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Description Of The Risk Factors Of Children's Growth And Development

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ABSTRACT

The growth and development of children is very important, as this would form the foundation for the quality of future generations in the nation. The slightest developmental disorders in infancy, if not detected and not handled properly will lead to a bad impact. Various genetic and environmental factors influence Toddler growth and development. **Purpose**: To distinguish the description of the risk factors related to child growth and development. **Method**: This research uses quantitative method. The design of the research is based on a cross-sectional approach in the analysis survey design. In the study, all toddlers under 59 month old were collected using a total of 366 samples in 2020 at the Ngalang Village, Gedangsari public health center and Gunungkidul Regency. Data analysis used univariate analysis of frequency distribution. **Results**: The highest number of average pregnancy records in this study was normal, from 366 LiLA women during pregnancy with normal categories namely 285 people (77.9%), height during pregnancy with normal categories namely 340 people (92.7%).), HB during pregnancy with a normal category of 350 people (95.6%), the age during pregnancy with a normal category of 293 people (80.1%), the number of ANC> 4 times namely 310 people (84.7%), gestational age with the category of aterm as many as 301 people (82.2%), but the records of pregnancy related to weight gain was mostly in the under category with a total of 245 people (66.9%) .Compromising diseases of pregnancy, the average mother did not suffer from comorbidities. Namely 351 (95,9%) out of 366 people did not suffer from asthma, did not suffer from heart disease namely 365 people (99.2%), did not suffer from hypertension namely 355 people (97.0%), did not suffer from preeclampsia / eclampsia namely 362 people (98.9%), did not suffer from maternal malaria infection, helminthiasis / worm infection, did not suffer from HIV / AIDS namely 366 people (366%), did not suffer from hepatitis B namely 365 people (99.7%), did not suffer from syphilis namely 364 people people (99.5%), did not suffer from tuberculosis (TB) namely 365 people (99.7%), and did not suffer from diabetes mellitus namely 364 people (99.5%). Laboral records of 366 respondents, most of the birth weight was in the normal category, namely 331 children (90.4%), the length of the birth body was in the normal category, namely 261 children (71.3%), the gender of the child was mostly boys, namely 203 children (55.5%), normal laboral by 302 people (82.5%), the average range between labor and previous labor was 125 children (34.2%) and second children and so on with a distance of 4-10 years as many as 137 children (37.4%), the condition of the children after birth most of them cried immediately as many as 341 children (93.2%), early initiation of breastfeeding namely 342 children (93.4%) and none infection factor in the child 339 children (92.6%). Child health care, of the 366 respondents who were given exclusive breastfeeding namely 296 children (80.9%), second children namely 174 (47.5%) and the first children 125 (34.2%), the type of infection that children often suffer is upper respiratory tract infection (cough, cold) 361 children (98.6%), most of the respondents have health insurance namely 290 people (79.2%). Environmental factors, out of 366 respondents, namely 332 of the latrines respondents used to defecate used a septic tank (90.7%). Source of clean water using wells 268 families (73.2%). According to 356 respondents (97.3%) the source of drinking water was clear, clean and odorless, 318 families (86.9%) waste management through burning, most of household of had sewage channels 286 families (78.1%) There are 309 families (84.4%) of sewage channels with water sources more than 10 meters (84.4%), most of father were smoke namely 208 people (56.8%). The children's eating habits, of the 366 respondents, easy to eat were 226 children (61.7%), but the children's food did not cover the 4 stars of 311 children (85.0%). **Conclusions and suggestions:** The average pregnancy records was normal, but not for weight gain. Comorbite pregnancy case in this study on average did not experience comorbidities. The laboral records was normal, more children were born male, the most labor range was between 4-10 years, almost all children cried immediately after delivered and had an IMD, and almost all did not experience an infectious factor. Health care is mostly exclusive breastfeeding, and the respondents are mostly second children, upper respiratory tract infection (coughs, colds) is the most common type of

infection suffered by children, most respondents have health insurance. Environmental factors are mostly good sanitation, but most of the fathers also still smoke. Children's eating habits, more children are not picky about food than choosing particular food, but children's food does not covers 4 stars. The suggestion for the next researcher is to follow directly from the pregnancy process, so that the data obtained is real from the researcher.

A. BACKGROUND OF THE STUDY

Impaired growth and development of children is a serious problem in both developed and developing countries, growth can be seen from height, weight and head circumference, while development can be seen in motor, social and emotional abilities, language skills and cognitive abilities. Basically, children will go through the process of growth and development according to the stages, but many factors influence it (Prastiwi, 2019).

In Indonesia, the rate of delay in growth and development is still quite high, namely around 5-10% experiencing general development delays. Two of 1,000 babies suffer motor problems, while 3-6 of 1,000 children also have problems with hearing, and one child out of 100 has low intelligence and speak ability delays (Sugeng et al., 2019). The 2018 Basic Health Research results showed that in Indonesia, the percentage of malnutrition was 3.9 % for children 0-59 months of age, while the percentage of malnutrition was 13.8%. The proportion of children 0-59 months of age very short and very short in Indonesia was 11.5% in 2018 and 19.3% in 2018. The condition in Indonesia in 2018 the percentage of young children aged 0-59 months is very small, i.e. 3,5% and 6,7%.

According to the results of basic health research (Riskesdas) between 2007 and 2018, the trend of a very short and short percentage among children aged 0-59 months in Indonesia were declined. Moreover, according to the outcomes of Basic Health Research from 2007 to 2018, the percentage trend for toddlers between 0 and 59 months in Indonesia was also decreasing. Although the percentage has decreased, short and thin toddlers are currently still a health problem in Indonesia (Kemenkes, 2019).

In other studies, Van Minde et al., (2019) explained that child vulnerability could last in the next life and could affect the health of their descendants or future generations. As for the efforts to make children grow and develop according to the provision of appropriate nutritional intake, because if the nutritional intake is not fulfilled according to their needs, the toddler period will be a critical period that will interfere with the child's growth and development. Considering that nutrition become major factor in the pattern of growth and development of children (Azijah & Adawiyah, 2020).

WHO explained that, the factors that contribute to growth and development, one of which is mother health related to nutrition and infection. WHO also explains the nutritional status of mothers before, during and after pregnancy affects child development (WHO, 2014). Other factors that affect are poverty, malnutrition, and poor health (Grantham-McGregor et al., 2007), malaria, HIV infection, breastfeeding, mother’s education background are also risk factors for children (Walker et al., 2011). Higher birth weight, socioeconomic conditions, anemia during pregnancy, HIV infection can also affect child growth and development (Donald et al., 2019). Considering these various factors, researchers tends to reveal the risk factors in relation with child growth and development.

B. METHOD

This investigation adopts a quantitative approach. The design of the study involved the use of a cross-sectional analysis design. The population in this survey in all toddlers <59 months was 366 samples, the total sampling technique being used in Ngalang Village, Gedangsari Public Health Centre, and the total population used was 366 samples in 2020. Data analysis used frequency distribution univariate analysis.

C. RESULT

a. Pregnancy Record

Tabel 1. Pregnancy Record

No	Variable	Categoy	Frequency	Percentage
a.	Bodyweight increase	Less < 11	245	66.9%
		Normal 11-16	97	26.5%
		Over > 16	24	6.6%
b.	Mother's Lila during pregnancy	Kek	81	22,1%
		Normal	285	77,9%
c.	Mother's Height When Pregnant	Less (≤145 Cm)	26	7,1%
		Normal (>145 Cm)	340	92,7%
d.	HB during pregnancy	Abnormal < 11	16	4.4%
		Normal ≥ 11	350	95.6%
e.	Age during pregnancy	Young <20	23	6.3%
		Normal 20 – 35	293	80.1%
		Old >35	50	13.7%
f.	Number of ANC	Less < 4	51	13.9%
		In accordance to standard 4 X	5	1.4%
		Over>4	310	84.7%
g.	Gestational Age	Premature ≤ 36	63	17.2%
		Aterm 37 – 42	301	82.2%
		Postterm > 42	2	5%

Table 1 shows that the weight of the individuals during their pregnancy increases and reduces by under 245 persons (66.9 %). However, if seen from the mother's lila during pregnancy, most of them were normal, namely 285 people (77.9%). Most of the mothers' height during pregnancy was also normal, namely 340 people (92.7%). Likewise, HB during pregnancy was mostly normal, namely 350 people (95.6%).

During pregnancy, most of the mothers were aged 20-35 years, namely 293 people (80.1%). Most of the mothers performed antenatal care more than four times, as many as 310 people (84.7%). The gestational age was also at term namely 301 people (82.2%).

b. Mother's Illness During Pregnancy

Tabel 2. Mother's illness during pregnancy

No	Variable	Category	Frequency	Percentage
a.	Asthma	Yes	15	4.1%
		No	351	95.9%
b.	Heart Disease	Yes	3	.8%

		No	363	99.2%
c.	Hypertension	Yes	11	3.0%
		No	355	97.0%
d.	Preeclamation/Eclamation	Yes	4	1.1%
		No	362	98.9%
e.	Maternal Malaria Infection	No	366	100%
f.	Maternal helminthiasis / worm infection	No	366	100%
g.	Maternal HIV/AIDS infection	No	366	100%
h.	Maternal Hepatitis B Infection	Yes	1	.3%
		No	365	99.7%
i.	Maternal Syphilis Infection	Yes	2	.5%
		No	364	99.5%
j.	Maternal Tuberculosis (TB) Infection	Yes	1	3%
		No	365	99.7%
k.	Diabetes Mellitus	Yes	2	5%
		No	364	99.5%

On Table 4.12 basis. Some women did not suffer from co-morbidity such as asthma during pregnancy 351 people (95.9%), heart disease 365 people (99.2%), hypertension 355 people (97.0%), preeclampsia / eclampsia. 362 people (98.9%), maternal infection with malaria, helminthiasis / worm infection, HIV / AIDS 366 people (366%), hepatitis B 365 people (99.7%), syphilis 364 people (99.5%), tuberculosis (TB) 365 people (99.7%), and diabetes mellitus 364 people (99.5%).

c. Laboral Record

Tabel 3. Laboran record

No	Variable	Category	Frequency	Percentage
a.	Birth Weight	BBLR < 2500	35	9.6%
		Normal ≥ 2500	331	90.4%
b.	Birth Body Length	Less < 48	101	27.6%
		Normal 48-52	261	71.3%
		Over > 52	4	1.1%
c.	Gender	Male	203	55.5%
		Female	163	44.5%
d.	Kind of labor	Normal	302	82.5%
		Delivery Through Caesarean Section	59	16.1%
		Breech Delivery	2	5%
		Vacuum Labor (Vacuum	3	8%

		Extraction)		
e.	Interval between previous births	First born	125	34.2%
		1-2 Years	25	6.8%
		2-3 Years	10	2.7%
		3-4 Years	27	7.4%
		4-10 Years	137	37.4%
		>10 Years	42	11.5%
f.	Condition of the Infant after delivered.	Crying Immediately	341	93.2%
		Bluish Motion body parts	1	3%
		Crying for a while	15	4.1%
		Bluish Whole Body	1	3%
		Not Crying	3	8%
		Reddish whole Body	5	1.4%
g.	Early Initiation of Breastfeeding	No	24	6.6%
		Yes	342	93.4%
h.	Risk Factors for Infection	No Risk Factors	339	92.6%
		Asfiction	3	8%
		Twins (Gemeli)	6	1.6%
		Ruptured membranes > 24 hours before birth	12	3.3%
		Greeny membranes	5	1.4%
		Mother Has Urinary Tract Infection	1	3%

Table 3 shows that the birth weight is in the normal category, namely 331 children (90.4%), as well as the birth weight in the normal category, namely 261 children (71.3%). The sex of the children was mostly boys, namely 203 children (55.5%). Most of them gave birth normally by 302 people (82.5%). The average distance between births and previous births was 125 children (34.2%) and second children and so on, with a distance of 4-10 years as many as 137 children (37.4%). Most of the children after birth cried as many as 341 children (93.2%). Most of the children underwent early initiation of breastfeeding (IMD) as many as 342 children (93.4%) and there was no infection factor in 339 children (92.6%).

d. Child Health Care

Tabel 4. Child Health Care

No	Variable	Category	Frequency	Percentage
a.	Exclusive breastfeeding	None	14	3.8%
		1 Month Breastfeeding	31	8.5%
		2 Months Breastfeeding	5	1.4%
		3 Months Breastfeeding	9	2.5%
		4 Months Breastfeeding	6	1.6%
		5 Months Breastfeeding	5	1.4%
		Exclusive breastfeeding	296	80.9%
b.	Number of Children	One	125	34.2%

	(Parity)	Two	174	47.5%
		Three	52	14.2%
		≥ Four	15	4.1%
c.	Kind of Infection	upper respiratory tract infection (cough, cold)	361	98.6%
		Diarrhea	3	8%
		Helminthiasis / worm infection	2	5%
d.	Health insurance	Not Available	76	20.8%
		Available	290	79.2%

According to table 4, most of them were exclusively breastfed by 296 children (80.9%). Most of the children were routinely weighed for 253 children (96.4%). Most of the second child was 174 children (47.5%) and the first child was 125 children (34.2%). The type of infection that often affects children is ARI (cough, runny nose) 361 children (98.6%). Most of the respondents have health insurance for 290 people (79.2%).

e. Environmental Risk Factors

Table 5. Environmental Risk Factors

No	Variable	Category	Frequency	Percentage
a.	Latrine	Pit Privy	16	4.4%
		Ventilation Improved Pit Latrine	16	4.4%
		Fish Pond Latrine	2	5%
		Septic Tank	332	90.7%
b.	Source of Clean Water	Rain Water (Reservoir)	1	3%
		River Water	3	8%
		Well	268	73.2%
		Tap Water from PDAM	94	25.7%
c.	Source of Family Drinking Water, Clear, Clean, and Odorless	No	10	2.7%
		Yes	356	97.3%
d.	Waste management	Thrown in the River	1	3%
		Thrown in the Backyard	44	12.0%
		Burned	318	86.9%
		Taken by the Garbage Truck	3	8%
e.	Household Sewerage	Not Available	80	21.9%
		Available	286	78.1%
f.	Distance from Sewer to Water Source	<10 Meter	57	15.6%
		>10 Meter	309	84.4%
g.	Active Smoker	None	113	30.9%
		Mother	1	3%
		Father	208	56.8%

		Other Families Living in the House	44	12.0%

Table 5 explains that the latrines used for defecation use septic tanks namely 332 families (90.7%). Source of clean water using wells 268 families (73.2%). According to 356 respondents (97.3%) the source of drinking water is clear, clean and odorless. Waste management by burning 318 families (86.9%), most of them also have RT 286 families (78.1%). The distance from the sewer to the water source is more than 10 meters, namely 309 families (84.4%). Most of the fathers smoked 208 people (56.8%).

f. Children's Eating Habits

Table 6. Children Eating Habits

No	Variable	Category	Frequency	Percentage
a.	Children's Habits of Food Picky	No	226	61.7%
		Yes	140	38.3%
b.	Children's Favorite Food	Uncover 4 Stars	311	85.0%
		Cover 4 Stars	55	15.0%

Table 6 clearly states that 226 children are not picky about food (61.7%), but the children's food has not fulfilled 4 stars 311 children (85.0%).

D. DISCUSSION

a. Pregnancy Records

The findings have shown that weight gains for most (66.9%) moms during pregnancy < 11 kg. Normal increase in weight is 11-16 kg. According to Institute of Medicine's recommendations 2009, weight gain during pregnancy is based on low body weight gain (BMI <18.5) of 13-18 kg, normal weight gain gain (BMI 18, 5-24.9) of 11-16 kg, overweight gain (BMI 25-29.9) of 7–11 kg and obese women (BMI 30) of 5–9 kg (Rm et al., 2019). Pregnancy weight gain in mothers can have a good growth and development effect on the child (Li et al., 2019). On the other hand, if the mother's nutritional status is inadequate, it will be at risk of experiencing problems with the child's growth (Khaing et al., 2019).

Most of the mothers had a normal record of LiLA during pregnancy namely (77.9%). According to the nutritional status assessment, the threshold for LILA WUS with the risk of CED is 23.5 cm. If the size is less than 23.5 cm, it means that the woman has a risk of CED, and is expected to birth to a baby with low birth weight (LBW) (Kemenkes, 2014; Par'i et al., 2017). Vasundhara et al., (2020) also explained that, mothers with less LiLA will affect to give birth to smaller children. This means that LiLA can affect the development of children.

In our analysis, most mothers namely (92.7%) had normal height (> 145 cm) and less body height namely 7.1%. A normal mother's height can affect the child's growth is also normal, and vice versa, if the mother's height is less then the child's growth is at risk. The cross-sectional analysis in nine rural provinces of the Indonesian Nutrition Monitoring System (NSS) found that the double burden for mothers and children defined as households with stunted children was 6–59 months for households with moms of <145 cm in height (Beal et al., 2018).

Depending on the person's Hb status, anemia can be classified, according to the World Health Organization (WHO), as serious, mild or moderate. Hb levels in this form are <10.9g/dL (mild

anemia), <9.9g/dL (moderate anemia) and <7g/dL (severe anemia), respectively, in this type of anemia (Ampiah et al., 2019). In our analysis, most (95.6%) had normal Hb during pregnancy. Hb that is not normal certainly has risk factors, such as growth and development of children, Murtiningih et al., (2019) revealed from the results of their research that anemia in the first trimester does not affect the occurrence of LBW if it does not continue until the next trimester. Anemia may affect low birth weight and premature birth during the second and third trimesters, with the highest risk if the anemia occurs during the third trimesters. This means that pregnant women anemia that continues until the final trimester is a risk factor and leads problems with child growth.

The average age during pregnancy for mothers was 20-35 years namely 80.1%. Age 20-35 is a safe age for pregnancy or childbirth (H et al., 2015). Mothers who are younger than 19 years have a risk related to child growth compared to adult mothers (Nguyen et al., 2017). Increased mothers over 35 years are also generally linked to increased vulnerability (Falster et al., 2018). However, the results of other studies show that there is no significant difference in children's development parameters between both groups of young moms (<20 years) and the adult moms (20–34 years) (W. Y. Wu et al., 2016).

The average number of ANC visits in this study is more than 4 times, namely 84.7%. Pregnant women are recommended to contact 4 times during pregnancy, at least once in the first quarter (0-12 weeks); at least once in the second quarter (> 12-24 weeks), and at least two times in the third quarter. Third (> 24 birth weeks). Visits to the antenatal may be 4 times or even more as needed and if there are complaints, illnesses or pregnancy disorders. The purpose of antenatal services is to ensure that every pregnant woman has the right to a high-quality health service so she is able to have a healthy pregnancy (Kemenkes, 2014). According to Chawla et al., (2020) Mothers visiting ANC four or more had a lower prevalence of body weight, underweight and stunting than mothers visiting three or more inadequate ANC visits. According to (Falster et al., 2018) antenatal visits have little additional impact on susceptibility in children. Antenatal visits for pregnant women therefore contribute to the child's growth and development.

The average gestational age in this study was in the athermic category, namely 37-42 with a total percentage of 82.2%. The gestational age at term is the normal gestational age for delivery, and is also a mature condition and does not pose a risk to the fetus or mother. Another study describing a population of 3,850 live children who were born under 35 weeks of preterm gestation revealed a heterogeneous post-term growth, with potentially cognitive developmental associations. Four various growth types were found and an increased slow growth during childhood group of children was significantly linked to low cognition at the age of five (Simon et al., 2017).

b. Record of Mother's Disease During Pregnancy

In this study, 4.1 % of women suffering from asthma during pregnancy.

This disease is very important to the health of both mothers and fetuses for recognition and optimal control. Low birth weight, especially in males, can cause asthma exacerbation during pregnancy (Capra et al., 2013). Although there is little evidence of the potential athmatic mechanism, Giles & Murphy, (2013) has shown that pregnant women who experience asthma have an increased risk of poor perinatal outcomes (even lower fetal growth). The effects of growth and development disorders on the fetus may affect the toddler period and even beyond.

Almost all heart disease in this study was normal, but there were still those who had a heart disease namely 0.8%. Mothers who have heart disease are not only at risk to themselves, but also to the fetus. The risk to the fetus to be discussed with mothers with cardiovascular conditions is the effects

of drugs that may need to be continued. It can lead to error, premature growth, low birth weight and intrauterine growth, as well as the effects that these may have on growth and development later. Detailed preconceptions is important, and the recurrence in cases of congenital heart and congenital heart disease is also important to consider (Ashrafi et al., 2017).

Hypertension in this study was mostly normal, but there were still 3.0% suffered from hypertension. The risk for pregnant women and fetuses is hypertension. Research of Manh et al., (2019) show that between the timing of hypertension and fetal growth limitation, there is an important relationship. Mothers with hypertension are more likely than women who have no hypertension to experience fetal growth restrictions. Another study also concluded from the results of his research that maternal hypertension pregnancy disorders have bad consequences for the mental health of offspring (Lahti-Pulkkinen et al., 2020).

Mothers who experienced preeclampsia / eclampsia during pregnancy in this study were 1.1%. The risk of various diseases such as endocrine, nutritional and metabolic diseases has increased in children born at time and exposed to preeclampsia (C. S. Wu et al., 2009). The risk of inheritance due to preeclampsia and its severity are also enhanced in childhood (Lahti-Pulkkinen et al., 2020).

There were no malaria infections, helminth infections, and HIV infections in our study. But we have to be aware that the mother and fetus are at risk of infection and can continue even in childhood or adulthood. Other investigations have shown that HIV and malaria are indicators of childhood poor cognitive and motor growth (French & Outhwaite, 2020). Research by Nampijja et al., (2012) has also explained that of the five main worm species that are found in pregnant women, two have affected the developmental dimension. There is a negative relationship between the Maternal Mansonella perstans and Strongyloides stercoralis. Other psychomotor and cognitive measures performance was linked to infanct illness during infancy, but did not relate to mother worm infection. The maternal antelmintic therapy had no positive effect on early life ability. The early executive function and language of Mansonella perstans and Strongyloide sterkoralis infection seem to be affected during pregnancy. Susceptibility to inflammation-mediated diseases, including metabolic conditions, can be altered by exposure to worms in utero (Mpairwe et al., 2014). We can mean that, in addition to affecting development, intestinal worm infections can also affect metabolism which of course affects the child's growth.

Maternal hepatitis B infection in this study was 0.3%, and the remaining mothers had never experienced hepatitis B infection. Other studies have evaluated the associated impact of hepatitis B on children. They explained that, hepatitis in children showed impaired growth. They also explained that it usually occurs in children who are transmitted parenetally (Degli Esposti & Shah, 2011). The Zeng et al., (2015) Zeng et al. study explains that there is no significant difference between telbivudine-exposed prenatal children and controls in their delays in their development. The study further explains that the exposure of telbivudine prenatal children is a normal growth and development. The results thus suggest that telbivudine therapy is safe and effective during pregnancy. ($p>0.05$) ($p>02$) (Zeng et al., 2015).

Maternal syphilis infection exposed in this study was 0.5%, the rest had no case of syphilis. Untreated maternal syphilis infection causes adverse pregnancy outcomes, including premature miscarriage, stillbirth, prematurity, low birth weight, neonatal and infant mortality, and congenital disease of the newborn (De Santis et al., 2012). Latent congenital syphilis is most often asymptomatic. However, about 20% of children are diagnosed with interstitial keratitis diagnosed at the age of 5–30 years, and one of them is hearing loss due to vestibulocochlear nerve damage and mental retardation (Plagens-Rotman et al., 2019).

Maternal Tuberculosis (TB) infection in this study was 0.3%, and the rest were mothers whose had never had TB during pregnancy. Spontaneous abortions, small uterine to date, premature labor, poor birth weights and an increase in neonatal mortality include obstetric complications of TB (Loto & Awowole, 2012). These problems can certainly affect the development and growth of born children, and therefore need to be detected early on in order to be treated immediately.

Diabetes Mellitus cases in this study was 0.5%, and the rest had no cases of Diabetes Mellitus. Actually, poor regulation of maternal glucose can lead to poor fetal development in diabetic pregnancies and possibly prediabetic pregnancies. Diabetes babies are at high risk of obesity and at a young age develop type 2 diabetes (Capra et al., 2013). The effects of diabetes pregnancy can be seen as a vicious cycle, with consequences for offspring extending beyond the neonatal period. Most increase in childhood type 2 diabetes can be attributed to intrauterine diabetes which can contribute to the alarming increase in the disease (Dabelea et al., 2000).

c. Laboral Record

Normal body weight is 2500-3500 gr. Body weight <2500 g is called a premature infant, while a baby weighing > 3500 g is called macrosomia (Ardhiyanti et al., 2014). Almost all babies with normal weight were born in this study namely 331 (90.4%). Another study explains that children born with low birth weight are having risk for growth. Anthropometric measures of growth are associated with neurodevelopmental outcomes (Scharf RJ, Stroustrup A, 2016). Research by Aryastami et al., (2017) also revealed that LBW is associated with stunting. This means that children born with LBW are having risk for their growth.

Birth length in normally is 48-52 (Nila Trisna Yulianti & Sam, 2019). The normal length of the birth of this study was 71.3%, 27.6% were born less than 48 cm in longitude and more than 52 cm in rest. Another study explains that birth time is a dominant growth risk (stunting) factor for children 0-23 months old (Utami et al., 2018). Another study also explained that the risk of growth of children born with body length < 48 cm is 5.06 times higher than that of children 48 cm long (Nur et al., 2021). In the meantime, growth can affect the development of a child, for example other researchers who found that stunted children experience 7% less optimal cognitive development than children who have not suffered stunting conditions (Ekholuenetale et al., 2020).

Gender in this study were 55.5% male and 44.5% female. The Bruininks-Oseretsky testin another research also measured motor skills, and used a parental questionnaire to measure family-related and behavioral variables. Girls outperformed boys in most motor skills tasks, 14 tests of which showed statistically significant differences in gender ($p<0.001$) (Matarma et al., 2020). Another study also found that the gender of the child was linked to growth, which caused serious stunting for about 7 (1.1%) boys and 15 (2.4%) girls. We can see from this results that stunting on boys are more severe than girls (Bogale et al., 2018). Another study has also shown that male children consistently experience stunting and loosing weight (Hailegebriel, 2020).

The kind of labor in this study was mostly normal, with a percentage of 82.5%, cesarean delivery 16.1%, breech delivery 5% and vacuum delivery (Vacuum Extraction) 8%. Children who are born abnormally may have a risk for their growth and development. Polidano et al., (2017) revealed that children born by cesarean performed far below children born vaginally. Saaka & Hammond, (2020) also concludes that, because the way the child is delivered also has a statistically important effect on infant nutrition, there are a link between CS and stunning. Within 1 hour of delivery, 70,4% of infants born throughout the vagina began breastfeeding, only 52,7% of babies that born through the CS were breastfeeding the same way. In the first hour (Crude odds ratio (COR) = 2.13,) baby born

vaginally was 2.1 times more likely to start breastfeeding. Compared to the CS babies, 3.2 times more prelude foods, such as water and sugar, are not supplied to babies born vaginally. Babies with a vaginal birth risk 1.8 times higher than infants born with CS to get adequate neonatal feeding (COR = 1.75,) (Saaka & Hammond, 2020). Planned delivery of vaginal breche on time is also connected with restricting fetal growth (Macharey et al., 2017). Ngan HY, Miu P, Ko L and Ma HK also showed that vacuum-assisted vaginal delivery does not seem to be adversely affecting long-term cognitive development as well. There was no difference in fine motor control, perceptible integration and behavioral maturity between the two groups following a 10- years evaluation of 295 children born on a vacuum extraction term and 302 patients delivered on a spontaneous vaginal delivery term (Ali & Norwitz, 2009).

The distance between recent born and the previous one in this study was more between 4-10 years namely 37.4%. Another study explained that the reduction in child height at 1 age among children born within 3 years of older siblings has been associated with his research results. They also found that children with a very broad range (more than seven years prior to birth interval) were 1 year of age at the same height as children three to seven years apart, but grew bigger than their peers, which were 3 to 7 years apart. Close up with age (Miller & Karra, 2020). The research carried out by Sumiaty et al.,(2017) also shows that birth spacing < 3 years is the risk factors for maternal stunting. More studies have also shown that short and long intervals of birth are clearly connected to height, physical fitness, overweight, obesity and mortality. However, they found that birth range is usually not associated with long term health after carefully adjustment in family backgrounds using sibling-in family comparisons (Barclay & Kolk, 2018). Another study also explained that children of mothers with (RRB) identified as the next child who was born within 24 months have a higher risk of behavioral problem and cognitive function in the first grade compared to children of non-RRB mothers (Crowne et al., 2012). Three globally based recommendations based on evidence on healthy gestational time and distance can improve maternal and child health considerably: Women should be at least 18 years old if their first pregnancy is postponed. After a live birth, a woman should wait for at least 24 months to try her next pregnancy to reduce both mother and baby health risks. Women should wait at least 6 months after a miscarriage or abortion to try to reduce mother and baby health risks before they try next pregnancy (Starbird & Crawford, 2019).

Almost all conditions of babies after birth were crying immediately with the amount of 93.2%. Another study explained that the Apgar score of 5 minutes is an important predictive factor for long-term neonatal complications (Boskabadi et al., 2015). Other studies also explained that Apgar scores can affect children's development and show that, with Apgar's 1-minutes and 5-minutes score falling, the risk of developmental vulnerability and special needs increased, and continued to rise at age 5. A 5-minute Low Apgar score was associated more closely than a 1-minute low Apgar score with developmental sensitivity and special needs. Children with a "normal" 5-minute Apgar score of 7, 8 and 9 were particularly susceptible to development, compared to kids with an Apgar score of 10 of 5 minutes. Likewise, children with an Apgar rating of 7 or 8 over 5 minutes were more likely to have special needs than children with an Apgar rating of 10 over 5 minutes. In addition, the risk of developing susceptibility was increased for children with the 1-minute Apgar Score in the Normal range (7-10) if their 5 minute Apgar Score was <10. The reduced Apgar score from 10 minutes to 7–9 minutes at 5 minutes is particularly noteworthy since this increases considerably the risk of developing susceptibility (Razaz et al., 2019).

In this study, almost all infants had early initiation of breastfeeding, namely 93.4%. Findings from other studies show that prompt breastfeeding is an important factor which affects the health of

children, both immediately and after birth. They also discovered that the immediate after-birth effect of breast milk was greater than the effect of breast milk just a couple hours after birth (Fosu-Brefo & Arthur, 2015). The results of the analysis showed that late breastfeeding is a major factor in growth (snapshot) in children aged six –59 months, according to research by Muldiasman et al., (2018) Most mothers / feet do not have as much as 92.6 percent risk for infection.

Naturally, when an infection risk factor exists, it may affect children's growth and development. Additional studies explain the seriousness of asphyxia as a developmental risk factor (Boskabadi et al., 2015).

d. Children's Health Care

The World Health Organization (WHO) and UNICEF recommend breastfeed to newborns within the first hour of birth. In order to be able to grow and develop, children should be breastfed exclusively for the first six months of life (Wood et al., 2020). According to this study, 80.9% of children were exclusively breastfed and 3.8% were still not exclusively breastfed. Lumbanraja, study (2019) revealed that the development and growth of infants was associated with a history of exclusive breastfeeding ($p < 0.001$). Babies who are exclusively breastfed have good and optimal growth, in contrast to babies who are not exclusively breastfed have poor growth. Other studies also explain the relationship between exclusive breastfeeding and growth. The higher mean age length (LAZ) and sub-weight (WAZ) of exclusive breastfeeding was associated with children up to 6 months old (Kuchenbecker et al., 2015).

The number of children in this study, on average, was the first child and the second child, with a percentage of 34.2% and 47.5%. Another study explains that parity is one of the factors that is an important factor related to recovery time from stunting in the first five years (Faye et al., 2019). However, another research have explained that parity and stunting have a low relationship (Syahril et al., 2020). Preterm births and neonatal admission to the ICU were also significantly higher in grand multiparity (Al-Shaikh et al., 2017). The risk of neonates born to large multiparous women (12.1%) is 3 times higher compared to low-parity women (5,4%) in Apgar (Mgaya et al., 2013). This means that children born to grand multiparous women have more risks, whereas this can affect the child's growth and development.

The distance between births and previous births in this study the average for the first child was 125 children (34.2%) and continued with a distance of 4-10 years as many as 137 children (37.4%). Other studies have shown that birth range does not normally have any association with long-term health, although the risk of adult overweight or obesity was higher for men born after a very long period of birth. They have found that the birth interval affects long lasting health outcomes less dependently (Barclay & Kolk, 2018).

Almost all types of infection in this study had experienced upper respiratory tract infection (ISPA) namely 98.6%. While for diarrhea 8% and 5% intestinal worms. Another study revealed that diarrhea and not eliminating worms in children were associated with growth (malnutrition) in children (Tette et al., 2015). Other studies also described helminth infections, which showed that STH causes considerable morbidity in children, affecting their cognitive development and physical development (Riaz et al., 2020).

The health insurance in this study was 79.2%, and the remaining 20.8% did not have health insurance. Other studies show that the insured and the uninsured differ considerably. The study found that those with active health insurance tend to use health services more frequently than those without active health insurance. In other words, people who are active in the health insurance

system are more likely to visit health facilities than people who do not visit health centres (Osei Asibey & Agyemang, 2017). In another study, the mothers who have also received home visitations from CHW are more likely than mothers that receive SC, to breastfeed at three months, exclusively, and are not likely to consult with a traditional curative at the end of three months compared with mothers who have received SC (antenatal care and HIV). In both groups mothers were also likely to receive child support and child growth and progress in the first 2 years of life were similar (Stansert Katzen et al., 2020). Increased maternal education and health services for children under five in rural areas were also able to prevent and delay growth, (Simbolon et al., 2019). (stunting). It can be concluded that health insurance affects health facilities visits while visits to health facilities themselves can benefit child growth and development by screening as quickly as possible and by providing child growth and development-related health education.

e. Environmental Risk Factors

In this study, the average latrine used was a septic tank with a total of 332 or 90.7%. However, there are also those who use the latrine with Pit Privy (*Cubluk*) with a total of 16 or 4.4%. Adequate toilet facilities are associated with lower child wasting (van Cooten et al., 2019). Another study also explained that growth (stunting) was less common among children aged 1 year with good access to the toilet than those who had not (Dearden et al., 2017). Torlesse et al., (2016) explain that the combination of unreparated and untreated latrines with drinking water results in an increased chance of stunting in comparison with better conditions.

The source of clean water in this study also came from wells with average of 268 or 73.2%. And there is still 1 or 3% that comes from rainwater. The research by Dearden et al., (2017) explains that access to better water is usually not associated with growth (stunting and underweight). But in Ethiopia where better access to water is associated with reduced stunting. Other studies have also explained that water sources that close to the house can affect children's growth, such as the following statement that water sources close to the house are associated with a lower prevalence of wasting. However, safe water sources were not significantly associated with child malnutrition (van Cooten et al., 2019).

The sources of drinking water in this study were entirely clear, clean and odorless. Another study shows that untreated drinking water results in an increased risk of stunting in comparison to better conditions (Torlesse et al., 2016). Another study also explained that related to the results of his research, bad drinking water sources were likely to have a higher incidence of stunting in children (Irianti et al., 2019).

Waste processing in this study on average by burning, namely 318 or 86.9%. And there are still 44 or 12.0% discarded in the backyard. Other studies indicate the increased likelihood of stunting in children in association with improper waste management (Irianti et al., 2019) .

78.1% of the sewage channels aspect in this study already have sewage channels, but the rest do not have sewers yet. The distance between the sewer and water sources is on average > 10 meters with a total of 309 or 84.4% and the rest are still < 10 meters. In addition WASH (water, sanitation and hygiene) play a major role for the nutritional results of children under the age of five according to other studies (Shrestha et al., 2020).

The most number of smoker in children environment is the Father with a total of 208 or 56.8%. But there is an environment where no one smokes namely 113 or 30.9%. Another study explained that from the observations, cognitive, behavioral and anthropometric differences in children according to cigarette exposure were small but statistically significant (Yang et al., 2013).

f. Children's Eating Habits

In this study, the child's habit of being picky about food in the no category was 61.7%, while the rest in the yes category were 38.3%. Other research suggests that increased dietary diversity, dietary variety of maize and fish as well as the intake of legumes and poultry seem to help children < 5 years of age to develop (Mank et al., 2020).). Meanwhile, the favorite food for children not having 4 stars is 311 (85%), and those with 4 stars are only 55 or 15.0%. Other studies showed that three prominent factors influencing early brain development, one of which is optimum nutrition, have a significant impact (Cusick & Georgieff, 2016).

E. CONCLUSSION

The conclusion in this study on average had a normal pregnancy record, but not for weight gain. Comorbidities of pregnancy in this study on average did not experience comorbidities. The birth history was normal, the more children were born male, the maximum water gap was between 4-10 years, almost all children cried immediately after birth and had an IMD, and almost all did not experience an infectious factor. Most of the health care is exclusive breastfeeding, and almost all of them are carried out routine weighing, the respondents are mostly the second child, the type of infection most children suffer is ispa (cough, cold), most respondents have health insurance. Environmental factors are mostly good sanitation, but most of the fathers also still smoke. Children's eating habits, more children are not picky about food than choose food, but children's food does not meet 4 stars. Suggestions for further researchers are, to follow directly from the pregnancy process, so that the data obtained is real from the researchers.

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