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THE RELATIONSHIP BETWEEN SOCIO-ECONOMIC AND MEDIA LITERACY LEVELS WITH THE LEVEL OF PARENT PARTICIPATION IN PREVENTING STUNTING IN RURAL AREAS

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ABSTRACT
This article examines the relationship between two variables: socioeconomic level and media literacy (variable X) and parental participation in stunting prevention (variable Y) in Indonesia. Socioeconomic level has long been considered the most dominant factor influencing the risk of stunting in children. This study introduces an additional variable, media literacy, hypothesizing that it may also impact parental participation in preventing stunting in children. The study employs a quantitative explanatory method using Kendall's rank correlation test. The population consists of parents with children under five years old. Sampling was conducted in two stages. First, the sample size was calculated based on the total population across eight Pre- and Postnatal Healthcare Information Centres (Posyandu) with a 5% margin of error. Second, the sample size obtained was distributed proportionally among each Posyandu using simple random sampling. The results show no significant relationship between socioeconomic level and parental participation in stunting prevention, with a significance level of 0.25. However, a relationship was found between media literacy and parental participation in stunting prevention, with a significance level of 0.023 and a very weak correlation coefficient of 0.109 (or 11%). This suggests that higher media literacy among parents has the potential to increase their participation in stunting prevention, albeit the relationship is very weak. This may be because parents do not directly use social media to obtain stunting information but rather for other purposes, such as entertainment or accessing nutritious recipes for children. Additionally, parents may receive stunting information from other sources, including stunting education provided by Posyandu cadres, village midwives, doctors, and nutrition consultants from local health centres.

Key words: stunting; socioeconomic level; media literacy; participation level

HUBUNGAN TINGKAT SOSIAL EKONOMI DAN TINGKAT LITERASI MEDIA DENGAN TINGKAT PARTISIPASI ORANG TUA DALAM PENCEGAHAN STUNTING DI DAERAH PEDESAAN

ABSTRAK
Artikel ini bertujuan untuk menguji hubungan dari dua variabel: tingkat sosial ekonomi dan tingkat literasi media (variabel X) dan tingkat partisipasi orang tua dalam pencegahan stunting (variabel Y) di Indonesia. Tingkat sosial ekonomi selama ini dipahami menjadi faktor paling dominan yang menyebabkan resiko anak terkena stunting. Penelitian ini menambahkan variabel lain yaitu tingkat literasi media yang diduga juga mempengaruhi tingkat partisipasi orang tua dalam pencegahan stunting pada anak. Penelitian ini menggunakan metode kuantitatif eksplanatif dengan menggunakan uji korelasi rank kendall. Populasi penelitian ini adalah orang tua yang memiliki anak di bawah lima tahun (balita). Pengambilan sampel dilakukan melalui dua tahap. Pertama, ukuran sampel dihitung berdasarkan total populasi di delapan Posyandu dengan angka kesalahan 5%. Kedua, ukuran sampel yang sudah didapatkan dari tahap pertama kemudian diambil secara proporsional dari setiap posyandu dengan teknik simple random sampling. Hasil penelitian menunjukkan tidak ada hubungan antara tingkat sosial ekonomi dan tingkat partisipasi orang tua dalam pencegahan stunting dengan angka signifikasi 0,25. Namun, ditemukan adanya hubungan antara tingkat literasi media dan tingkat partisipasi orang tua dalam pencegahan stunting dengan angka signifikasi 0,023 dan koefiensi korelasi sangat lemah sebesar 0,109 atau hanya 11%. Hal ini berarti bahwa semakin tinggi tingkat literasi media orang tua berpotensi meningkatkan partisipasi mereka dalam pencegahan stunting, meskipun hubungannya sangat lemah. Hal ini terjadi karena orang tua tidak menggunakan media sosial secara langsung untuk mendapatkan informasi tentang stunting, tetapi untuk keperluan lain misalnya sebagai media hiburan dan mengakses informasi resep makanan bergizi untuk anak. Selain itu, orang tua mendapatkan informasi stunting dari sumber lain diantaranya adalah penyuluhan stunting yang diberikan para kader posyandu, bidan desa, dokter dan konsultan gizi dari Puskesmas. Selain itu, orang tua juga mendapatkan informasi tentang stunting tidak hanya media tetapi juga dari sumber lain diantaranya adalah kader posyandu, bidan desa, dokter dan konsultan gizi dari Puskesmas.

Kata Kunci: stunting; tingkat sosial ekonomi; literasi media; tingkat partisipasi.

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INTRODUCTION

Stunting remains one of the major issues affecting children in Indonesia, requiring urgent intervention. Currently, it is estimated that 37% of children under five in Indonesia experience stunting. Stunting can affect children in the long term, particularly in relation to their physical and cognitive development (Beal et al., 2018; Mediani, 2020). Although several interventions have been implemented to prevent stunting, such as nutritional improvements and healthcare services, numerous studies have been conducted to identify the causes, risk factors, and strategies to address it (Permatasari, M.Kes. et al., 2022; Suratri et al., 2023). Several studies indicate that low socioeconomic level in families is a primary risk factor for stunting (Binagwaho et al., 2020; McDonald et al., 2012; Phengxay et al., 2007; Ponum et al., 2020; Singh et al., 2009). Additionally, a mother's knowledge of nutrition and feeding practices for sick children has been identified as a factor impacting child health, particularly in relation to stunting and underweight issues (Labadarios et al., 2005; Phengxay et al., 2007). Moreover, a study in Mexico found that low maternal education is associated with an increased risk of children having stunted growth (Binagwaho et al., 2020). In Pakistan, maternal education also affects stunting, yet there has been minimal effort from government programs to educate mothers on stunting and maternal and child nutrition (Ponum et al., 2020). A study in Nigeria revealed that maternal education and media exposure are positively associated with child immunization (Balogun et al., 2017; Smith-Greenaway, 2013). Greenaway (2013) also demonstrated that mothers' literacy skills strengthen the connection between maternal education and infant mortality reduction. These studies indicate that several factors, such as socioeconomic level and parental education, are associated with the prevalence of stunting in children.

Several studies have identified low socioeconomic level in families as a risk factor for stunting. Socioeconomic level refers to an individual's or family's social and economic position within society, determined by factors such as income and occupation (Susilowati & Karyadi, 2002). Socioeconomic level is viewed as a measure of an individual's or family's access to resources and opportunities, which can significantly impact their health and well-being (Binagwaho et al., 2020). Therefore, in cases of stunting, improving socioeconomic level may play a vital role in reducing stunting prevalence among children.

Several studies indicate that higher parental education, particularly among mothers, is associated with better child health outcomes, including lower risks of childhood stunting, underweight, and wasting (Ayine et al., 2020; Vollmer et al., 2017). Additionally, maternal education has been identified as a significant variable in early caregiving, marking differences in maternal behaviours (Mayes & Bornstein, 1995). Parental education is also linked to child ADHD, depression, and academic challenges (Torvik et al., 2020). Furthermore, maternal education can influence parenting practices, such as dietary patterns, impacting childhood obesity (Ayine et al., 2020). Thus, parental and maternal education is viewed as an essential factor affecting child development and health, potentially enhancing child well-being. Educational levels may include literacy rates, highest education completed, and participation in formal schooling.

This study further develops previous research by adding factor or variable believed to influence parental participation in stunting prevention: media literacy. Media literacy has been defined and developed in various ways, one of which describes it as the 'ability to access, analyze, evaluate, and create media for specific purposes' (Aufderheide & Firestone, 1992). Another definition describes media literacy as the ability to access, analyze, and evaluate messages and information transmitted by media (Chaleshgar-Kordasiabi et al., 2023). Media literacy is crucial in the digital era, where the spread of misinformation in traditional and social media has increased significantly (Mrisho & Dominic, 2023). Media literacy promotes critical thinking skills, enabling individuals to make independent choices, particularly in evaluating and selecting information sources and channels, as well as interpreting news and information received through these channels (Mrisho & Dominic, 2023). Media literacy is seen as a set of perspectives that people use to actively engage with media to interpret the meaning of the messages they encounter (Saleh, 2022). It emphasizes active participation in media consumption, including the ability to create media messages and the dissemination processes through

which these messages are shared. Media literacy involves more than merely reading individual media messages; it also includes creating informational messages (Saleh, 2022).

In relation to this study, media literacy refers to the capacity of individuals or parents to actively engage in accessing, analyzing, evaluating, and producing media to prevent stunting in children. Media literacy can play a critical role in family participation in stunting prevention (Balogun et al., 2017; Smith-Greenaway, 2013). This involves how families evaluate sources, interpret media information, and select relevant media content related to child health and well-being. The enhancement of individual participation aligns with the goals of media literacy, which are to promote "(1) democracy, active participation, and citizenship, as media-literate societies are better equipped to support an informative, critical, and inclusive public sphere; (2) knowledge of the economy, competitiveness, and informed consumer choice, as market economies grow rapidly through diverse and complex forms of information; media literacy supports innovation and creativity, and maintains consumers' ability to make informed choices; and (3) lifelong learning, cultural expression, and fulfilment of personal needs, as a reflective and symbol-rich environment informs and frames significant choices, values, and knowledge in daily life" (Livingstone & van der Graaf, 2010).

Parental participation in stunting prevention is crucial to the success of prevention efforts. Such participation involves actively engaging parents in stunting prevention programs to yield better results (Bukit et al., 2021). This includes expanding parental roles in stunting prevention, such as fathers supporting and providing knowledge to mothers during pregnancy and early childhood (Bukit et al., 2021). Additionally, family support and involvement in fulfilling the nutritional needs of young children can reduce stunting rates (Bukit et al., 2021; Fajaria et al., 2022).

Thus, participation refers to the roles of both fathers and mothers in stunting prevention programs through support, communication, and involvement in activities that include:

1. Ensuring their children receive optimal nutrition;
2. Participating in regular health monitoring for their children, including immunizations, growth monitoring, and early detection and treatment of infections and diseases;
3. Involvement in providing access to clean water, adequate sanitation, and good hygiene practices;
4. Promoting positive social interactions and providing a safe and secure environment;
5. Contributing to their communities by promoting stunting prevention practices and advocating for policies and programs that support child health and nutrition

Parental involvement in stunting prevention underscores the importance of engaging parents as active partners in efforts to improve child health and nutrition within families and communities. One strategy to increase parental participation in stunting prevention is to enhance parental media literacy. To support this strategy, this study hypothesizes (H1) that a relationship exists between socioeconomic level and media literacy with parental participation in stunting prevention.

This research was conducted in Batu City for several reasons. Annual reports indicate that stunting prevalence in Batu City increased from 15% in 2021 to 25.2% in 2022 (BKKBN Jatim, 2023). This report indicates a 10.2% rise in stunting rates within a year, making this city the third-highest in stunting rate increases after Ngawi (12.2%) and Jember (11%).

METHOD

This study uses an explanatory quantitative method with Kendall's rank correlation test. This approach is chosen due to the pressing need for traditional surveys and quantitative testing in research (Creswell, 2014). This method examines the relationship between socioeconomic level and media literacy level with parental participation in stunting prevention. The data in this study are measured on an ordinal scale.

The study was conducted in several stages. The first stage involved gathering secondary data to create a research data bank. Secondary data were obtained from documents relevant to the study, such as reference books, related journals, online news sources, newspapers, and other important reports (Creswell, 2014). Using secondary data is valuable for establishing a research knowledge base on the development of the phenomenon being studied. Additionally, this secondary data served as a foundation for designing the questionnaire used in subsequent research stages. It includes three variables consisting of socio-economic level (X1) and media literacy level (X2), as well as a dependent variable (Y) that measures the level of parent participation in preventing stunting. The

measurement of socio-economic level is based on the poor household concept of Susilowati & Karyadi (2002). Media literacy is defined according to the individual competence framework, which encompasses personal and social competences as outlined by the European Commission (2009). The level of parent participation is based on the national strategy established under Presidential Decree (Peraturan Presiden/Perpres) No. 72 of 2021 concerning the Accelerating Reduction of Stunting Prevalence. The compilation of the questionnaire in this study is adjusted to meet research needs and field conditions.

The operational definitions of variables in this study are presented in Table 1.

Table 1. Operational Definitions of Variables

Variable	Indicator	Topic Questioned
Socioeconomic Level (X1)	Income	Number of family members with permanent employment, total family income, type of family members' jobs, and total working hours.
	Expenditure	Total family expenditure and the largest expenditure type.
	Asset Ownership	Ownership of residence, farmland, livestock, transportation facilities, water source, and type of electricity supply.
	Education	Last education level of the husband, last education level of the wife, and number of illiterate adults.
	Health Insurance	Health insurance ownership and type of health insurance held.
Media Literacy Level(X2)	Computer and Internet Skills	Ability to use mobile phones, laptops/computers, and the internet.
	Balanced and Active Use of Media	Ability to limit internet usage time, daily internet usage intensity, and most frequently sought information type.
	Advanced Internet Use	Use of social media and browsing applications for seeking beneficial information, use of shopping and transportation apps for needs fulfilment
	Understanding Media Content and Its Functioning	Ability to identify fake information; ability to understand and analyze information on social media and electronic mass media; ability to share information on social media; and ability to understand content control features.
	Knowledge about Media and Media Regulations	Ability to understand the function of each media, ability to find reliable information, attitude regarding the importance of understanding the Electronic Information and Transactions Law (UU ITE) for internet users, understanding of the existence and content of the UU ITE.
	User Behavior	User behaviour in expressing opinions, reposting others' work, avoiding spreading sensitive/fake/slanderous information, analyzing information before sharing with others, using media information to improve users' thinking and behaviour, and the ability to avoid being easily provoked by fake news.
	Social Relations	Use of commenting and chatting features on social media, ability to share information obtained from social media and electronic mass media with others, and ability to maintain behaviour and etiquette when interacting with others on social media.
	Citizen Participation	Participation in sharing documentation of community activities, beneficial information, and constructive criticism on social media.
	Content Creation	Ability to create media content, interest in creating media content, and frequency of uploading media content.
Stunting Prevention Participation Level (Y)	Nutritional Fulfillment for Pregnant Women	Frequency of consumption of protein-rich foods, nutritious foods containing iron and folic acid, iodine-rich foods, and iron supplements for pregnant women.
	Disease Prevention for Pregnant Women	Routine pregnancy check-ups and exercise frequency.
	Child Nutrition Fulfillment	Consumption by the child of exclusive breastfeeding, continued breastfeeding until age 2, solid foods after 6 months, zinc and vitamin-mineral supplements, protein-rich and nutritious foods containing iron after 6 months old.
	Child Disease Prevention	Early detection of child allergies, administration of deworming medication every six months, child immunizations, ensuring the child eats independently and regularly, ensuring the child has a balanced diet, providing nutritious snacks, and controlling unhealthy snacks (e.g., high sugar and MSG).
	Sanitation	Ensuring good quality of sanitation facilities and drinking water sources, ensuring the cleanliness of the home environment, ensuring pregnant women and children maintain hygiene, and ensuring they are not exposed to cigarette smoke.
	Participation in Community Stunting Prevention Programs	Frequency of visiting Pre- and Postnatal Healthcare Information Centre (henceforth referred to as *Posyandu*) to monitor child growth (especially weight and height), practising family planning after childbirth, actively participating in outreach programs and consultation activities on maternal and child health, and contributing to spreading information on stunting prevention.

Source: Research data processed by the researcher, 2023

The second stage, as previously explained, involves using a quantitative method for this study. In this stage, the research collects quantitative data through questionnaires directed at parents of children under five years old in Sidomulyo village. The quantitative data collected includes:

1. Socioeconomic level data of parents with young children in Sidomulyo Village.
2. Media literacy level data of parents with young children in Sidomulyo Village.
3. Data on parental participation in stunting prevention among young children in Sidomulyo Village.

The study's population comprises all parents with children under five. This population selection is based on several reasons. First, young children are an age group that still requires supervision and services from *Posyandu*. Second, information from *Posyandu* cadres indicates that children over two years old still experience stunting. Third, parents with young children often have other children of similar ages. This population data was obtained from eight *Posyandu* in Sidomulyo Village: *Posyandu* Dahlia 1, Dahlia 2, Dahlia 3, Dahlia 4, Nusa Indah 1, Nusa Indah 2, Mawar 1, and Mawar 2. Using a simple random sampling technique, data were proportionally collected from each *Posyandu* in August 2023, applying the Taro Yamane formula with a 5% margin of error and a total population of 498 individuals.

The calculation results proportionally obtain 222 samples from 8 Posyandu as follows;

Table 2. Sample Distribution from each Posyandu

No	Posyandu	Population Quantity	Sample Quantity
1	Dahlia 1	25	11
2	Dahlia 2	74	33
3	Dahlia 3	66	29
4	Dahlia 4	55	25
5	Nusa Indah 1	55	25
6	Nusa Indah 2	75	33
7	Mawar 1	72	32
8	Mawar 2	76	34
	Total	498	222

Source: Processed data from Posyandu

Data was collected using structured interviews, observation, and document review. Structured interviews were conducted with all respondents using a questionnaire. Additionally, unstructured interviews were randomly conducted with some respondents to obtain supplementary data and enhance the quantitative data collected from the questionnaire. Documents were also gathered, including government policies on stunting, stunting rates in Indonesia, documents from *Posyandu* on stunting rates and population demographics, and related research journals. Observations were conducted to directly assess parents' economic conditions, such as by examining housing conditions and environmental sanitation. Observations took place during unstructured interviews with respondents.

The third stage involved processing and analyzing the quantitative data. Data processing and analysis were conducted using Statistical Package for Social Sciences (SPSS) version 25.0 for Windows. Before data processing and analysis, responses from the questionnaire were scored, with higher values assigned to positive answers. Quantitative data processing involved creating descriptive and crosstabulation tables to support the quantitative analysis. Quantitative data analysis was conducted using Kendall's rank correlation test with an alpha level of 5% or 0.05. The hypotheses for this study are as follows;

H0a: There is no relationship between socioeconomic level and parental participation in stunting prevention.

H1a: There is a relationship between socioeconomic level and parental participation in stunting prevention.

H0b: There is no relationship between media literacy and parental participation in stunting prevention

H0b: There is a relationship between media literacy and parental participation in stunting prevention

This study was conducted in Sidomulyo Village, Batu District, Batu City, based on several considerations. First, BKKBN data from Batu City indicates that Sidomulyo Village currently has a stunting risk rate of 15% for females and 18.5% for males. Additionally, Batu City was identified in the year-end report as one of the three cities with the highest increase in stunting prevalence, rising from 15% in 2021 to 25.2% in 2022. Second, Batu City is known as "De Klein Switzerland" because it is situated at an altitude of 680-1200 meters above sea level, nestled between three mountains: Mount Panderman, Mount Arjuna, and Mount Welirang. Its mountainous and hilly topography, with an average temperature of 15-19 degrees Celsius, creates an exceptional potential for natural resources. This potential has made Batu City a popular tourist destination in East Java. Most residents work as fruit, flower, and vegetable farmers or as dairy cattle farmers. Specifically, Sidomulyo Village serves as a hub for ornamental plants and flowers, making it a tourist attraction in Batu City (PPID, 2019). This economic potential in Batu City, stemming from agriculture, livestock, and tourism, should theoretically enhance residents' income. However, this contrasts with the rising prevalence of stunting in the area. Therefore, this study seeks to examine whether the increase in residents' economic level

impacts the stunting conditions among young children in Batu City.

RESULTS AND DISCUSSION

Characteristics of Respondents

The research results indicate several characteristics of the respondents, including gender, age, education, and occupation. The majority of respondents interviewed were women, with 199 women (90%) compared to only 23 men (10%). Most respondents were mothers of young children, primarily housewives, while fathers typically worked outside the home.

The largest proportion of respondents were housewives, accounting for 61.7%. Other respondents worked as farmers/livestock keepers (9.9%), self-employed (8.1%), traders (7.2%), private employees (3.6%), civil servants (2.3%), and in other occupations (5%). Most residents in Sidomulyo Village are flower farmers. Although housewives, the mothers in Sidomulyo Village also help their husbands or parents tend to flower crops in the fields. When needed, they usually leave their young children with their parents, as explained by one respondent:

> *"...sometimes I also have to go to the fields to help my husband... I end up leaving my child with my mother... if he cries, she gives him water first because I haven't returned to breastfeed"* (Dian, one of the respondents with a stunted young child)

The interview above shows that, in addition to caring for their children and families, housewives in Sidomulyo also help with the flower fields. The study results indicate that the respondents are generally still of productive age, with 35% aged 27–35 years and 23.9% aged 33–38 years, as illustrated in Diagram 1 below:

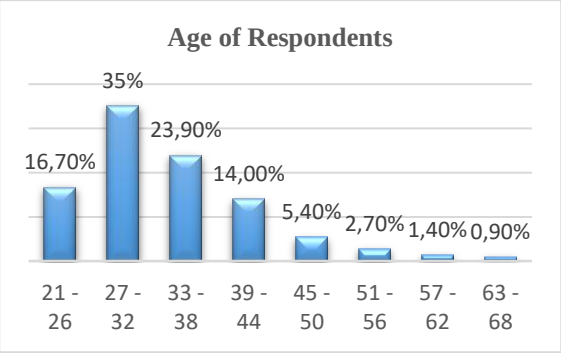

Diagram 1: Age of Respondents

In the productive age group, their education level is considered moderate, with most having completed junior high school (21.2%) and senior high school (46.8%), as shown in Diagram 2:

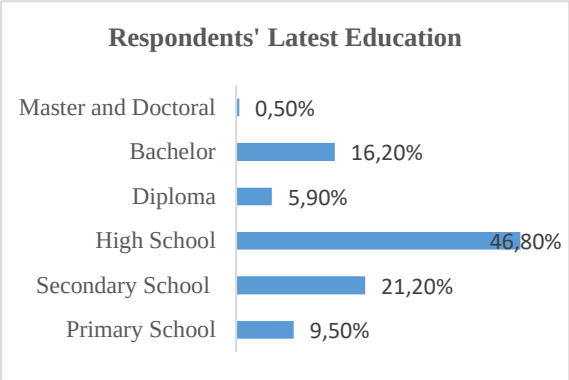

Diagram 2. Latest Education

Although most of them have a moderate level of education, the majority choose to return to their family's fields or help grow flowers, which is a profitable and prominent commodity in Batu City.

Socioeconomic Level of the Parents

The parental socioeconomic level and media literacy variables in this study serve as independent variables (X) or influencing factors. These variables are measured through six indicators: income, expenditure, asset ownership, health insurance ownership, and education. Socioeconomic level can impact access to resources and knowledge on stunting prevention. It is considered a measure of an individual's or family's access to resources and opportunities, which can significantly affect their health and well-being (Binagwaho et al., 2020). In stunting cases, therefore, improved socioeconomic level is thought to play a critical role in reducing stunting prevalence in children.

The socioeconomic levels of parents in Sidomulyo Village are divided into three categories: low, moderate, and high. According to the study results, the majority of parents of young children fall into the moderate socioeconomic category, with 68.9% or 153 respondents. In contrast, 30.62%, or 68 respondents, are in the low category, and only 0.5%, or one respondent, is in the high category.

The findings indicate that most respondents have a moderate socioeconomic level and fairly adequate socioeconomic conditions. The study assessed respondents' economic conditions based on income, expenditure, and asset ownership. The primary income of most husbands is relatively low; however, wives and other family members within the same household, such as children and grandparents, also contribute financially to help meet the family's needs. Among the husbands, 36% (80 individuals) earn between 1–2 million rupiahs monthly, and 29.7% (66 individuals) earn between 2–3 million rupiahs monthly. Only 4.5% (10 individuals) of husbands earn over 5 million rupiahs per month. Among the 42.3% of wives who have an income, 15.3% (34 individuals) earn 1 million rupiahs or less per month, while only 0.5% (1 individual) earns over 5 million rupiahs per month. Additionally, 46.8% of respondents have other family members working in

the same household, with a total income ranging from 2–3 million rupiahs per month (15.3% or 34 individuals). The largest proportion, 89 individuals (40.1%), earn their income from agriculture and livestock farming, primarily through flower cultivation.

Most of them manage agricultural land of various sizes for flower farming, with some land rented out. Others grow flowers in pots at home, including varieties such as orchids, cacti, and aglaonema. The flowers are sold directly to consumers visiting their homes or occasionally to suppliers or distributors in Batu City. The types of livestock raised include cows, chickens, and goats. With moderate education levels, respondents (18% or 40 individuals) also have a higher likelihood of working in the private sector, such as in minimarkets or malls.

The research results indicate that husbands typically serve as the primary breadwinners by working as farmers for their families. Most wives in Sidomulyo Village are housewives (67.6% or 150 individuals). The majority of the village population still views women working as housewives and caring for children as the accepted norm. This leaves other occupations as self-employed (8.1%), traders (7.2%), private sector employees (4.1%), farmers/livestock keepers (3.6%), civil servants (3.2%), teachers (2.7%), labourers (0.5%), and others (3.2%).

Social conditions can be assessed through education and health insurance. The largest proportion of husbands, comprising 47.7% or 106 individuals and wives (48.6% or 108 individuals) have adequate education, with a high school diploma or equivalent. This indicates that most have met the government's 12-year compulsory education requirement. A small percentage of husbands (0.5% or one individual) have never received formal education, and none hold a postgraduate degree. In contrast, all wives have received formal education, with a small number (1.4% or three individuals) having completed postgraduate studies. Additionally, 6.8% (15 respondents) have adult family members (aged 17 and above) in the household who are illiterate. These illiterate family members are typically the grandparents of young children who also help in childcare.

Health insurance ownership among respondents and their families is fairly high, with 52.3% or 166 respondents covered by BPJS Kesehatan PBI—a government-subsidized health insurance plan. Other types of health insurance respondents hold include BPJS Kesehatan Mandiri (27.9%) and private health insurance (2.3%). Some respondents also have dual coverage, with BPJS Mandiri and private insurance (3.6%). However, 14% or 31 respondents do not have health insurance. Reasons for lacking insurance include an inability to pay premiums, inactive insurance due to removal from PBI level or premium arrears, fear of underuse, not expecting illness, feeling they do not need it yet, and the perception that the members of BPJS Kesehatan are not prioritized for hospital services.

Media Literacy Level

Several studies highlight the potential of social media in promoting health education and physical activities, effectively used to disseminate knowledge and raise awareness about disease prevention. These studies include the role of Facebook as a platform for disseminating knowledge on hypertension (Spronck et al., 2018) and enhancing fitness functions for adult physical well-being (Chang et al., 2021). Other social media platforms used for health information dissemination include WeChat, which educates the elderly on fall prevention at home (Ye et al., 2022) and shares health information during the COVID-19 pandemic (Chai, 2022) and TikTok, which offers education on dermatology issues (Kassamali et al., 2021) and improves muscle function in older adults at risk of sarcopenia (Shi et al., 2024).

Based on these previous studies, this research hypothesizes that respondents' use of social media may influence their participation in stunting prevention. The results show that the media literacy level among the majority of parents with young children in Sidomulyo Village is moderate (60.8% or 135 individuals), followed by high (37.4% or 83 individuals) and low (1.8% or four individuals). Indicators to measure parental media literacy include computer and internet skills, balanced and active media use, advanced internet usage, understanding media content and its functioning, knowledge of media and media regulations, user behavior, social relations, citizen participation, and content creation. The findings indicate that most respondents are proficient in using gadgets and social media and actively use these skills to access information and interact with other social media users. Regarding their ability to use social media applications, 50% of respondents agreed, while 45% strongly agreed, 3.6% disagreed, and 1.4% strongly disagreed. These results are similar to respondents' responses about using the internet to search for information via web browsers, with 50.9% agreeing, 39.6% strongly agreeing, 5.9% disagreeing, and 3.6% strongly disagreeing.

Most respondents could also identify whether the information they received was trustworthy or fake. This is evident from the responses: 53.6% agreed, 34.7% strongly agreed, 10.4% disagreed, and 3% strongly disagreed. Additionally, the majority of respondents could understand and analyze the content of messages they saw on social media, with 55% agreeing, 35.1% strongly agreeing, 8.6% disagreeing, and 1.4% strongly disagreeing.

However, some respondents lacked an understanding of media regulations and were not actively involved in social participation or content creation. Regarding understanding the Electronic Information and Transactions Law (UU ITE), 50% stated they did not understand, while 16.2% strongly

disagreed, 28.8% understood, and 5% strongly understood. This is likely because most respondents have never sought information related to the UU ITE. In terms of engagement in commenting or critiquing information they received, 54.1% of respondents disagreed, while 23.4% strongly disagreed, 16.2% agreed, and 6.3% strongly agreed. Regarding participation in creating media content on social media, 43.7% of respondents disagreed, while 29.7% agreed, 13.1% strongly agreed, and 13.5% strongly disagreed. Most respondents who do not upload content on their social media accounts cite a lack of interest and content creation skills.

Participation Level

The level of parental participation in stunting prevention efforts is the dependent variable (Y) in this study. To measure participation levels, this study uses seven indicators: nutrition fulfilment for pregnant women, disease prevention for pregnant women, child nutrition fulfilment, child disease prevention, sanitation, and involvement in community stunting prevention programs. The results indicate that the majority of parental participation in stunting prevention is high, with a percentage of 93.7% (208 respondents), while the remaining 6.3% (14 respondents) fall into the moderate category.

The findings show that nearly all question items in variable Y received positive (yes) responses, with percentages exceeding 60% and some even above 90%. For the question on whether pregnant women routinely consume protein-rich foods, 97.3% responded yes, and only 2.3% responded no. Regarding whether the child received exclusive breastfeeding, 80.6% answered yes, while 19.4% answered no. Reasons for not providing exclusive breastfeeding included the mother's inability to produce milk or needing to return to work, thus replacing breastfeeding with formula. Regarding whether children regularly consume protein-rich foods after six months of age, 94.1% answered yes, and 5.9% answered no. Children who do not consume protein-rich foods regularly often have parents with a permissive parenting style, allowing the child to eat according to personal preference. The findings also indicate that all respondents have access to good quality sanitation and clean water facilities: 94.1% obtain water from HIPPAM[1], 4.1% from PDAM[2], and 1.8% from groundwater.

Although overall participation in stunting prevention is high, participation remains low in the indicator concerning community involvement in stunting prevention. Specifically, 84.2% of respondents reported not participating in disseminating stunting information, while only 15.8% reported doing so. Most respondents felt that disseminating stunting information was the responsibility of authorities such as healthcare workers, *Posyandu* cadres, and other officials. However, active parental involvement is essential for more effective prevention and reduction of stunting rates.

Relationship between Socioeconomic Level and Parental Participation Level in Stunting Prevention

Table 3. Relationship between Socioeconomic Level (X1) and Parental Participation Level in Stunting Prevention (Y)

			Variable X1	Variable Y
Kendall's tau_b	Variable X1	Correlation Coefficient	1.000	0.055
		Sig. (2-tailed)		0.254
		N	222	222
	Variable Y	Correlation Coefficient	0.055	1.000
		Sig. (2-tailed)	0.254	
		N	222	222

Source: processed data generated from SPSS, 2024

Table 3 shows the results of Kendall's rank correlation test between variables X1 (socioeconomic level) and Y (parental participation in stunting prevention), with a correlation coefficient of 0.055 and a significance level of 0.254. This study uses an alpha level of 5% (0.05), so it can be concluded that H1a is rejected and H0a is accepted. This indicates no relationship between socioeconomic level and parental participation in stunting prevention. This finding differs from other studies that found a relationship between family income and parents' consideration in meeting children's nutritional needs (Aini et al., 2022; Beal et al., 2018; Kim et al., 2017; Mbabazi et al., 2024; Quamme & Iversen, 2022; Utumatwishima et al., 2024). In contrast, this study shows that parental

[1] HIPPAM stands for *Himpunan Penduduk Pemakai Air Minum*, which refers to the community members who use groundwater provided by the government to access clean water.

[2] PDAM stands for Perusahaan Daerah Air Minum, which refers to a drinking water company owned by the local government that distributes clean water to the community.

income levels are not linked to an improvement in the quality of nutrition in the food consumed by the family. Previous studies with similar results support this finding, indicating no relationship between economic factors and the risk of or occurrence of stunting in children (Ibrahim & Faramita, 2015; Krisnana et al., 2020). Furthermore, another study in Makassar revealed that families with higher incomes tend to purchase less nutritious food, negatively impacting the nutritional level of children (Ibrahim & Faramita, 2015).

Higher income is often assumed to give families the ability to choose preferred foods for family members. However, field data show that the foods chosen or preferred by families may not provide the nutrition needed by children. One informant's explanation supports this:

> *"...parents now have it easy... whatever they want to eat, they just open their phone and order through an app... they're too lazy to cook nutritious food that their child needs…*" (Tuti: village midwife)

> *"...my child loves fried rice... so I just buy it every day from the fried rice vendor who passes by our house every night... as long as the child wants to eat..."* (Dian, a respondent with a stunted young child)

Furthermore, the results indicate that low or limited family income does not necessarily drive parents to prioritize family needs. As expressed by a nutrition consultant from the local health centre:

> "...some parents truly cannot afford to buy nutritious food... but there are also some who could manage but don't prioritize buying nutritious food for their child, instead spending on other things... usually, fathers spend on cigarettes..." (Andi: nutrition consultant from the health centre)

Field findings indicate that respondents not actively engaged in stunting prevention activities do not necessarily belong to a low socioeconomic level; some come from moderate and high socioeconomic levels. This finding supports previous research showing that it is not family income or economic level linked to the risk of stunting in children but rather the low household expenditure on food needs (Fedriansyah et al., 2020). Furthermore, this study also identifies other factors influencing parental participation in stunting prevention, such as motivation, parenting style, and parental diligence in meeting the child's nutritional needs.

Crosstabulation results between total household income and young children's consumption of zinc and mineral supplements reveal a distribution of responses across income levels. Among the 32.9% of respondents whose children do not consume zinc and mineral supplements, 12.2% have a household income of more than 2–4 million rupiahs, 9.5% have 2 million rupiahs or less, 5.4% have income higher than 4–6 million rupiahs, 3.2% earn over 6–8 million rupiahs, 1.4% earn over 8–10 million rupiahs, and 1.4% earn over 10 million rupiahs. Similarly, crosstabulation results between total household income and the frequency of protein consumption for young children also show an even distribution. Among the 5.9% of young children who do not consume protein-rich foods regularly, 2.7% are from families with a total income of more than 2–4 million rupiahs, 1.8% have more than 4–6 million rupiahs, 0.5% have 2 million rupiahs of income or less, 0.5% have more than 6–8 million rupiahs, and 0.5% have more than 10 million rupiahs. Crosstabulation of household income and protein consumption frequency among pregnant mothers yields similar results.

These crosstabulation data indicate that some parents' participation in stunting prevention remains suboptimal, even among those with high incomes. Although these families can afford to buy protein-rich foods, zinc supplements, and mineral vitamins, they do not always do so. This is because some respondents prioritize ensuring their children eat, even if that means giving them foods based on the child's preference without considering nutritional content. Children's preferred foods include instant noodles, fried rice, and meatballs. These processed foods are nutritionally inadequate for children, as other ingredients, such as flour or carbohydrates dilute the protein content. Additionally, field findings show that 0.9% of respondents allocate their primary spending to cigarettes. These respondents are from households with low total expenditures (lower than 1 million rupiahs). This spending choice is concerning, as it could be redirected to prioritize purchasing protein-rich food for young children or pregnant women rather than non-essential items like cigarettes, which can harm family members' health.

Further, crosstabulation results indicate no relationship between parental education levels, whether father or mother and their participation in stunting prevention. Looking at maternal education, for instance, two mothers had middle school and diploma-level education. Data reveal that mothers with lower education levels (middle school) had higher participation rates (19.8%) compared to diploma-educated mothers (6.8%). Similarly, crosstabulation between fathers' education levels and their participation in stunting prevention shows the same pattern. Fathers with middle school education participated more actively in stunting prevention (18%) than those with a bachelor's degree (11.7%). Field observations also support this finding, indicating that parents with lower education levels do not necessarily have stunted children. Conversely, data show that parents with higher education levels, such as a midwife and a village official, sometimes have stunted children.

Previous studies present mixed findings. Some studies report a link between parental education

levels and stunting in children (Mustajab, 2023; Rachman et al., 2021; Scheffler et al., 2021; Setiawan et al., 2018; Soekatri et al., 2020). These findings are based on the assumption that parental education, particularly maternal education, is closely associated with the mother's ability to receive and absorb knowledge or information about nutrition, specifically, stunting (Rahmawati & Agustin, 2020). Parents with higher education are presumed to have higher incomes to meet their children's nutritional needs (Rachman et al., 2021) and adopt more positive attitudes, such as healthier dietary and lifestyle practices, including the consumption of nutritious foods and proper handling of health issues (Setiawan et al., 2018).

However, some studies show differing results, finding no relationship between parental education levels and stunting in children (Mustajab, 2023; Rahmawati & Agustin, 2020; Salsabila et al., 2023). These varied findings may suggest that parental education levels are not directly linked to stunting. Other factors besides parental education may contribute to stunting, such as highly educated mothers working and having to leave their children with caregivers or relatives beyond their direct supervision (Rahmawati & Agustin, 2020). Another factor identified is maternal knowledge about stunting. Studies indicate that a mother's understanding or knowledge of stunting is associated with stunting in young children, and this knowledge level is not necessarily linked to formal education. Instead, it can enhance parents' ability to receive health, nutrition, and stunting knowledge (Anugrahaeni et al., 2022; Fadare O et al., 2019). Knowledge about stunting can be acquired through formal education and outreach activities, internet access, and reading materials (Anugrahaeni et al., 2022).

The Relationship between Media Literacy Level and Parental Participation Level in Stunting Prevention

prevention. Several studies have shown similar findings, establishing a link between media, both mass and social media and stunting rates in children. For example, research in Southeast Sulawesi demonstrated that involving mass media and other stakeholders, such as the government, academics, businesses, and communities (pentahelix), successfully reduced stunting prevalence in the region (Mahdar, 2023). Media forms, like leaflets and posters, have also raised maternal awareness about stunting (Siburian & Ritonga, 2024). However, digital media has proven more effective and has significant potential to increase public knowledge about stunting (Aris Tyarini et al., 2023; Mananohas et al., 2023; Setyowati et al., 2022). Through various online platforms and mobile applications, information on healthy practices for stunting prevention and other health literacy can be conveyed in a more engaging, broad-reaching, and interactive way, with content that is accurate, easy to understand, and tailored to the audience's needs (Aris Tyarini et al., 2023).

Although this study confirms a relationship between media literacy and parental participation in stunting prevention, the strength of this relationship is relatively weak. This may be due to several factors, including the low media usage by parents of young children to access information on stunting. The largest proportion (30.2%) of parents in Sidomulyo Village primarily use electronic media and social media for entertainment purposes, such as watching dramas, movies, vlogs, and similar content. Only 13.5% frequently use media to access health-related information, with the remaining usage categories as follows: 19.8% for recipes, 11.7% for parenting tips, 5.4% for education information, 18.5% for other topics like makeup, fashion, buying/selling goods, and travel, and 0.9% do not use social or electronic media for information. The use of social media by parents for finding recipes and child vitamins is explained by one respondent:

Table 4. The Relationship between Socioeconomy (X2) and Participation Level in Stunting Prevention

			Variable X2	Variable Y
Kendall's tau_b	Variable X2	Correlation Coefficient	1.000	0.109
		Sig. (2-tailed)		0.023
		N	222	222
	Variable Y	Correlation Coefficient	0.109	1.000
		Sig. (2-tailed)	0.023	
		N	222	222

Table 4 shows the results of Kendall's rank correlation test between variables X2 (media literacy) and Y (parental participation in stunting prevention), with a correlation coefficient of 0.109 and a significance level of 0.023. This result allows us to conclude that H0b is rejected and H1b is accepted, indicating a relationship between media literacy levels and parental participation in stunting

> *"...I watch YouTube because I'm confused about how to prepare fish for my child's meals… I also like watching TikTok sometimes when I'm unsure about giving*

vitamins to my child…" (Putri, a respondent with a stunted young child)

The use of social media as entertainment by parents, especially mothers, was also noted by a *Posyandu* cadre:

> *"…Young parents today seem less attentive to their children… even while breastfeeding, they're on their phones… watching anything… I think it should be like the old days when mothers used breastfeeding time to communicate with their children… it created a good communication bond…"* (Ida: *Posyandu* cadre)

The above information shows that parents in Sidomulyo Village do not directly use social media to learn about stunting. Instead, they use it to look up food recipes to encourage nutritious eating in their children and for entertainment. Furthermore, parents in Sidomulyo may also obtain information about stunting from other sources, such as stunting outreach programs conducted by *Posyandu* cadres, village midwives, doctors, and nutritionists from the health centre (Puskesmas).

Additionally, beyond parental media literacy, other factors may relate to the content or information about stunting available in both mass and social media. Stunting information may lack the quantity or quality to capture the audience's attention. For instance, research findings show that stunting coverage is sometimes "pushed aside" by larger issues, such as election campaigns, presidential and local elections (Indriani et al., 2023). This competition for attention with political news reduces the consistency of stunting reporting, as political issues tend to draw greater public interest.

CONCLUSION

This research finds that the socio-economic level of parents does not have a relationship with their participation in preventing stunting. Parents with a high income and higher levels of education exhibit a moderate level of participation in stunting prevention. In contrast, parents with low income do not always demonstrate low levels of participation. The level of participation in preventing stunting may be related to other factors, one of which is the media literacy level of the parents. Social media has the potential to serve as a source of information to increase parents' knowledge about stunting, alongside other sources such as posyandu cadres, village midwives, and nutritionists at Puskesmas. The Indonesian government is urged to consider the significant role of social media in disseminating information related to the stunting issue. The content about stunting on social media could be made attractive for audiences to facilitate access to information on this issue.

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