Article Type: Research Paper

Obstacles to Children's Growth and Development Due to Parental Cigarette Consumption in Sumatra

Vitriyani Tri Purwaningsih, Resha Moniyana Putri, Moneyzar Usman, and Endriko Bagus Pratama

Abstract: Globally, one in three children under five are affected by stunting, which impairs their growth. On average, 50% of malnourished children aged five years or younger reside in Asia, while more than 30% live in Africa. Indonesia, as one of the Southeast Asian Countries, exhibits a higher prevalence of stunting compared to other middle-income countries. Several studies have identified a correlation between the smoking behavior of parents and the risk of stunting in children. This is thought to be due to the allocation of cigarette expenditure, which can reduce spending on food. This study aims to examine the impediments to growth encountered by children as a consequence of cigarette consumption within households in Sumatra and beyond. The data used in this study is derived from the Indonesian Family Life Survey (IFLS), with the logistic regression method utilized for analysis. The findings of this study indicate that a significant proportion of expenditure on cigarettes, living in a poor household, and internal child factors, namely the baby's weight at birth (less than 2500 grams), can increase the risk of children experiencing stunting. Genetic factors like parents' height and environmental factors like sanitation can also reduce the risk of stunting in children. Because the height of a parent's body posture and a clean can positively influence children's health conditions. The study calls for interventions to reduce smoking and improve child nutrition, especially in impoverished households. It is imperative to allocate expenditures related to the procurement of cigarettes to benefit children, thereby facilitating their growth and development.

Keywords: Child; Cigarettes; Sanitation; Stunting
JEL Classification: D12; I15; I32

AFFILIATION:
Department of Development Economics, Faculty of Economics and Business, Universitas Lampung, Lampung, Indonesia

***CORRESPONDENCE:**
vitriyani.tri@feb.unila.ac.id

THIS ARTICLE IS AVAILABLE IN:
http://journal.umy.ac.id/index.php/jerss

DOI: 10.18196/jerss.v9i1.24255

CITATION:
Purwaningsih, V. T., Putri, R. M., Usman, M., & Pratama, E. B. (2025). Obstacles to Children's Growth and Development Due to Parental Cigarette Consumption in Sumatra. *Journal of Economics Research and Social Sciences, 9*(1), 37-46.

Introduction

It is paramount to consider health issues from the perspective of all groups, with particular attention paid to those affecting children. One of the primary objectives of the Sustainable Development Goals (SDGs) is to guarantee a healthy life and to promote well-being for all, as outlined in Goal 3. To achieve this goal, most countries worldwide have developed policy strategies to address global child health issues, particularly nutrition. Nutritional problems are not hereditary; they are caused by a lack of nutritious food intake, congenital diseases, parenting practices, and lack of access to adequate health services (UNICEF, 2015).

One of the most prevalent nutritional issues affecting children is stunting. A report from UNICEF (2019) indicates that, globally, one in three children under the age of five is not growing properly due to stunting, wasting, and overweight. Concerning geographical distribution, the highest prevalence of nutritional problems among children under five years of age is observed in Asia and Africa. On average, 50% of malnourished children under five years of age are located in Asia, while more than 30% are in Africa.

Nutritional deficiencies are typically the result of insufficient dietary intake. Two-thirds of children are not fed an appropriate diet for growth and development (UNICEF, 2019). A significant proportion of children aged between six and 23 months, precisely 44%, do not consume adequate fruit or vegetables. Furthermore, 59% of this age group also fails to ingest adequate vegetable or animal protein. Furthermore, some additional factors associated with nutritional issues in children can originate from parenting practices, the surrounding environment, and other external influences. The level of parental education has also been identified as a factor influencing nutritional problems in children (Alderman & Headey, 2017). This is because low parental education is associated with lower levels of knowledge, which is linked to poorer recognition of symptoms and less effective management of illnesses in children.

Several researchers have identified a correlation between parental smoking behavior and the risk of stunting, wasting, and being overweight in children. A study conducted in Indonesia revealed that households where the father smokes spend 16,6% of their income on cigarettes (Wijaya-Erhardt, 2019). The smoking habit may be indicative of a parenting style that prioritizes immediate gratification over long-term health outcomes. The allocation of income for essentials such as food may be compromised when funds are redirected towards purchasing cigarettes. The prevalence of stunting is increased by 1,5 times in children whose mothers smoke, in comparison to children whose mothers do not smoke (Bove et al., 2014). In contrast, Best et al. (2008) observed that the likelihood of a child being stunted was 1,1 times higher in households where the father smoked compared to those where the father did not smoke.

Concerning the health implications, the consequences of parental smoking result in children becoming Secondhand Smoke (SHS) and a deterioration in the child's health. A study conducted by (1) demonstrated the relationship between urinary levels of cotinine metabolites and GABA concentrations in children exposed to heavy parental smoking in urban households. The average level of cotinine metabolites in children exposed to secondhand smoke was 57.37 ng/ml. Meanwhile, the cotinine metabolite levels in a control group of normal children were 2.53 ng/ml (n = 253). It can be hypothesized that elevated levels of cotinine metabolites may influence GABA levels and subsequent neurobehavioral effects, potentially causing insomnia in children living with heavy-smoking parents in urban households.

Previous studies, such as those conducted by Wijaya-Erhardt (2019), have analyzed the impact of parental smoking habits on child health outcomes. However, these studies have not controlled for potential confounding factors, such as low birth weight status, breastfeeding, and children's diet. This study intends to examine parental smoking habits

but did not control for child outcomes such as low birth weight status, breastfeeding, and diet, which are crucial factors that warrant consideration. It is because they wanted to compare the nutritional status of children in low-income households with smoking and non-smoking fathers. Accordingly, this study examines the impact of various factors on child nutrition, including sanitation, breastfeeding, and household economic conditions. This study contributes to the extant literature on the impact of tobacco expenditure on child growth in low-income households in Indonesia. Although families with fathers who smoke do not allocate a smaller proportion of their income to food compared to households without smokers, spending on tobacco has a deleterious effect on the linear growth of their children. This study also underscores the necessity to incorporate anti-smoking counseling in Indonesia's ongoing stunting reduction programs.

Research Method

The data employed in this study were derived from the multi-level, large-scale Indonesian Family Life Survey (IFLS), encompassing both individual and household levels of analysis. The unit of analysis was the household with at least one child under the age of five. The questionnaire instrument is a longitudinal survey designed to collect substantial information at both the individual and household levels. This includes a range of indicators such as consumption, income, assets, education, health status, migration, marriage, and other pertinent data (Strauss et al., 2014).

Based on the purpose of this study is to see the risk of the proportion of parental cigarette expenditure on the nutritional status of children in Sumatra and outside Sumatera so that the dependent variable used is nutritional status such as stunting, the proportion of parental cigarette expenditure, and other control variables. To conduct the analysis, an equation model is used to describe the research objectives:

$$st_i = \beta_0 + \beta_1 prop_i + \beta_2 bblr_i + \beta_3 mthg_i + \beta_4 fthg_i + \beta_5 mtedu_i + \beta_6 san_i + \beta_6 hhpoor_i + \beta_7 bfd_i + \varepsilon_i,$$

Dependent variable st_i on the model retrieved status of children's stunting *i*. Afterwards, independent variable $prop_i$ shows the allocation of the proportion of cigarette expenditure in a month, $bblr_i$ child's low weight status at birth, $mthg_i$ mother's height, $fthg_i$ father's height, $mtedu_i$ mother's education, san_i sanitation status, $hhpoor_i$ poor household and bfd_i breastfeeding. This study explores the relationship between parental health, education, sanitation, breastfeeding, household income, and the allocation of cigarette expenditure in a month on stunting in children.

The utilization of these variables follows the UNICEF conceptual framework and several preceding studies. In certain studies, such as those conducted by Kyu et al. (2009) and Mishra & Retherford (2007), the method employed was multinomial logistic regression to analyze the relationship between smoking and stunting status in children. However, this study's observed dependent variable of children's nutritional status is a dummy variable, thus allowing logistic regression. The estimation results can be interpreted as indicating

the direction of the variable relationship. However, to analyze the coefficient results, it is necessary to estimate further using the odds ratio, a widely used measure in previous studies, especially those related to health. The odds ratio is an exponential measure of the estimated logistic coefficient, expressed as a ratio of greater or lesser odds.

Result and Discussion

The primary data for this study is derived from the Indonesian Family Life Survey Wave 5, also known as the Indonesian Family Life Survey (IFLS). The sample size for children under the age of five years is 3,067 observations. This study delineates two regional conditions: Sumatra and the rest of Indonesia. It describes the characteristics of households with children under five and parents who smoke. This study examines the nutritional status or incidence of stunting in one child in each Sumatra and Non-Sumatra household.

The children observed in this study had a maximum age of 59 months and an average of 28 months. The mean monthly expenditure on cigarettes in the average household was 6%. The lowest proportion was 0, indicating that these households did not consume cigarettes. In contrast, the highest proportion was 39%, representing the maximum monthly household expenditure on cigarettes.

The maternal characteristics of the subjects included in the study exhibited a range of heights, with the shortest being 104,6 cm and the tallest reaching 174,5 cm. The mean height of the mothers in the study was 151.5 cm. The lowest recorded height of the fathers was 128,5 cm, with the highest being 198 cm. The average height of the fathers was 163,3 cm. It can be observed that the average height of fathers is generally superior to that of mothers.

The primary data for this study is derived from the Indonesian Family Life Survey Wave 5, also known as the Indonesian Family Life Survey (IFLS). The sample size for children under the age of five years is 3,067 observations. This study delineates two regional conditions: Sumatra and the rest of Indonesia. It describes the characteristics of households with children under five and parents who smoke. This study examines the nutritional status or incidence of stunting in one child in each Sumatra and Outer Sumatra household.

The children observed in this study had a maximum age of 59 months and an average of 28 months. The mean monthly expenditure on cigarettes in the average household was 6%. The lowest proportion was 0, indicating that these households did not consume cigarettes. In contrast, the highest proportion was 39%, representing the maximum monthly household expenditure on cigarettes.

The maternal characteristics of the subjects included in the study exhibited a range of heights, with the shortest being 104.6 cm and the tallest reaching 174,5 cm. The mean height of the mothers in the study was 151,5 cm. The lowest recorded height of the fathers was 128,5 cm, with the highest being 198 cm. The average height of the fathers

was 163,3 cm. It can be observed that there is a tendency for fathers to have a superior average height in comparison to mothers.

Maternal education was classified into a binary variable, with 1 indicating that the mother had completed at least nine years of education or had graduated from junior high school (SMP) and 0 indicating otherwise. In this study, the lowest level of education attained by the mother was no schooling, while the highest level of education attained by the mother was 20 years or a university degree or even a master's degree. The mean level of maternal education in this study was 10 years.

Table 1 presents a classification of the observed children by region and stunting status. The prevalence of stunting among the children in this study was 30%, while 70% were not. Among the children exhibiting stunting, 33% demonstrated severe stunting. The children who were stunted were distributed across Sumatra and in regions outside of Sumatra. A total of 27% of stunted children were resident in Sumatra, while 78% lived outside the area.

Table 1 Classification of Children by Region and Stunting Status

Region	*Stunting*	
	Yes	**No**
Sumatera	251 (8.18)	620 (20.22%)
Out of Sumatera	671 (21.88%)	1525 (49.72%)

Source: IFLS (processed)

The stunting status of children can be classified into three categories: no stunting, mild/moderate stunting, and severe stunting. As illustrated in Figure 1, the data reveal that 70% of the 3067 children (2145) are not stunted, exhibiting a height-for-age score above -2. In contrast, 30% of the children (922 children) are stunted, with 622 children classified as mild/moderate stunted and 300 children classified as severely stunted.

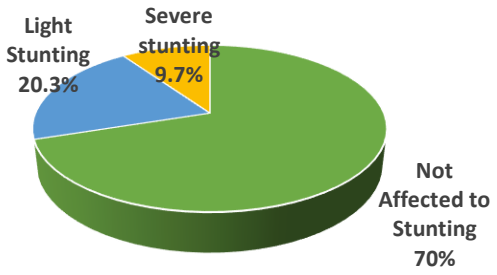

Figure 1 Classification of Stunting Status in Children (%)

Table 2 is presented in a manner that classifies the data based on the clustering of child stunting status and parental smoking status among poor households. Amongst households with a low income, 81% of parents are smokers, while 19% do not smoke.

Table 2 Classification of Parental Smoking and Stunting Status by Poor Households

Variable	Poor Household		
	No	**Yes**	**Total**
Parental Smoking			
Not Smoking	445	185	**630**
Smoking	1641	796	**2437**
Stunting Status in Child			
Not *Stunting*	1523	622	**2145**
Stunting	563	359	**922**

Source: IFLS (processed)

It can thus be observed that the majority of households with a low income will set aside a portion of their regular expenditure to purchase cigarettes. Furthermore, a significant proportion (approximately 37%) of children from poor households exhibit stunted growth. In contrast, the majority of children from non-poor households are not stunted. This phenomenon can be attributed, at least in part, to a discrepancy in the allocation of expenditure between purchasing nutritious food and other spending. The severity of the child's condition may be exacerbated in households with parents who smoke and allocate a portion of their budget to cigarettes while reducing the expenditure on nutritious food.

Table 3 presents the estimated results, which facilitate the interpretation of the direction of the relationship between the independent variables and the dependent variable. The results demonstrate a positive correlation between the proportion of parents' expenditure on cigarettes and the prevalence of child stunting. This suggests that parents who smoke and allocate a portion of their spending to cigarettes may increase the likelihood of their children experiencing stunting. Parents who smoke will indirectly affect the budget and consumption patterns within the household. As evidenced by previous research by Wijaya-Erhardt (2019), low-income households whose parents smoke tend to allocate a significant portion of their income, approximately 16.6%, towards cigarette expenditure.

The weight status of a child at birth is considered to be a direct factor in the likelihood of the child subsequently becoming stunted. The findings of the analysis, conducted in both Sumatra and other regions, indicated a positive correlation between low birth weight (LBW) and the likelihood of stunting. A birth weight of less than 2500 grams is indicative of LBW, which is associated with an elevated risk of stunting.

This suggests that children who have a history of being born with a low body weight (less than 2500 grams) and whose parents smoke are at an increased risk of suffering from stunting. As children grow older, their nutritional requirements increase, particularly regarding food intake. Parents who smoke may alter the household budget to accommodate their own habits, potentially impacting the availability of nutritious food for their children. The etiology of stunting in children is multifactorial, with influences extending beyond the child's intrinsic biological makeup to encompass heredity and the external environment. One of the characteristics of stunted children is a below-average height. However, this does not imply that all children with a shorter stature are necessarily stunted. Additionally, children's height can be influenced by genetic factors.

Table 3 Estimation Results of the Effect of Parental Cigarette Consumption on Stunting

Variable	(1)	(2)
	Sumatera	Out of Sumatera
Proportion of Cigarette Expenditure	0.00784	0.0172**
	(0.0134)	(0.00847)
Low Birth Weight	0.908***	0.860***
	(0.318)	(0.165)
Mother's Height	-0.0627***	-0.0703***
	(0.0146)	(0.00994)
Father's Height	-0.0407***	-0.0701***
	(0.0136)	(0.00891)
Mother's Education Level	-0.272	-0.0255
	(0.185)	(0.111)
Sanitation	-0.257	-0.340***
	(0.175)	(0.116)
Poor Households	0.235	0.186*
	(0.166)	(0.106)
Breastfeeding	-0.240	0.111
	(0.413)	(0.286)
_cons	15.63***	21.12***
	(2.939)	(2.016)
N	871	2196

Description () *Robust standard errors;,* * p < 0,1; ** p < 0,05; *** p < 0,01

Discussion

The results of the analysis demonstrate a negative correlation between the height of the mother and father and the risk of stunting in children. This suggests that when maternal and paternal height is greater, the likelihood of children experiencing stunting is reduced. The influence of genetic factors is such that when the mother and father have a high posture, the child will also have a high posture. Furthermore, children from Sumatra will have a lower tendency to experience stunting than children from outside Sumatra.

In general, several factors can contribute to the occurrence of stunting in children, and the influence of parental smoking habits is only one of these. As per the UNICEF conceptual framework, the primary controlled factors in this study were sanitation and breastfeeding. A private toilet with a septic tank in a household is associated with a reduced risk of stunting in children. The results were statistically significant in the region outside Sumatra but not in Sumatra itself. One potential explanation for this is that over 70% of households in Sumatra have access to adequate sanitation facilities.

The subsequent analysis yielded further insights into the positive correlation between household poverty and stunting in children. The probability of stunting is greater in impoverished households than in non-impoverished ones. Children residing in impoverished households are at an elevated risk of stunting, in part due to inadequate access to essential nutrients. In conclusion, the findings of this study indicate that the proportion of expenditure on cigarettes, infant birth weight, parental height, sanitation, and poverty are factors that influence the occurrence of stunting in children. However,

among these factors, the infant's birth weight is the most significant influence on stunting in Sumatra. In regions outside of Sumatra, additional factors influence stunting, including the proportion of expenditure allocated to tobacco, sanitation, and the prevalence of poverty within the household.

The results of the odds ratio analysis indicate that the likelihood of a child experiencing stunting is 0.01 times greater when the proportion of cigarette expenditure in the household is high. This result is indicative of a positive correlation, whereby the risk of children experiencing stunting is significantly elevated when a father or mother, or even both parents, smokes. The probability of stunting is 0.8 times greater for children with low birth weight (LBW) conditions than for children not born LBW. Furthermore, a reduction in parental height is associated with an increased probability of stunting in children, with a 0.06 decrease observed. Additionally, improved sanitation conditions in the household have been linked to a 0.3 reduction in the likelihood of stunting in children. Furthermore, families with inadequate resources also exhibit a considerable probability. The probability of stunting is 0.2 times greater for children residing in poor households than those living in non-poor households.

In essence, the results of the analysis based on the overall model align with those of several studies, including those by Best et al. (2008), Best et al. (2007), and Wijaya-Erhardt (2019) which indicates that smoking has a significant impact on child nutrition issues, particularly stunting. Households with low incomes that consume tobacco or cigarettes will allocate funds from their budget for cigarette expenditure, which will result in a reduction in spending on food and other essentials. In contrast, this does not occur in households with higher incomes, where the budget is sufficient to fulfill daily needs. Therefore, cigarette expenditure does not affect food expenditure.

Conclusion

The findings of the research and analysis conducted on the discussion indicate that there is a positive correlation between parental smoking and an increased probability of stunting in children. The evidence suggests that children whose parents smoke are at a greater risk of being stunted than children whose parents do not smoke.

The stunting status of children is negatively affected by the genetic factor of parental height. The probability of a child being stunted correlates with the parents' height. This is because children's posture is typically genetically aligned with their parents. Sanitation can be used to indicate the environmental conditions in the vicinity of the children in question. The presence of optimal sanitation conditions can positively influence children's health outcomes, reducing the likelihood of stunting due to the maintenance of surrounding environmental conditions and a high level of cleanliness. The economic circumstances of the household can have an impact on the nutritional status of children.

The risk of children experiencing stunting is higher in poor households than in non-poor households, which are better able to fulfill their food and non-food needs. While maternal

education and breastfeeding have been identified as potential protective factors against stunting, the observed associations were not statistically significant. In light of these findings, it is recommended that intervention be considered concerning programs designed to reduce the prevalence of smoking. Potential strategies for achieving this goal include limiting production, implementing a comprehensive ban on advertising, and introducing a smoking ban policy in all schools, offices, and public spaces such as restaurants and shopping centers.

In subsequent studies, researchers are anticipated to investigate factors that have the potential to moderate (strengthen or weaken) or mediate (elucidate the underlying mechanism) the association between parental cigarette consumption and outcomes in children, including socio-economic status, parenting, social support, and genetic factors.

References

Alderman, H., & Headey, D. D. (2017). How Important is Parental Education for Child Nutrition? *World Development*, *94*, 448–464. https://doi.org/10.1016/j.worlddev.2017.02.007

Astuti, D. D., Handayani, T. W., & Astuti, D. P. (2020). Cigarette smoke exposure and increased risks of stunting among under-five children. *Clinical Epidemiology and Global Health*, *8*(3), 943-948. https://doi.org/10.1016/j.cegh.2020.02.029

Bella, A., Dartanto, T., Nurshadrina, D. S., Kusnadi, G., Moeis, F. R., Nurhasana, R., Satrya, A., & Thabrany, H. (2023). Do parental Smoking Behaviors Affect Children's Thinness, Stunting, and Overweight Status in Indonesia? Evidence from a Large-Scale Longitudinal Survey. *Journal of Family and Economic Issues*, *44*(3), 714-726. https://doi.org/10.1007/s10834-022-09864-x

Best, C. M., Sun, K., de Pee, S., Sari, M., Bloem, M. W., & Semba, R. D. (2008). Paternal Smoking and Increased Risk of Child Malnutrition among Families in Rural Indonesia. *Tobacco Control*, *17*(1), 38–45. https://doi.org/10.1136/tc.2007.020875

Bove, I., Campoy, C., Uauy, R., & Miranda, T. (2014). Smoking during Pregnancy: A Risk Factor for Stunting and Anemia in Infancy. *International Journal of School and Cognitive Psychology*, *1*(3), 1–5. https://doi.org/10.4172/2469-9837.1000109

Dartanto, T., Moeis, F. R., Nurhasana, R., Satrya, A., Thabrany, H. (2018). Parent smoking behavior and children's future development: evidence from Indonesia Family Life Survey (IFLS). *Tobacco Induced Diseases*, 16(3), 78. https://doi.org/10.18332/tid/94561

Egger, S., Watts, C., Dessaix, A., Brooks, A., Jenkinson, E., Grogan, P., & Freeman, B. (2023). Parent's awareness of, and influence on, their 14–17-year-old child's vaping and smoking behaviours; an analysis of 3242 parent–child pairs in Australia. *Addictive Behaviors*, *150*, 107931. https://doi.org/10.1016/j.addbeh.2023.107931

Goyal, N., & Canning, D. (2018). Exposure to ambient fine particulate air pollution in utero as a risk factor for child stunting in Bangladesh. *International journal of environmental research and public health*, *15*(1), 22. https://doi.org/10.3390/ijerph15010022

Kyu, H. H., Georgiades, K., & Boyle, M. H. (2009). Maternal Smoking, Biofuel Smoke Exposure and Child Height-for-Age in Seven Developing Countries. *International Journal of Epidemiology*, *38*, 1342–1350. https://doi.org/10.1093/ije/dyp253

Malinda, R., Sudaryati, E., & Aritonang, E. (2020). Stunting and Household Food Expenditures Among Junior High School Students from Smoker and Non-Smoker

Famillies. *International Journal of Public Health and Clinical Sciences*, *7*(3), 42-49. https://doi.org/10.32827/ijphcs.7.3.42

Mishra, V., & Retherford, R. D. (2007). Does Biofuel Smoke Contribute to Anaemia and Stunting in Early Childhood ? *International Journal of Epidemiology*, *36*, 117–129. https://doi.org/10.1093/ije/dyl234

Nabi-Burza, E., Regan, S., Walters, B. H., Drehmer, J. E., Rigotti, N. A., Ossip, D. J., ... & Winickoff, J. P. (2019). Parental dual use of e-cigarettes and traditional cigarettes. *Academic pediatrics*, *19*(7), 842-848. https://doi.org/10.1016/j.acap.2019.04.001

Rahmiwati, A., Karlinda, K., Hasyim, H., & Febriyansyah, F. (2024). Passive Smoking and Its Correlation with Stunting in Children: A Systematic Review. *Kesmas*, *19*(5), 97-104. https://doi.org/10.21109/kesmas.v19isp1.1201

Rivansyah, A. A., Triyani, A., & Minarsi, M. (2024). Analysis of the causes of compulsive smoking behavior among adolescents in South Sumatra. *Edusoshum: Journal of Islamic Education and Social Humanities*, *4*(3), 241-252. https://doi.org/10.52366/edusoshum.v4i3.115

Sajjadi, H., Shushtari, Z. J., Mahboubi, S., Rafiey, H., & Salimi, Y. (2018). Effect of socio-economic status, family smoking and mental health through social network on the substance use potential in adolescents: a mediation analysis. *Public Health*, *157*, 14–19. https://doi.org/10.1016/j.puhe.2018.01.004

Semba, R. D., Kalm, L. M., De Pee, S., Ricks, M. O., Sari, M., & Bloem, M. W. (2007). Paternal smoking is associated with increased risk of child malnutrition among poor urban families in Indonesia. *Public health nutrition*, *10*(1), 7-15. Semba, R. D., Kalm, L. M., Pee, S. de, Ricks, M. O., Sari, M., & Bloem, M. W. (2007). https://doi.org/10.1017/S136898000722292X

Shah, S., Kanaan, M., Huque, R., Sheikh, A., Dogar, O., Thomson, H., ... & Siddiqi, K. (2019). Secondhand smoke exposure in primary school children: a survey in Dhaka, Bangladesh. *Nicotine and tobacco research*, *21*(4), 416-423. https://doi.org/10.1093/ntr/ntx248

Strauss, J., Witoelar, F., & Sikoki, B. (2014). *The Fifth Wave of the Indonesia Family Life Survey (IFLS): Overview and Field Report*.

UNICEF. (2015). *UNICEF's Approach to Scaling Up Nutrition: For Mothers and Their Children*.

UNICEF. (2019). *Children, food and nutrition: Growing well in a changing world*. www.unicef.org/sowc

Wijaya-Erhardt, M. (2019). Nutritional status of Indonesian children in low-income households with fathers that smoke. *Osong Public Health and Research Perspectives*, *10*(2), 64–71. https://doi.org/10.24171/j.phrp.2019.10.2.04

Yang, Z., & Schaninger, C. M. (2010). The impact of parenting strategies on child smoking behavior: The role of child self-esteem trajectory. *Journal of Public Policy and Marketing*, *29*(2), 232-247. https://doi.org/10.1509/jppm.29.2.232