with the normal growth curve, unlike infants consuming formula milk.

Furthermore, breast milk contains several essential nutrients such as calcium, phosphorus, sodium, and potassium in the right amounts as per the infant's needs, while the levels of copper, cobalt, and selenium are higher in breast milk. These nutritional contents qualitatively meet the needs of the infant and play a role in supporting growth, including optimal height (Kim and Yi, 2020). In order to ensure that the infant's needs are met, and the nutritional status remains normal,

particularly in terms of height growth, exclusive breastfeeding becomes a crucial factor. Therefore, this practice plays a role in reducing the risk of stunting and ensuring optimal growth in the early stages of life.

CONCLUSION AND SUGGESTION

There is a significant relationship between exclusive breastfeeding and stunting occurrence in infants aged 6-24 months. Promote the practice of exclusive breastfeeding, essential steps involve increasing public awareness of the benefits of exclusive breastfeeding. Furthermore, advocacy efforts are needed to create a conducive environment for exclusive breastfeeding, including the provision of breastfeeding rooms and support from various stakeholders are essential to improve child health to prevent stunted. Additionally, social and financial support aspects need accommodation to assist breastfeeding mothers in successfully practicing this method. For future researchers, it is recommended to use more robust research designs, such as longitudinal studies, to better understand the cause-and-effect relationship between exclusive breastfeeding and stunting. Future research should also consider other contributing factors to stunting, including maternal nutrition status, access to healthcare services, and family socio-economic conditions.

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