

Stunting Incidence Factors In Toddlers In The Working Area Of Unurum Guay Health Center, Jayapura Regency, Papua Province

Ronald Imanuel Rambli

Postgraduate Master Program of Public Health, Faculty of
Public Health, Cenderawasih University

Semuel Piter Irab

Arius Togodly

Rosmin M. Tingginehe

Sarce Makaba

Hasmi

Faculty of Public Health, Cenderawasih University,
Jayapura Papua, Indonesia

Abstract: Stunting can be caused by a number of variables, including mother's knowledge, level of education, family income, family size, exclusive breastfeeding, infectious illnesses, and vaccines. The goal of this study was to identify the factors that contribute to stunting among toddlers in the working area of the Unurum Guay Health Center in 2022. This is known as "Cross-Sectional. The population consisted of all toddlers aged 12-59 months in the Unurum Guay Health Center's Working Area, a total of 200 children who were also the sample in this study. Primary data were gathered through interviews, questionnaires, and observations, while secondary data were gathered through the Community Health Center and the Health Office. The data were examined using univariate, bivariate, and multivariate techniques. The findings revealed a significant relationship between mothers' awareness ($p = 0.042$), exclusive breastfeeding ($p = 0.048$), total parity ($p = 0.009$), basic vaccination completion ($p = 0.033$), and prevalence of stunting. There was no significant link between the incidence of stunting and maternal education ($p = 0.807$), family income ($p = 0.516$), family size ($p = 0.742$), or infectious diseases ($p = 0.980$).

Keywords: Stunting, Toddlers, Immunizations.

I. INTRODUCTION

Stunting, a form of child developmental delay, is a common nutritional status problem primarily affecting impoverished nations. It may lead to illness, death, poor brain and motor skill development, and mental retardation. Its impact on future generations may threaten a country's productivity.

According to the National Team for the Acceleration of Poverty Reduction in 2017, as many as 150.8 million toddlers worldwide, or approximately 22.2%, are stunted. According to Basic Health Research [1], the prevalence of stunting in Indonesia was 36.8%. There was a decline in 2010 to 35.6%, but there was a rise in 2013 at a rate of 37.2%. The 2015

Nutrition Status Monitoring (PSG) statistics for stunting in Indonesia showed a prevalence of 29% in 2015, 27.5% in 2016, an increase of 29.6% in 2017, and a decline of 27.67% in 2019. Even if it has dropped, this ratio is still higher than the World Health Organization (WHO) norm, which is a maximum of 20% stunting in Indonesia. Indonesia has the second highest stunting rate in Southeast Asia and ranks fifth in the world [2].

Nutritional issues were also addressed in the 2015-2019 National Medium Term Development Plan (RPJMN), with a stunting prevalence target of 28%. However, according to the findings of Basic Health Research (2013), the prevalence of stunting increased by 1.8%, from 35.6% in 2010 to 37.2% in

2013 [1]. According to the WHO 2010, this is a severe concern because the prevalence is in the 30-39% range.

Stunting requires special attention because it has a wide range of consequences for toddlers, including inhibition of cognitive and motor development, such as slow speech and walking, and affects brain development, which is closely linked to vision, hearing, and thinking during the learning process [2]. Current research indicates that stunting is associated with a variety of circumstances, such as the study of Sutarto et al. (2020), who found a relationship between family income, and mother's education level and stunting [4]. Stunting is associated with a history of exclusive breastfeeding and low birth weight. Furthermore, Kurniawati (2020) indicated a relationship between family income, exclusive breastfeeding, and prevalence of stunting [5].

Silas et al. (2018) investigated "the factors affecting stunting in children under five years of age in Mimika Sub Province" in Papua Province. The findings revealed that age, mother's education, family income, and illness infection were not substantially connected to stunting in toddlers in the Mimika Regency; however, knowledge, mother's role, and newborn weight were statistically significant [6].

According to data from the Jayapura District Health Office in 2020, there were 1,258 stunted toddlers out of 13,556, a proportion of 17.28%. In 2021, there will be 595 stunted toddlers out of 13,101 (9.24 %). By 2022, there will be 1,502 stunted toddlers out of 13,101 (15.64 %). The incidence of stunting in 2020 at the Unurum Guay Health Center was 246 children under the age of five, which was measured as 218 children under the age of five, with 27 children under the age of five (12.38%) being stunted. In 2021, 8 (7.61%) of 237 children under the age of five were short and extremely short (stunting), as measured by 105 children under the age of five. In 2022, 277 children under the age of five were measured, and 105 (37.9%) were short and extremely short (stunting). Three infants aged 0-11 months and 102 children aged 12-59 months were among 105 stunted youngsters [7].

Based on the aforementioned reasons, the researcher wishes to undertake research titled "Determinant Factors in Stunting Incidents in Toddlers in the Working Area of the Unurum Guay Health Center, Jayapura Regency, Papua Province."

II. METHODS

This form of study is cross-sectional observational research, which stresses the period of measurement or observation of independent variable data and the dependent variable being assessed simultaneously and temporarily.

This research was conducted in the working area of the Unurum Guay Health Center in the Jayapura Regency in December 2022. The populations in this study were toddlers aged 12-59 months in the Working Area of the Unurum Guay Health Center, totaling 200 toddlers, and all of them were used as samples or for total sampling.

The data used in this study were obtained through primary and secondary data collections. Primary data were obtained by conducting direct surveys to obtain data that were not obtained from the local health center. Direct measurements were made

using research instruments in the form of a microtoise and digital scale, which were used to obtain information from respondents about the height and weight of a sample of toddlers. The z-score was calculated using the WHO Anthro v3.2.2 software to assess the nutritional status of children under five years of age. Additionally, a questionnaire was used to examine the risk factor variables that were considered to be related to the incidence of stunting in toddlers. Data collection was carried out directly by the researchers by conducting interviews and filling out questionnaires on the mothers as respondents by visiting the Health Center individually. Before completing the questionnaire, respondents received an explanation from the researcher of the purpose and method of filling out the questionnaire. Secondary data were obtained from trusted institutions or other parties, namely, data from the Jayapura Regency Health Office, Unurum Guay Health Center.

Data analysis using univariate, bivariate, and multivariate methods Univariate analysis was carried out by analyzing the existing variables descriptively by calculating the frequency distribution and proportions, b. Bivariate Analysis was conducted to determine the relationship between each variable and the dependent variable using the chi-squared test. The way to decide whether there is a significant relationship between the independent variable and the dependent variable is to use the p-value compared to the error rate of 5% or 0.05. If the p-value is <0.05, Ho is rejected, which means there is a significant relationship between the dependent variable and the independent variable; if the p-value is ≥ 0.05 , Ho is accepted, which means there is no significant relationship between the dependent and independent variables. Multivariate Analysis was conducted to determine the dominant independent variables in this study.

III. RESULT

The findings of this study's observations revealed that of the 200 toddlers observed, 102 (51.0%) were stunting and 98 (49.0%) were not.

Variables	Stunting n=102 (51.0%)	Not Stunting n=98 (49.0%)	RP	95%CI	P-value
Mother's Knowledge					
Good	52(59.77)	35(40.23)	1.351	Ref	0.042
Lack	50(44.25)	63(55.75)		1.032 – 1.768	
Mother's Education					
High	66(50.00)	66(50.00)	0.944	Ref	0.807
Low	36(52.94)	32(47.06)		0.713 – 1.252	
Family Income					
Enough	25(46.30)	29(53.70)	0.878	Ref	0.516
Less	77(52.74)	69(47.26)		0.634 – 1.216	
The Size of Family Members					
Small family	25(46.30)	29(53.70)	0.878	Ref	0.516
Big family	77(52.74)	69(47.26)		0.634 – 1.216	
Exclusive Breastfeeding					
Yes	45(60.81)	29(39.19)		Ref	

No	57(45.24)	69(54.76)	1.344	1.031– 1.753	0.048
History of infection					
Never	73(51.41)	69(48.59)		Ref	
Ever	29(50.00)	29(50.00)	1.028	0.759– 1.392	0.980
Parity					
Low	39(66.10)	20(33.90)		Ref	
High	63(44.68)	78(55.32)	1.479	1.142– 1.917	0.009
Basic Immunization					
Complete	73(57.03)	55(42.97)		Ref	
Not complete	29(40.28)	43(59.72)	1.416	1.029– 1.948	0.033

RP: Ratio Prevalence; CI: Confidence Interval

Table 1: Factors related to the incidence of stunting in toddlers in the working area of the Unurum Guay Health Center, Jayapura Regency, Papua Province

Table 1 demonstrates that of the eight factors, four were statistically significant related to stunting in toddlers, meanwhile four others were not statistically significant. Mothers with low knowledge have a 1.351 times higher risk of stunting in their babies compared to mothers with good knowledge. Mothers who do not give exclusive breastfeeding have a 1.333 times higher risk of stunting in their babies compared to mothers who give exclusive breastfeeding. Mothers with high parity have a 1.479 times higher risk of stunting in their babies compared to mothers with low parity. Furthermore, Infants who are not fully immunized are at risk of 1.416 times higher for stunting compared to fully immunized infants.

IV. DISCUSSION

A. RELATIONSHIP BETWEEN MOTHER'S KNOWLEDGE AND STUNTING INCIDENTS

Based on the univariate findings of mothers with less knowledge of 56.5% and 43.5% of excellent knowledge, the knowledge of mothers in the Working Area of the Unurum Guay Health Center was classified into two categories in this study: low knowledge and good knowledge. According to the statistical test results, P value = 0.042, there is a significant association between mother's knowledge and the prevalence of stunting in toddlers. The findings of this study are consistent with the findings of Amalia et al. (2017), who found a link between mother's knowledge and the prevalence of stunting, indicating that strong knowledge can help avoid stunting in toddlers [8].

Ningtyas et al.'s 2020 study found a significant relationship between maternal nutritional knowledge and stunting incidence in toddlers. An effective nutrition education program can increase knowledge and prevent stunting in children. Understanding good nutrition in mothers is crucial for children's growth and development. Nutritional knowledge can be obtained from health professionals, the internet, and literature [9].

B. RELATIONSHIP BETWEEN MOTHER'S EDUCATION AND STUNTING INCIDENTS

The mother's education was divided into two categories in this study: low (no school, elementary and junior high) and high (high school and college). According to the Univariate statistics, 34% of moms have a low education level and 66% have a higher education level. The P value for the chi square statistical test was 0.807, indicating that the connection between maternal education level and stunting in toddlers is not significant in the Working Area of the Unurum Guay Health Center. According to Astuti and Taurina's (2020) research, there is no association between mother's education and the nutritional condition of preschool and elementary school children [10].

The mother's education level is connected to how easily she can acquire and receive information concerning stunting. Mothers with a high level of education who have never read or received information about stunting will not affect their understanding of stunting, whereas mothers with low levels of education who frequently receive information about stunting will understand it better, so there are other factors that can influence it so that the relationship between mother's education level and the incidence of stunting in toddlers in the working area of the Unurum Guay Health Department is not significant. To prepare for this, women with high or poor education should get information, socialization, and intervention about the causes and prevention of stunting.

C. RELATIONSHIP BETWEEN FAMILY INCOME AND STUNTING INCIDENTS

In this study, family income was divided into two categories: Less (if total income was less than Rp. 3,561,932) and Adequate (if total income was more than Rp. 3,561,932). According to Univariate statistics, 73% of families have less money, while 27% of families have enough income. Based on statistical analyses, P value = 0.516, indicating that the link between parental income and the prevalence of stunting in toddlers is not significant in the Unurum Guay Health Center's Working Area. These findings contradict research from Bangladesh, which found that low socioeconomic status is a risk factor for stunting in children under the age of five [11], but Anindita's (2017) study found no relationship between family income levels and stunting, indicating that toddler growth does not affect family income [12]. If low-income families can prepare healthy meals from basic and inexpensive items, the baby's growth will improve. The revenue collected is not entirely spent on fundamental food needs, but rather on other necessities. A high amount of money does not ensure excellent nutritional status for toddlers since cash is not always allocated appropriately for dietary needs.

Family income is connected to a household's capacity to satisfy its basic, secondary, and tertiary demands. A high family income makes fulfilling life's demands simpler; on the other hand, a low family income makes meeting life's needs more difficult. A family's food quality and quantity will suffer as a result of a low income. Food will be less diverse and in smaller quantities, particularly those that serve as sources of protein, vitamins, and minerals for children's growth, raising

the risk of malnutrition. These restrictions increase the likelihood of a youngster having stunting. People with low incomes and purchasing power can overcome specific eating patterns that impede optimal nutrition improvement, particularly for their children.

D. RELATIONSHIP BETWEEN THE SIZE OF FAMILY MEMBERS INCOME AND STUNTING INCIDENTS

In this study, the number of family members was divided into two categories: large families (more than four individuals in one house) and small families (fewer than four people in one house). According to the Univariate statistics, 74% of families have big families, whereas 26% of families have tiny families. Based on statistical testing, P value = 0.742, indicating that the association between the number of family members in one residence and the frequency of stunting in toddlers in the Working Area of the Unurum Guay Health Center is not significant.

One of the elements influencing the growth pattern of children and toddlers in a household is the number of family members. The increased number of family members, if not compensated by increased income, will result in an unbalanced distribution of food consumption. The frequency of stunting children is the same from first to third birth order, but much greater in fourth children, according to Dewy (2011) [13]. This is because birth order corresponds with kid age, and competition for food is higher in homes with more children. Toddlers with fewer family members are not always free of stunting. Because it may be a role in unequal food distribution, it may result in the child receiving insufficient food, resulting in a lack of nutrient intake. Furthermore, incorrect parenting habits, such as giving older children more food or nutritional intake than younger children (toddlers), might be one of the causes influencing the high frequency of stunting episodes in toddlers, which really originates from a small family.

E. RELATIONSHIP BETWEEN EXCLUSIVE BREASTFEEDING AND STUNTING INCIDENTS

For neonates up to 6 months of age, exclusive nursing means solely breast milk. Babies are not offered any other food or drink for 6 months when exclusively nursing. The findings revealed that 63% of children in the Working Area of the Unurum Guay Health Center did not get exclusive breastfeeding, whereas the remaining 37% did. According to the bivariate data, the fraction of children under five who are not exclusively breastfed has a worse nutritional condition, namely 55.9%, compared to children under five who are exclusively breastfed. The statistical test findings yielded a p value of < 0.005 , indicating that there is a significant link between exclusive breastfeeding and the frequency of stunting in toddlers in the Working Area of the Unurum Guay Health Center.

This study supports the findings of Suwartini et al. (2019), who discovered a strong link between exclusive breastfeeding and the prevalence of stunting [14]. Children who do not receive exclusive breastfeeding are 5.7 times more likely to suffer from stunting [15].

According to the findings of field study, more than half of the toddlers in the Working Area of the Unurum Guay Health Center do not get exclusive breastfeeding. This is due to the fact that, in addition to breast milk, babies aged 0-6 months are given other foods such as papada, bananas, and food that the family consumes on a daily basis; additionally, there are mothers who have problems with breastfeeding that are difficult to get out, as well as mothers who are sick after giving birth, so that babies are not exclusively breastfed. Exclusive breastfeeding is a major determinant in the prevalence of stunting. This is said because breast milk is a very vital source of nutrients for children's growth, particularly during the golden years.

F. RELATIONSHIP BETWEEN HISTORY OF INFECTION AND STUNTING INCIDENTS

Aside from food consumption, infectious illness is one of the direct factors of children under the age of five's nutritional condition. Statistical studies demonstrate that the link between infectious illnesses and the prevalence of stunting in toddlers in the Working Area of the Unurum Guay Health Center is not significant. In line with study by Paramashanti et al. (2019), which discovered that more research samples were free of infectious illnesses [16], but not with research by Permadi et al. (2019), which discovered that majority of the samples were infected [17]. Infectious illness is a direct cause of poor nutritional status in children. This is because children with infectious disorders have lower food intake. If dietary intake and nutrient absorption are not adequate, it might deplete energy sources in the body, resulting in stunted children [18].

The findings of this study reveal that there is no significant link between infectious infections and the frequency of stunting in toddlers in the Working Area of the Unurum Guay Health Center. This is possible because the infectious diseases inquired about are only in the short term and may not always represent infectious diseases that children have encountered throughout their lives. Stunting is a long-term effect of a poor-quality diet associated with morbidity, infectious illnesses, and environmental issues.

G. RELATIONSHIP BETWEEN PARITY AND STUNTING INCIDENTS

Parity is a significant predictor of the mother's fate during pregnancy and labor. Mothers who have given birth to children more than three times are at danger of having LBW kids, the mother's health begins to deteriorate, and the uterus is weakened owing to damage to the walls of the uterine blood vessels caused by several pregnancies. This will have an impact on the fetus' nutrition and may develop or worsen LBW.

According to the study's findings, the number of parities with stunting in the Working Area of the Unurum Guay Health Center had a P-value of 0.009. This demonstrates the existence of a meaningful link. According to the findings from the field, moms with a high parity have children that are stunted. This is because families with numerous children, particularly those with little financial resources, are unable to give attention and sufficient meals to all of their children. Children at a phase of

growth, particularly rapid growth such as around the age of 1-2 years, require specific care and stimulation for brain development in addition to sufficient nourishment for physical growth. Growth and development abnormalities are more common in children born later, because the load on parents increases with the number of children they have [19].

This study is consistent with previous research from Kendari, which found that toddlers with many parities have a 3.25 times higher risk of stunting than toddlers with few parities [19]. According to research done in Nairobi, maternal parity is a key determinant in the time it takes to recover from stunting in the first five years of life [20]. Because parity is directly tied to parenting methods and the fulfillment of children's nutritional demands, it is an indirect factor in the prevalence of stunting, especially when supported by low economic situations. Children born to multiparous moms are more likely to get inadequate parenting and not meet their nutritional demands during their growing phase. Children with a large number of siblings may have developmental delays owing to competition for the limited dietary resources available at home.

H. RELATIONSHIP BETWEEN BASIC IMMUNIZATION AND STUNTING INCIDENTS

A P-value of 0.033 was found based on the findings of the study on the completeness of vaccination against stunting. This demonstrates that there is a substantial association between the completeness of basic vaccination and the frequency of stunting in toddlers in the Unurum Guay Health Center's operational area. This study supports the findings of Nasrul et al. (2019), who discovered that the completion of basic vaccination has a strong link with stunting.

It is critical to provide comprehensive vaccination to youngsters in order to prevent stunting. According to Al-Rahmad (2016), children who do not receive comprehensive vaccination would have immunological abnormalities against infectious illnesses [21]. Children who do not receive full vaccination will have poor antibody production, making them prone to illness. Essentially, providing vaccination to children has a significant goal: to lower the risk of morbidity (sickness) and mortality (death) in children owing to illnesses that may be avoided by immunization. Children's immunization status is one sign of contact with health care. Because interaction with health services is expected to assist ameliorate nutritional difficulties, vaccination status is also predicted to have a favorable impact on long-term nutritional status.

V. CONCLUSION

- ✓ There is a significant relationship between mother's knowledge and the incidence of stunting.
- ✓ There is no significant relationship between mother's education level and stunting.
- ✓ There is no significant relationship between parental income and the incidence of stunting.
- ✓ There is no significant relationship between the number of family members and the incidence of stunting.

- ✓ There is a significant relationship between exclusive breastfeeding and the incidence of stunting.
- ✓ The relationship between histories of infectious diseases is not significant with the incidence of stunting.
- ✓ There is a significant relationship between the number of parity and the incidence of stunting.
- ✓ There is a significant relationship between the completeness of basic immunization and the incidence of stunting.

REFERENCES

- [1] Indonesian Ministry of Health. (2013). Report on the Results of Basic Health Research (Riskesdas) 2013. Jakarta: Indonesian Ministry of Health.
- [2] Teja, M. (2009). Indonesian Toddler Stunting and Its Management. *Journal of Brief Studies on Actual and Strategic Issues XI*, 13-18. Retrieved from http://berkas.dpr.go.id/puslit/files/info_short/Info%20Sikat-XI-22-II-P3DI-November-2019-242.pdf
- [3] Mita, N. (2016). Frequency of zinc consumption as a dominant factor in the incidence of stunting in grade 1 elementary school students in West Jakarta in 2016. University of Indonesia: Depok.
- [4] Sutarto, Azqinar, T.C., Himayani, R., and Wardoyo. (2020). The Relationship between Mother's Education Level and Family Income with Stunting in Toddlers in the Way Urang Community Health Center, South Lampung Regency. *Jurnal Dunia Kesmas*, 9(2), 256 – 263.
- [5] Kurniawati, E. 2020. Risk Factors for Stunting in Toddlers in Kerinci District, Jambi Province. *Journal of Health Science and Physiotherapy*, 2(2), 143-151.
- [6] Silas L, Rantetampang AL, Tingginehe R et al. 2018. The factors affect stunting child under five years in sub province mimika. *International Journal of Science & Healthcare Research*, 3(2), 99-108.
- [7] Jayapura Regency Health Office. 2021. Jayapura Regency Health Office Profile 2020. Sentani.
- [8] Amalia, ID., Lubis, DPU., and Khoeriyah, SM. 2021. Relationship between mother's knowledge on nutrition and the prevalence of stunting on toddlers. *Jurnal Kesehatan Samodra Ilmu*, 12(2), 146-154. Available at: <https://stikes-yogyakarta.e-journal.id/JKSI/article/view/153/145>
- [9] Ningtyas, Y. P., Udiyono, A., & Kusariana, N. (2020). Knowledge of Mothers Related to Stunting in Toddlers in the Work Area of the Karangayu Health Center, Semarang City. *Journal of Public Health (Undip)*, 8(1), 107–113.
- [10] Astuti, FD., and Sulityowati, TF. 2013. THE RELATIONSHIP BETWEEN MOTHER'S EDUCATION LEVEL AND FAMILY INCOME LEVEL WITH THE NUTRITIONAL STATUS OF PRESCHOOL AND ELEMENTARY SCHOOL CHILDREN IN GODEAN DISTRICT. *Kesmas*, 7(1), 15-20.
- [11] Jesmin, A., Yamamoto, S. S., Malik, A. A., & Haque, M. A. (2011). Prevalence and determinants of chronic malnutrition among preschool children: A cross-sectional

- study in Dhaka City, Bangladesh. *Journal of Health, Population and Nutrition*.
<https://doi.org/10.3329/jhpn.v29i5.8903>
- [12] Anindhita, P. (2012). 'Relationship of Maternal Education Level, Family Income, Protein & Zinc Adequacy with Stunting (short) in Toddlers Aged 6-36 Months in Tembalang District of Semarang City', *Mas Health Journal*, 1, 617–626.
- [13] Dewey KG, Begum K. Long-term consequences of stunting in early life. *Maternal & Child Nutrition*. 2011;7(s3):5–18. doi: 10.1111/j.1740-8709.2011.00349.x
- [14] Suwartini, I., Hati, FC., and Paramashanti, BA. 2020. HISTORY OF EXCLUSIVE BREASTFEEDING AND STUNTING IN CHILDREN AGED 24-59 MONTHS IN PAJANGAN DAN PLERET SUB-DISTRICT, BANTUL REGENCY. *Food Nutrition Media*, 27(2), 37-43.
- [15] Zai, T., Girsang, E., Nasution, SLR., and Ginting, CN. (2022). Prevalence and Determinants of Stunting Incidence in Toddlers. *Aisyah's Journal: Journal of Health Sciences*, 7(2), 527–534.
- [16] Paramashanti, B. A., H. Hadi and I. M. A. Gunawan. 2016. Exclusive breastfeeding is not related to stunting in children aged 6–23 months in Indonesia. *Indonesian Journal of Nutrition and Dietetics*, 3 (3): 162-174.
- [17] Permadi, M. R., D. Hanim, Kusnandar and D. Indarto. 2016. Early Breastfeeding Initiation And Exclusive Breastfeeding AS Risk Factors Of Stunting Children 6-24 Months-old. *Nutrition and Food Research*, 39(1), 9-14..
- [18] Udoh, E. E. and Amodu, O. K. (2016). Complementary feeding practices among mothers and nutritional status of infants in Akpabuyo Area, Cross River State Nigeria, *SpringerPlus*, 5(1). doi: 10.1186/s40064-016-3751-7.
- [19] Palino, I., Majid, R. and Ainurafiq, A. (2017). Determinants of Stunting Incidents in Toddlers Aged 12-59 Months in the Working Area of the Puuwatu Health Center, Kendari City, 2016, *Scientific Journal of Public Health Students*, 2(6), 1-12.
- [20] Faye, C. M., Fonn, S., & Levin, J. (2019). Factors associated with recovery from stunting among under-five children in two Nairobi informal settlements. *PLoS ONE*, 14(4), 1–17. <https://doi.org/10.1371/journal.pone.0215488>
- [21] Al-rahmad, A. H., Miko, A. and Hadi, A. (2013). Study of stunting in children under five in terms of exclusive breastfeeding, MP-ASI, immunization status and family characteristics in Banda Aceh City, *Nasuwakes Scientific Health Journal*, 6(3), 169–184.