MEDIA PENELITIAN DAN
PENGEMBANGAN KESEHATAN
Vol 35 No 2, Juni 2025

e-ISSN: 2338-3445
p-ISSN: 0853-9987

THE EFFECTIVENESS OF THE ROLE OF HOSPITALS IN ADDRESSING STUNTING PROBLEMS; A BIBLIOMETRIC ANALYSIS

Efektivitas Peran Rumah Sakit dalam Menangani Masalah Stunting: Analisis Bibliometrik

Rendy Yoga Ardian[1*], Maria Ulfa[1]
[1]Master Program of Hospital Administration, Universitas Muhammadiyah Yogyakarta, Yogyakarta, Indonesia
*Email: dr.rendyiip@gmail.com

ABSTRAK

Permasalahan stunting menjadi perhatian yang signifikan tidak hanya di Indonesia namun juga secara global. Karena itu. Penelitian tersebut bertujuan untuk mengetahui peran rumah sakit dalam penanganan stunting. Desain penelitian ini digunakan tinjauan pustaka kualitatif dengan menganalisis tren jumlah publikasi dari waktu ke waktu, mengidentifikasi penulis yang memiliki kontribusi paling signifikan dalam bidang tertentu, dan melihat kontribusi negara dan lembaga di kawasan tertentu. Memanfaatkan database Scopus, tinjauan pustaka ini mengkaji dokumen-dokumen tahun 2014 hingga 2023 tentang "stunting" dan "rumah sakit" per 19 Januari 2024. Penelusuran menghasilkan 317 dokumen berbahasa Inggris di berbagai bidang, antara lain keperawatan, psikologi, profesi kesehatan, multidisiplin. studi, dan kedokteran gigi. Para peneliti menggunakan analisis pencarian Scopus, VOSviewer, dan software RStudio untuk menganalisis data bibliometrik. Penelitian kami menunjukkan peningkatan signifikan dalam penelitian seputar peran rumah sakit dalam mengatasi stunting pada tahun 2022. Kontributor paling produktif dalam bidang studi ini adalah Amerika Serikat (59), Inggris (39), dan India (38). Studi ini mengidentifikasi intervensi berbasis rumah sakit, seperti terapi nutrisi dan program multidisiplin dengan pendekatan pendidikan, penelitian, dan layanan yang melibatkan bidang keahlian yang bekerja sama untuk memecahkan masalah dan mencapai tujuan dalam bidang kesehatan. Namun efektivitasnya seringkali terhambat oleh terbatasnya sumber daya, kurangnya koordinasi yang optimal dengan layanan kesehatan primer, dan aksesibilitas yang tidak merata. Untuk mengatasi kendala tersebut, perlu dilakukan penguatan kapasitas rumah sakit, kerjasama lintas sektor, dan pemanfaatan rumah sakit sebagai pusat edukasi masyarakat.

Kata kunci: *efektivitas, peran rumah sakit, stunting*

ABSTRACT

The issue of stunting is a significant concern not only in Indonesia but also globally. Therefore. The study aimed to determine the role of hospitals in handling stunting. This research design used a qualitative literature review by analyzing trends in the number of publications over time, identifying authors with the most significant contribution in a particular field, and looking at the contribution of countries and institutions in a specific region. Utilizing the Scopus database, this literature review examined documents from 2014 to 2023 on "stunting" and "hospital" as of January 19, 2024. The search yielded 317 English-language documents in various fields, including nursing, psychology, health professions, multidisciplinary studies, and dentistry. The researchers used Scopus search analysis, VOSviewer, and RStudio software to analyze the bibliometric data. Our research showed a marked increase in research around the role of hospitals in addressing stunting by 2022. The most prolific contributors in this area of study are the United States (59), the United Kingdom (39), and India (38). This study identified that

https://doi.org/10.34011/jmp2k.v35i2.2668

e-ISSN: 2338-3445
p-ISSN: 0853-9987

hospital-based interventions, such as nutritional therapy and multidisciplinary programs, with an education, research and service approach that involves areas of expertise working together to solve problems and achieve goals in the health field. However, their effectiveness is often hampered by limited resources, lack of optimal coordination with primary care, and uneven accessibility. To overcome these obstacles, it is necessary to strengthen hospital capacity, cross-sector collaboration, and use hospitals as education centres for the community.

Keywords: effectiveness, hospital's role, stunting

INTRODUCTION

Stunting remains a considerable nutritional challenge for children under five globally. According to recent statistics, in 2017, approximately 150.8 million, or 22.2% of children under five years old worldwide, were affected by stunting [1]. Of these, 55% of cases were reported in Asia, while more than a third of stunting cases (39%) were reported in Africa [1]. These statistics indicate that stunting remains an immense concern that requires a concerted effort to address globally. The stunting rate for children under five in Asia varies significantly, with the highest rate in southern Asia at 58.7% and the lowest in central Asia at 0.9% [2]. Based on the most recent data, the incidence of stunting among Indonesian children aged 0-23 months was 32.9% in 2013, 26.1% in 2016, and 29.9% in 2018 [3]. The percentage of stunted children under the age of five in Indonesia reached 21.6% by 2022 and decreased to 2.8% by 2023 [4],[5]. The results of the 2023 Indonesian Health Survey recorded that the national average prevalence of stunting was 21.5%, showing a decline over the last 10 years (2013-2023). However, this achievement still does not meet the 2020-2024 RPJMN target, namely stunting prevalence of 14% in 2024 [6]. This trend remains concerning despite the decline and requires further attention and action [7]. This statistic is a cause for concern and requires attention from stakeholders and policymakers to address the issue and improve the country's children's well-being.

It has been observed through various cases that the stunting condition of children within the age bracket of 0-23 months encountered during the first 1,000 days of their life is irreversible. Stunting can negatively impact an individual's socio-economic status and health, potentially impacting future generations [8]. According to a study conducted in Cambodia, 2.443 children aged 6-16 across 20 primary schools were involved. The study revealed that children experiencing stunted growth scored significantly lower on all intelligence tests when compared to their non-stunted counterparts [9]. This finding highlights the detrimental impact of stunting on cognitive development and underscores the need for targeted interventions to address malnutrition among children in Cambodia. According to a case-control study conducted in Southern Iran, among children aged 6-7 years, stunting is significantly associated with chronic disease [10]. The study's results indicate a need for further investigation into the causes of stunting and suggest that preventative measures may be necessary to reduce the risk of chronic disease in this population [10]. The survey conducted in Nigeria conclusively stated that children under five who are stunted had diarrhoea within the two weeks following the study [11]. Research indicates that children experiencing stunted growth face an increased risk of mortality from various infections, including, but not limited to, sepsis, meningitis, tuberculosis, hepatitis, and cellulitis [12]. The data suggests that stunted growth in children may indicate an abnormal immune condition. Consequently, stunting prevention is of the utmost importance in Indonesia [3].

The key risk factors for stunting encompass poor maternal health, inadequate antenatal care, suboptimal feeding and care, as well as deficiencies in infrastructure and healthcare facilities [13]. Economic wealth is another major factor affecting dietary change. The educational background of both parents, be it the mother or the father, is

https://doi.org/10.34011/jmp2k.v35i2.2668

e-ISSN: 2338-3445
p-ISSN: 0853-9987

significant in determining the likelihood of undernourishment and stunting in primary school students [14]. Furthermore, the mother's age, the interval between childbirths, and the couple's intention to have a child are crucial factors hindering growth. The matter of inadequate sanitation is of considerable significance in public health, as it is correlated with a range of outcomes related to stunted growth [15]. The lack of proper sanitation and open defecation significantly contribute to the spread of diarrhoea and intestinal parasites, which can lead to malnutrition [16]. Early-life stunting, a condition resulting from malnutrition, can have detrimental effects, such as poor development, reduced educational performance, and lower wages due to decreased productivity.

Bibliometric analysis provides a global perspective on the contribution of relevant literature from a research, practice and policy perspective in various countries [17]. Hospitals with special nutrition programs for children have reduced the prevalence of stunting significantly. For example, the Therapeutic Feeding Center program in Africa has improved the nutritional status of acutely malnourished children [18], [19]. Studies in India show that nutritional education for mothers carried out in prenatal hospitals can increase understanding of the importance of exclusive breastfeeding, which contributes to the prevention of stunting [20]. Research in Indonesia reveals that early detection of growth problems in children through growth and development clinic programs in hospitals helps reduce the severity of stunting [21]. The unique thing about this research is that it uses a bibliometric approach to analyze the role of hospitals in overcoming stunting, which is a unique combination of the field of public health and scientific literature analysis. There are rarely studies linking bibliometric methods to specific hospital interventions in stunting. Most studies on stunting focus on nutritional factors, public education, or national health programs. This research focuses on the hospital institution as a key actor, often under-explored. This research identified gaps in the existing literature using bibliometrics, such as the lack of research on hospitals as the leading actors in stunting interventions. Provides direction for future research, such as collaborative strategies between hospitals and government.

The progress towards preventing stunting is impeded by multiple factors, including insufficient capacity, inadequate implementation of programs, and insufficient advocacy, campaigns, and dissemination efforts [22]. These challenges need to be addressed to enhance the effectiveness of our stunting prevention initiatives. The maternal and child health service program is a practical initiative to prevent stunting [23]. The provided services encompass energy, nutrition, and treating diseases and infections during pregnancy, which can contribute to stunted growth [24]. Proper nutrition and health services for pregnant women, including the involvement of healthcare professionals, can prevent stunted growth in children. This study aimed to provide an in-depth analysis of hospitals' role in managing stunting and suggest solutions for healthcare providers.

METHODS

A qualitative literature review methodology was employed for this study. The search was confined to peer-reviewed journals with international reputations published between 2014 and 2023, accessible through the Scopus database (scopus.com). The keywords “stunting” and “hospital” were searched in the Scopus database. Bibliometric analysis of journal citations, authors, or others can be used to evaluate academic and individual journals' effectiveness and performance [25]. Bibliometric analysis offers several additional advantages, such as identifying foci of knowledge that require further investigation and pinpointing the most popular research topics within a given field. The research approach was formulated by leveraging all available Scopus databases. The consideration of using the Scopus Database as a data source is because it is one of the two most important databases and has high-quality articles published in journals. The authors conducted a systematic search on the Scopus database on January 19, 2024,

https://doi.org/10.34011/jmp2k.v35i2.2668

e-ISSN: 2338-3445
p-ISSN: 0853-9987

to identify articles published between 2014 and 2023 that examined the role of hospitals in preventing stunting in various countries. The reason for choosing the 2014-2023 time period because the problem of handling stunting has been very high in the last ten years, especially in African countries [26]. While searching for articles to be analyzed within the scope of the study, the authors used the keywords “stunting” and “hospital” and only considered articles written in English. This study also used snowball sampling through reference list searches and citation tracking to further expand the search. The search focused on articles related to medicine, nursing, psychology, health professions, and dentistry. Included articles were limited to those that had reached the final publication stage and were published in English-language journals. After analyzing the search results and filtering the data, the authors identified and analyzed 317 articles. More details can be seen in Figure 1 below, the exclusion process by providing limitations to this article.

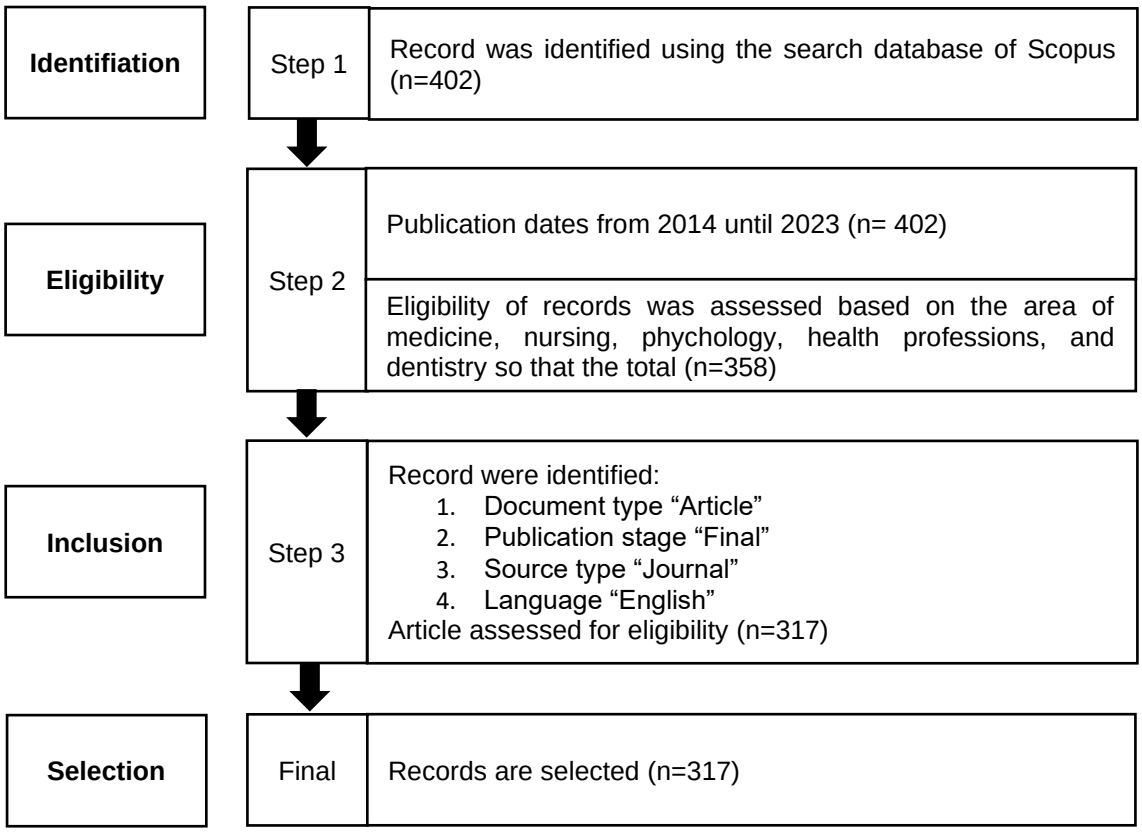

Figure 1. The PRISMA flow diagram identifies, screens, and includes papers for our bibliometric review (Source Fig: Processed by Author 2024)

We exported the research data in RIS export file format to facilitate the sharing of research map information. Our analysis involved the use of various software tools like VOSviewer and R-Studio. We applied the descriptive method to Scopus search results based on publication year, country, and study topic. In parallel, we used VOSviewer to create a bibliometric map of research progress on the critical topic of female athlete triad syndrome, using VOSviewer version 1.6.18 (released on January 24, 2022, by Leiden University's Centre for Science and Technology, Leiden, Netherlands). We refined the data multiple times to obtain information on the role of hospitals in handling stunting. The dataset was then transformed into BibTeX format and analyzed using Bibliometrics in R version 3.6.3 (released on February 29, 2020, by Posit PBC, Vienna, Austria). The dataset includes information on the distribution of publications by country/region, year of publication, authors, and keywords. We performed this correlation to assess the female

https://doi.org/10.34011/jmp2k.v35i2.2668

e-ISSN: 2338-3445
p-ISSN: 0853-9987

athlete triad syndrome, and VOSviewer software mapped the most popular terms used when researching it. We used the author's or title's keyword to construct the context of sports sciences. These results are based on 317 documents from the Scopus database.

RESULT

Certain countries have shown greater success than other countries in mitigating stunting, such as Argentina, Brazil, China, Iran, Senegal, Peru, and Vietnam, which have experienced significant reductions in stunting rates. In contrast, Eritrea, Pakistan and Papua New Guinea have experienced an increase in stunting rates. Disparities in stunting rates across countries persist. In 2012, the sixty-fifth World Health Assembly (WHA) endorsed a target to reduce the number of stunted children under five by 40% by 2025. This has been set as a sustainable development goal 2 to eradicate hunger, achieve food security, improve nutrition, and encourage sustainable agriculture [27]. Based on the findings presented in Figure 2, there has been a significant surge in research papers focused on hospitals' role in managing stunting over the years. This trend has become increasingly prominent recently, particularly between 2021 and 2023. Our study meticulously analyzed an extensive data set and identified 317 published papers.

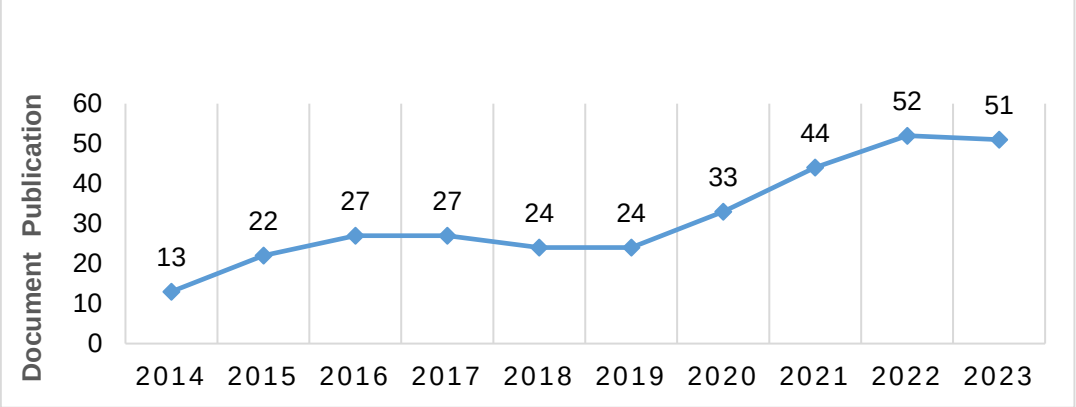

Figure 2. Scientific Publication by Year (Source: Scopus)

The research found that 14 countries conducted research in relevant fields. United States (56), India (35), United Kingdom (35), Ethiopia (30), Bangladesh (23), South Africa (23), Canada (16), Australia (15), Kenya (15), China (14), Pakistan (14), Japan (14), the Netherlands (14) and Nepal (13) were identified as the top fourteen contributing countries on this topic (Figure 3).

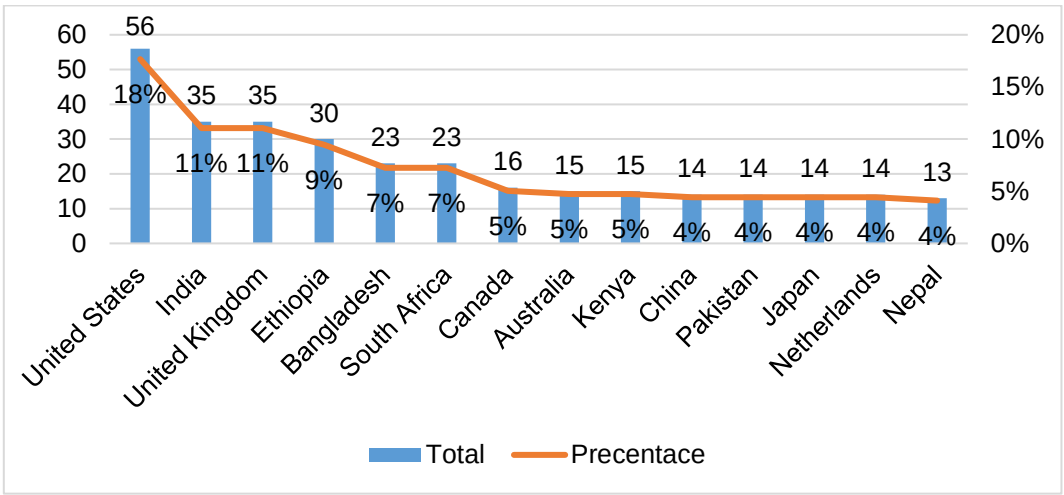

Figure 3. Scientific Publication based on Nation (Source: Scopus)

https://doi.org/10.34011/jmp2k.v35i2.2668

e-ISSN: 2338-3445
p-ISSN: 0853-9987

Figure 4. Hospitals' Role in Handling Stunting Analysis using Rstudio

Figure 4 shows a comprehensive analysis of how hospitals manage stunting, covering the period from 2013 to 2023. The study thoroughly examined 188 sources, yielding 334 documents that were then analyzed for relevant information. The study findings indicated that a substantial number of authors, totalling 2.386, have contributed to the literature on this topic, underscoring its significance and importance. Furthermore, the study unveiled a high annual growth rate of 23.62% in publications related to hospitals' role in managing stunting, suggesting a rapid expansion in this field of research. These findings underscore the need for further investigation and advancement in hospitals' role in managing stunting.

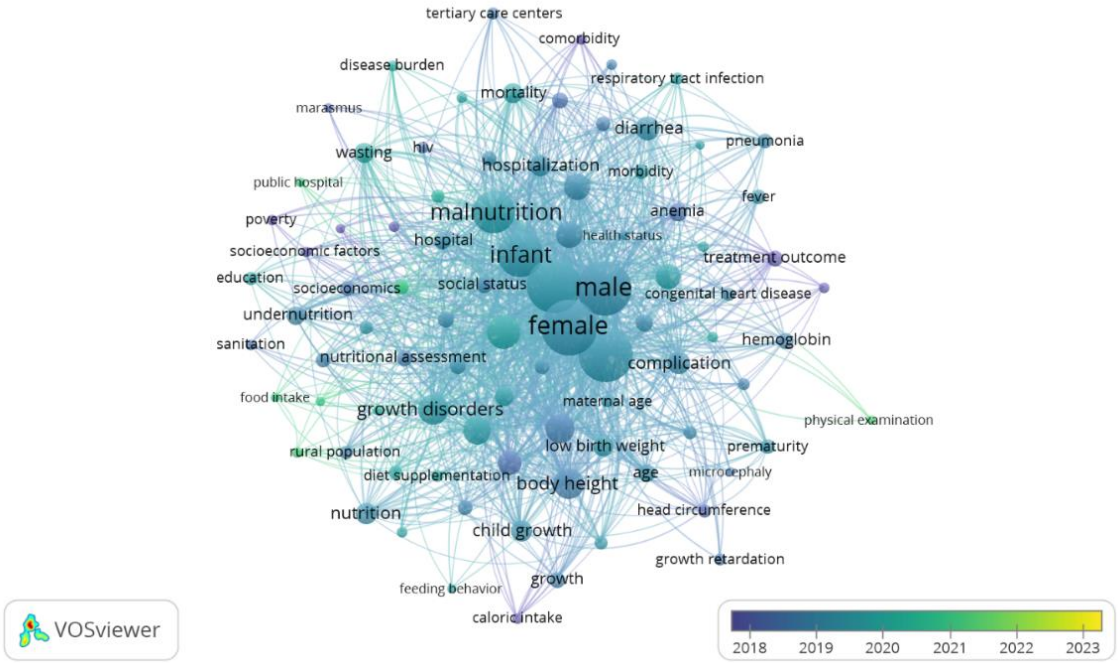

Figure 5. The Keywords Trends in Hospitals' Role in Handling Stunting (Source: VOSviewer)

Figure 5 presents the results of a document analysis conducted by VOSviewer. The study identified keyword trends for each year, providing valuable insights into the research conducted from 2013 to 2023—the analysis aimed to determine the most prevalent research themes and topics related to stunting. Trends in 2021 are

https://doi.org/10.34011/jmp2k.v35i2.2668

e-ISSN: 2338-3445
p-ISSN: 0853-9987

underweight, public health, and undernutrition. Mortality, disease burden, and food security are trends in 2022. Moreover, trends in 2023 are nutritional education, food intake, and food insecurity.

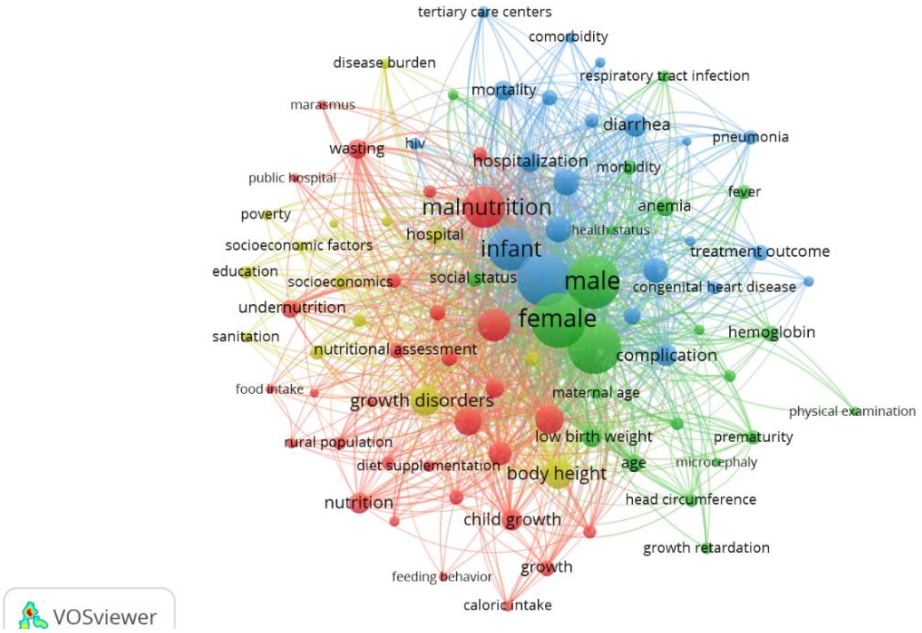

Figure 6. Network Visualization by Keywords using VOSviewer

This study shows that the 2023 trends in stunting are nutritional education, food intake, and food insecurity. Efforts to combat stunting should be independent of government or healthcare unit support. Parental education constitutes a crucial factor in reducing stunting rates [29]. Maternal knowledge is a significant factor that can influence the incidence of stunting in children [30],[31]. Mothers need to have adequate knowledge about stunting as it can potentially increase the risk of stunting in their children. The recommendations about complementary feeding are developed to target specific nutrient deficiencies, advocating for locally available nutrient-dense foods and incorporating them into health promotion initiatives to prevent stunting [32]. According to previous studies, children aged between 6 and 23 months in Africa, Asia, and Latin America face typical nutritional deficiencies of calcium, iron, and zinc due to their complementary feeding diets. Furthermore, the review underscores the deficiency of energy, vitamin A, thiamin, riboflavin, niacin, folate, and vitamin C in their dietary intake [32],[33]. Household food insecurity is one of the primary causes of undernutrition, among the three underlying factors contributing to this issue [34]. Its impact is most reflected in children, whose dietary intake in terms of quality and quantity is compromised. Insufficient healthcare and suboptimal child-feeding practices are known to promote a vicious cycle of child undernourishment by perpetuating the presence of food insecurity over the long term [35]. To effectively address the issue of stunting, it is imperative to consider three key factors carefully.

We utilized the VOSviewer application to analyze the retrieved keywords, allowing us to evaluate their relationships comprehensively. The keyword connections generated by the tool are visually represented in Figure 6, aiding in interpreting the results. Table 1 overviews the keywords' frequency, co-occurrence, and centrality measures. The VOSviewer application has proven to be a powerful tool for identifying significant patterns and trends within the data. It is widely acknowledged for its capability to construct and display bibliometric networks, as developed by van Eck and Waltman in 2010 [36]. Each cluster was thoughtfully labelled using distinct colours, with red assigned to represent stunting prevention (34%), green attributed to risk factors for stunting (22%), blue

https://doi.org/10.34011/jmp2k.v35i2.2668

e-ISSN: 2338-3445
p-ISSN: 0853-9987

designated to signify the role of hospitals in handling stunting (22%), and yellow assigned to stunting service programs and policies (16%).

Table 1. The Clusters' Themes of Hospital's Role in Handling Stunting Using VOSviewer

Cluster's themes	Keywords	Items	Percentage
Cluster 1. Stunting prevention	Anthropometry, body weight, breastfeeding, caloric intake, caregiver, child growth, child nutrition, diet, diet supplementation, dietary intake, epidemiology, feeding behaviour, food insecurity, food intake, food security, growth, malnutrition, marasmus, nutrition, nutrition education, nutritional assessment, nutritional disorder, nutritional support, public hospital, rural area, rural population, severe acute malnutrition, undernutrition, underweight, wasting	30	34%
Cluster 2. Risk factors for stunting	Age, anaemia, female, fever, gestational age, growth retardation, head circumference, health status, haemoglobin, hospital readmission, low birth weight, male, maternal age, microcephaly, morbidity, a pediatric hospital, physical examination, prematurity, respiratory tract infection, social status, stunting, vaccination	22	25%
Cluster 3. The role of hospitals in handling stunting	Child, childhood disease, comorbidity, complication, congenital heart disease, diarrhoea, high-risk population, HIV, HIV infections, hospital admission, hospitalisation, incidence, infant, mortality, outcome assessment, patient discharge, pneumonia, risk factor, tertiary care centres, treatment outcome, tuberculosis, wasting syndrome	22	25%
Cluster 4. Stunting service programs and policies	Body height, developing countries, disease burden, education, growth disorders, hospital, mother, poverty, public health, sanitation, socioeconomic factors, socioeconomics, university hospital, urban population	14	16%

Source. Scopus data processed by the Author, (2024)

DISCUSSION

Stunting Prevention

The stunting prevention program implemented in Indonesia has undergone an evaluation to assess its impact on stunting rates. Based on the report of Acceleration Team for Prevention of Stunting Children (2021), it has been observed that the program has not significantly reduced stunting rates [37]. This can be attributed to the fact that the stunting rate is still above the threshold of 20%. Further analysis is required to identify the possible reasons for the program's limited effectiveness and develop strategies to improve outcomes. The prevalence of high stunting rates in Indonesia has been a significant threat to the country's child development efforts. And there is a consistent prevalence of toddlers who fall below the average height category [38]. The negative impact of stunting on children's height growth has been a concern, as it can lead to reduced physical stature, which can have long-term consequences for their health and well-being.

There is evidence to suggest that high levels of stunting can result in irreversible loss of cognitive development in children, further exacerbating the negative impact this issue has on the country's prospects. To address stunting prevention and stunting gap reduction at the district or city level in Indonesia, a thorough analysis was conducted to

https://doi.org/10.34011/jmp2k.v35i2.2668

e-ISSN: 2338-3445
p-ISSN: 0853-9987

assess the direct and indirect relationships between various risk factors associated with stunting at the district level [3]. Direct risk factors include maternal undernutrition during pregnancy, often caused by inadequate intake of micro and macronutrients. This can lead to low birth weight (LBW) and impaired fetal growth [39]. In addition, premature pregnancy also increases the risk of the baby becoming stunted as the body's organs and systems have not yet developed optimally. Improper feeding practices, such as not providing exclusive breastfeeding for the first six months or complementary feeding (MP-ASI) that does not meet nutritional needs, are also significant factors [40]. Infectious diseases, such as diarrhea or pneumonia that children often experience also contribute to stunting by inhibiting the absorption of nutrients and increasing the body's energy needs [41].

Meanwhile, indirect factors include social, economic, and environmental conditions that indirectly affect children's nutritional status [42]. Poor environmental sanitation and limited access to clean water increase the risk of infectious diseases, such as diarrhea, exacerbating malnutrition [43]. Low levels of maternal education are also an essential factor, as uneducated mothers tend to have a low understanding of nutrition and health [44]. In addition, families' economic limitations may hinder their ability to provide nutritious food and adequate health services. Cultural factors, such as restrictions on certain types of food for pregnant women or children under five, can also exacerbate the risk of stunting [45]. This analysis aims to provide valuable insights that can inform the development and implementation of effective policies and programs to address stunting in the country.

Risk Factors for Stunting

A multitude of risk factors impact the effectiveness of stunting prevention initiatives. UNICEF's conceptual framework for addressing stunting in Indonesia underscores the crucial role of factors such as access to nutritious food, healthcare services, appropriate infant and child feeding practices, hygiene, education, access to clean water in households, and adequate sanitation facilities in reducing the incidence of child stunting [37]. According to recent studies conducted in India, low birth weight (LBW) stands out as the predominant risk factor for stunting [46]. In contrast, research conducted in the Republic of Congo has revealed that inadequate nutrition and delayed breastfeeding initiation (EIB) are the primary factors contributing to stunting. These findings shed light on the complex nature of stunting and highlight the importance of early interventions to address this issue. Insufficient diversity in household food, food insecurity, inadequate feeding practices, and poverty contribute to stunted growth in the Lao People's Democratic Republic (PDR) [47]. The prevalence of stunting in this country is a significant public health concern. Addressing these stunting determinants is crucial to improving the population's well-being and health. Fawzi et al. (2019) stated that the presence of an impoverished environment is anticipated to have a substantial impact on the prevalence of stunting in South Asia, Sub-Saharan Africa, East Asia, and the Pacific [48]. The adverse effects of a poor environment on nutrition, health, and sanitation can lead to stunting, which has long-term consequences for individuals and communities.

The Role of Hospitals in Handling Stunting

Hospitals have an essential role in stunting prevention and management through a holistic approach covering various health services [49]. As maternal and neonatal health service providers, hospitals ensure that pregnant women receive regular check-ups, nutrition counseling, and safe delivery while providing intensive care for premature or low birth weight babies. In addition, the hospital offers nutrition counseling services that support exclusive breastfeeding and complementary feeding as needed. Early detection of nutritional problems through measuring children's nutritional status is also integral to preventing stunting [50]. Hospitals act as community education centers by promoting

https://doi.org/10.34011/jmp2k.v35i2.2668

e-ISSN: 2338-3445
p-ISSN: 0853-9987

healthy lifestyles and the importance of good nutrition during pregnancy and early childhood. Collaboration with community health centers and health cadres further strengthens the reach of stunting interventions [50].

In contrast, training and competency development of health workers such as midwives and nutritionists improve the quality of services [51]. Hospitals are also becoming data collection and research centers, providing evidence for more effective treatment strategies and developing specialized facilities such as nutrition rehabilitation units or growth and development clinics. Hospitals contribute significantly to reducing stunting rates and ensuring optimal child development by performing these functions [51].

Stunting Service Programs and Policies

The prevention of stunting is a critical issue that demands a collaborative governance framework coordinating diverse stakeholders' efforts. This effort must be underpinned by a shared commitment to stunting prevention, which transcends sectoral boundaries. The cooperative governance approach, which emphasises cross-sectoral collaboration, is a promising strategy for achieving this objective. By bringing together stakeholders from various sectors, this approach can promote exchanging knowledge, expertise, and resources and facilitate engagement, ownership, and accountability. Hence, collaborative governance is essential for effective stunting prevention [52]. Achieving effective measures to combat stunting requires the sub-district government to supervise strategies to reduce stunting in rural areas, where its prevalence is more pronounced than in urban areas. Public healthcare at the sub-district level is essential for addressing stunting [53]. The effective communication of stunting prevention policies from sub-district governments to village governments is crucial in achieving the primary targets of such programs [54]. This underscores sub-districts' importance in connecting government initiatives with their communities. Therefore, the sub-district government must ensure that all villages within their jurisdiction have the necessary tools and resources to implement these policies to benefit their communities.

This study's key finding emphasises the importance of healthcare facilities collaborating with governments to combat stunting. A sensitive approach that empowers communities proves more effective than specific treatments. Pregnant women in the short term should receive support from health cadres to boost their knowledge, understanding, attitudes, and behaviours. Public health intervention programs from the government are crucial in ensuring that families with low socioeconomic status have access to adequate, safe, and nutritious food and health education. Nutritional education on healthy eating habits and affordable, wholesome food is also strongly recommended.

Hospital-based interventions, such as nutrition therapy and multidisciplinary programs, effectively improve children's nutritional status and reduce the prevalence of stunting. Hospitals that provide integrated and multidisciplinary nutrition services involving health workers, such as doctors, nutritionists, midwives, and nurses, can significantly address the problem of stunting in children under five [55]. One of the primary interventions in this program is providing nutritional therapy tailored to the child's condition, including food supplementation and close monitoring of the child's daily nutrient consumption [56]. In addition, a multidisciplinary approach involving various medical professions ensures comprehensive care for children with stunting [57].

In several studies, hospitals implementing multidisciplinary programs involving nutritionists, pediatricians, and other health workers showed significant reductions in stunting prevalence [58]. Hospitals that routinely provided parents with growth monitoring and nutrition education reported improvements in children's nutritional status in a relatively short period. These programs provide accurate information on the importance of exclusive breastfeeding, appropriate complementary feeding, and monitoring the weight and height of children under five. In addition, in-hospital nutritional therapy that

https://doi.org/10.34011/jmp2k.v35i2.2668

e-ISSN: 2338-3445
p-ISSN: 0853-9987

includes supplemental feeding and managing medical conditions associated with malnutrition can significantly improve children's weight and height [59].

This study also shows that successful hospital stunting management depends on the involvement of a medical team that includes nutritionists, pediatricians, nurses, and midwives. Successful management of stunting often depends on coordination between various health professionals providing integrated care [60]. Hospitals with nutrition monitoring programs for pregnant women and children under five and counseling for parents can ensure that appropriate early interventions support healthier child growth. Evaluations of these hospital programs also show that reducing the prevalence of stunting depends not only on medical interventions but also on the success of educational programs provided to families. Hospitals that routinely conducted nutrition counseling and training for pregnant and lactating mothers showed significant improvements in adherence to recommended nutrition guidelines [61].

To reduce stunting, health and community stakeholders must work together and utilize the local wisdom available in the community. Collaborative governance is an essential element that enables the coordination of stakeholders involved in stunting prevention to work together toward a common goal [62]. The success of stunting prevention relies heavily on effective collaboration among stakeholders, including policymakers, health workers, and communities. A comprehensive approach that includes interventions to improve nutrition, sanitation, and access to quality health services is essential to reduce the impact of stunting on children's growth and development [63]. These measures will pave the way for a brighter future for the country, focusing on addressing the root causes of poverty, such as lack of access to adequate food and clean water. Therefore, sub-district governments must commit to addressing stunting with appropriate measures, including educating mothers about stunting. This will help create an environment enabling children's healthy growth and development and promote sustainable economic and social development [64].

This study's strength is to offer valuable suggestions and recommendations for managing stunting in healthcare facilities. It adds to the current knowledge on stunting and hospitals' crucial role in its management. Nonetheless, the study is limited by its reliance on a systematic literature review as its primary methodology. Further research should explore more comprehensive strategies for addressing stunting, particularly within healthcare settings, to prevent its occurrence in children.

Stunting is an important problem to be addressed well because it is one of the achievements of sustainable development. Stunting is a condition where a child has a height that is shorter than the age standard due to chronic malnutrition, recurrent infections, or inadequate parenting patterns during the first 1,000 days of life (from pregnancy until the child is 2 years old). This condition not only impacts physical growth but also brain development, which can affect children's learning abilities, productivity and future health. Stunting is often used as an important indicator to measure the nutritional status and welfare of children, especially in developing countries [65].

Indonesia needs to pilot stunting management in countries that have succeeded in reducing prevalence rates. One of them is Bolivia, this country has a good program in preventing stunting. Focusing on asking mothers to provide exclusive breast milk to their babies on a regular basis, as well as having a supplementary intake of fortified breast milk [66]. Meanwhile, Peru in handling stunting only focuses on poor families. This condition is the same as that in Indonesia, prevention is still focused on poor families. The prevalence rate can be reduced by 4.25 percent per year in Indonesia by 2022 [67]. Another program to support the welfare of mothers and children in accessing clean sanitation has been implemented through the Water Sanitation and Hygiene (WASH) program. Plus, psychosocial support for the growth and development of toddlers. The main cause of stunting is nutritional deficiencies during pregnancy or after birth. Thus,

https://doi.org/10.34011/jmp2k.v35i2.2668

e-ISSN: 2338-3445
p-ISSN: 0853-9987

this condition is important for stakeholders to note as policy makers, so that they are able to overcome stunting well [68].

The limitation of bibliometric research is that it only analyzes publications recorded in certain databases (eg Scopus, PubMed), so it may miss local research or unpublished reports (grey literature). Bibliometric analysis tend to emphasize global trends and relationships, but do less to delve into micro details, such as the effectiveness of specific programs at particular hospitals. Limited data about hospitals is because the research does not include primary data that directly evaluates hospital programs in dealing with stunting. In addition, the literature focuses more on developing countries in general, but does not describe the specific conditions of hospitals in rural or remote areas. The implication is that it is important to complement bibliometric analysis with field data from hospitals that carry out stunting-related interventions. Plus it is necessary to encourage collaboration between hospitals, communities and local governments to tackle stunting holistically.[18]

CONCLUSION

This research succeeded in revealing the strategic role of hospitals in handling stunting. Hospitals function as health service centres that provide curative, rehabilitative interventions, preventive education, and coordination within the health system. Hospital-based interventions, such as nutritional therapy and multidisciplinary programs, have proven effective in improving children's nutritional status and reducing the prevalence of stunting. However, the effectiveness of this role is often hampered by limited resources, lack of optimal coordination with primary services, and uneven accessibility. To overcome this obstacle, it is necessary to strengthen hospital capacity, cross-sector collaboration, and use hospitals as educational centres for the community. By implementing the right strategy, hospitals can play a more significant role in tackling stunting comprehensively and sustainably, supporting the achievement of public health targets, especially in areas that need it most. Hospitals are central in handling stunting through curative health services, preventive education and coordination functions. However, resources must be strengthened to increase its effectiveness, and cross-sector collaboration and integration of health services are needed. This research underlines the importance of hospitals as key actors in efforts to overcome stunting comprehensively and sustainably.

REFERENCES

[1] S. Sukmawati, Y. Hermayanti, E. Fadlyana, and H. S. Mediani, “Stunting prevention with education and nutrition in pregnant women: A review of literature,” *Open Access Maced. J. Med. Sci.*, vol. 9, no. T6, pp. 12–19, 2021, doi: https://doi.org/10.3889/oamjms.2021.7314.

[2] E. O. Devi, D. S. K. Dewi, and E. W. DJ, “Policy Trend of Stunting Treatment in Developing Countries at Southeast Asia: WHO’s Role in Achieving Global Targets,” *Nakhoda J. Ilmu Pemerintah.*, vol. 22, no. 1, pp. 124–135, 2023, doi: https://doi.org/10.35967/njip.v22i1.444.

[3] N. Fentiana, E. L. Achadi, B. Besral, A. Kamiza, and T. Sudiarti, “A Stunting Prevention Risk Factors Pathway Model for Indonesian Districts/Cities with a Stunting Prevalence of≥ 30%,” *Kesmas J. Kesehat. Masy. Nas.*, vol. 17, no. 3, p. 175, 2022, doi: 10.21109/kesmas.v17i3.5954.

[4] S. Azarine, “Hubungan Pengetahuan, Peran Petugas Kesehatan, dan Dukungan Keluarga terhadap Perilaku Pencegahan Stunting pada Ibu Hamil di Wilayah Kerja Puskesmas Pondok Meja Muaro Jambi Tahun 2023,” *J. Ilm. Ners Indones.*, vol. 4, no. 1, pp. 1–8, 2023, doi: ttps://doi.org/10.22437/jini.v4i1.24906.

[5] D. Kartika, I. Zoelkarnain, O. Illiandri, R. Adhani, and M. Musafaah, “Analysis of Factors Associated with the Incidence of Stunting in Toddlers: Factor Analysis of Family Support,

https://doi.org/10.34011/jmp2k.v35i2.2668

e-ISSN: 2338-3445
p-ISSN: 0853-9987

Health Worker Support, Insurance Participation, and Income," *J. La Medihealtico*, vol. 5, no. 5, pp. 1112–1117, 2024, doi: 10.37899/journallamedihealtico.v5i5.1742.

[6] A. Situasi and D. A. N. Permasalahan, "Stunting di Indonesia dan Determinannya," Jakarta Pusat, 2024.

[7] M. U. Harahap and R. Hasibuan, "Analysis Implementation of The Stunting Prevention Programme," *J. Heal. Sci. Prev.*, vol. 7, no. 2, pp. 1–10, 2023, doi: ttps://doi.org/10.29080/jhsp.v7i2.1048.

[8] P. Seferidi, T. Hone, A. C. Duran, A. Bernabe-Ortiz, and C. Millett, "Global inequalities in the double burden of malnutrition and associations with globalisation: a multilevel analysis of Demographic and Health Surveys from 55 low-income and middle-income countries, 1992–2018," *Lancet Glob. Heal.*, vol. 10, no. 4, pp. e482–e490, 2022.

[9] M. Perignon *et al.*, "Stunting, poor iron status and parasite infection are significant risk factors for lower cognitive performance in Cambodian school-aged children," *PLoS One*, vol. 9, no. 11, p. e112605, 2014, doi: https://doi.org/10.1371/journal.pone.0112605.

[10] M. J. Fatemi, M. Fararouei, H. Moravej, and M. Dianatinasab, "Stunting and its associated factors among 6–7-year-old children in southern Iran: a nested case–control study," *Public Health Nutr.*, vol. 22, no. 1, pp. 55–62, 2019, doi: https://doi.org/10.1017/S136898001800263X.

[11] B. J. Akombi, K. E. Agho, J. J. Hall, D. Merom, T. Astell-Burt, and A. M. N. Renzaho, "Stunting and severe stunting among children under-5 years in Nigeria: A multilevel analysis," *BMC Pediatr.*, vol. 17, no. 15, pp. 1–16, 2017, doi: https://doi.org/10.1186/s12887-016-0770-z.

[12] A. J. Prendergast and J. H. Humphrey, "The stunting syndrome in developing countries," *Paediatr. Int. Child Health*, vol. 34, no. 4, pp. 250–265, 2014, doi: https://doi.org/10.1179/2046905514Y.0000000158.

[13] D. Headey, J. Hoddinott, D. Ali, R. Tesfaye, and M. Dereje, "The other Asian enigma: explaining the rapid reduction of undernutrition in Bangladesh," *World Dev.*, vol. 66, no. 1, pp. 749–761, 2015, doi: https://doi.org/10.1016/j.worlddev.2014.09.022.

[14] M. M. Rahman, "Is unwanted birth associated with child malnutrition in Bangladesh?," *Int. Perspect. Sex. Reprod. Health*, vol. 41, no. 2, pp. 80–88, 2015, doi: https://doi.org/10.1363/4108015.

[15] D. Spears, A. Ghosh, and O. Cumming, "Open defecation and childhood stunting in India: an ecological analysis of new data from 112 districts," *PLoS One*, vol. 8, no. 9, p. e73784, 2013, doi: https://doi.org/10.1371/journal.pone.0073784.

[16] C. G. Victora *et al.*, "Maternal and child undernutrition: consequences for adult health and human capital," *Lancet*, vol. 371, no. 9609, pp. 340–357, 2008.

[17] M. de las M. Capobianco-Uriarte, M. del P. Casado-Belmonte, G. M. Marín-Carrillo, and E. Terán-Yépez, "A bibliometric analysis of international competitiveness (1983–2017)," *Sustainability*, vol. 11, no. 7, p. 1877, 2019.

[18] T. H. Musa, T. Y. Akintunde, G. Gatasi, U. Ghimire, J. Kawuki, and H. H. Musa, "A bibliometric analysis of the 100 top-cited articles on global malnutrition indexed in Web of Science," *J. Public Heal. Emerg.*, vol. 5, no. December, pp. 1–11, 2021, doi: 10.21037/jphe-21-38.

[19] K. Sadler, "Community-based therapeutic care: treating severe acute malnutrition in sub-Saharan Africa," 2009, *University of London, Africa*.

[20] M. Abdulahi, A. Fretheim, A. Argaw, and J. H. Magnus, "Breastfeeding education and support to improve early initiation and exclusive breastfeeding practices and infant growth: a cluster randomized controlled trial from a rural Ethiopian setting," *Nutrients*, vol. 13, no. 4, p. 1204, 2021.

[21] D. Simbolon, D. Suryani, and E. Yorita, "Prediction model and scoring system in prevention and control of stunting problems in under five-year-olds in Indonesia," *J. Kesehat. Masy.*, vol. 15, no. 2, pp. 160–170, 2019.

https://doi.org/10.34011/jmp2k.v35i2.2668

e-ISSN: 2338-3445
p-ISSN: 0853-9987

[22] W. H. Organization, *Reducing stunting in children: equity considerations for achieving the Global Nutrition Targets 2025*. New York: World Health Organization, 2018.
[23] S. Sutarto, D. P. S. Ratna, and T. U. Winda, "Multilevel Analysis of Health Services in the Stunting Prevention Program in Central Lampung District," *Nongye Jixie Xuebao Trans. Chinese Soc. Agric. Mach.*, vol. 53, no. 11, pp. 1–7, 2022.
[24] E. M. Sari, M. Juffrie, N. Nurani, and M. N. Sitaresmi, "Asupan protein, kalsium dan fosfor pada anak stunting dan tidak stunting usia 24-59 bulan," *J. Gizi Klin. Indones.*, vol. 12, no. 4, pp. 152–159, 2016.
[25] D. Zhao and A. Strotmann, *Analysis and visualization of citation networks*. California: Morgan & Claypool Publishers, 2015. doi: 10.2200/S00624ED1V01Y201501ICR039.
[26] O. P. Ogunniran, K. I. Ayeni, O. S. Shokunbi, R. Krska, and C. N. Ezekiel, "A 10-year (2014–2023) review of complementary food development in sub-Saharan Africa and the impact on child health," *Compr. Rev. Food Sci. Food Saf.*, vol. 23, no. 6, p. e70022, 2024, doi: https://doi.org/10.1111/1541-4337.70022.
[27] E. Galasso, A. Wagstaff, S. Naudeau, and M. Shekar, "The economic costs of stunting and how to reduce them," Washington, DC, 2016. [Online]. Available: https://documents1.worldbank.org/curated/en/099350307142324151/pdf/IDU0e883e26805fcd047b109a050c6013ce72703.pdf
[28] W. H. Organization, *Levels and trends in child malnutrition child malnutrition: UNICEF/WHO/World Bank Group Joint Child Malnutrition Estimates: Key findings of the 2023 edition*. New York: World Health Organization, 2023. doi: https://www.who.int/publications-detail-redirect/9789240073791.
[29] D. N. Hendryanti, C. Andriani, S. Indriani, L. Gunawan, and M. T. Sibero, "Dietary Diversity, Stunting, and the Impact of an Education Program on Parents' Knowledge and Attitudes in West Sumba, Indonesia," *J. Gizi dan Pangan*, vol. 18, no. 2, pp. 79–88, 2023.
[30] Z. Muhamad *et al.*, "Preliminary study: the effectiveness of nutrition education intervention targeting short-statured pregnant women to prevent gestational stunting," *Nutrients*, vol. 15, no. 19, p. 4305, 2023, doi: 10.3390/nu15194305.
[31] R. D. Rahmandiani, S. Astuti, A. I. Susanti, D. S. Handayani, and D. Didah, "Hubungan pengetahuan ibu balita tentang stunting dengan karakteristik ibu dan sumber informasi di Desa Hegarmanah Kecamatan Jatinangor Kabupaten Sumedang," *J. Sist. Kesehat.*, vol. 5, no. 2, pp. 74–80, 2019.
[32] U. Fahmida, I. L. Pramesthi, S. Kusuma, G. Wurjandaru, and D. Izwardy, "Problem Nutrients and Food-Based Recommendations for Pregnant Women and Under-Five Children in High-Stunting Districts in Indonesia," *Curr. Dev. Nutr.*, vol. 6, no. 5, p. nzac028, 2022, doi: https://doi.org/10.1093/cdn/nzac028.
[33] S. J. M. Osendarp *et al.*, "Complementary feeding diets made of local foods can be optimized, but additional interventions will be needed to meet iron and zinc requirements in 6-to 23-month-old children in low-and middle-income countries," *Food Nutr. Bull.*, vol. 37, no. 4, pp. 544–570, 2016, doi: https://doi.org/10.1177/0379572116655239.
[34] M. J. Landry, A. E. van den Berg, F. M. Asigbee, S. Vandyousefi, R. Ghaddar, and J. N. Davis, "Child-report of food insecurity is associated with diet quality in children," *Nutrients*, vol. 11, no. 7, p. 1574, 2019, doi: https://doi.org/10.3390/nu11071574.
[35] Z. Tafese, F. R. Alemayehu, A. Anato, Y. Berhan, and B. J. Stoecker, "Child feeding practice and primary health care as major correlates of stunting and underweight among 6-to 23-month-old infants and young children in food-insecure households in Ethiopia," *Curr. Dev. Nutr.*, vol. 4, no. 9, p. nzaa137, 2020, doi: https://doi.org/10.1093/cdn/nzaa137.
[36] N. J. van Eck and L. Waltman, "Software survey: VOSviewer, a computer program for bibliometric mapping," *Scientometrics*, vol. 84, no. 2, pp. 523–538, 2010, doi: 10.1007/s11192-009-0146-3.
[37] S. Hadi, "Laporan Baseline Program Percepatan Pencegahan Stunting 2018-2024," Tim Percepatan Pencegahan Anak Kerdil (Stunting)/TP2AK, Jakarta Pusat, 2024.

https://doi.org/10.34011/jmp2k.v35i2.2668

e-ISSN: 2338-3445
p-ISSN: 0853-9987

[38] M. F. Rizal and E. van Doorslaer, "Explaining the fall of socioeconomic inequality in childhood stunting in Indonesia," *SSM-population Heal.*, vol. 9, no. 1, p. 100469, 2019, doi: https://doi.org/10.1016/j.ssmph.2019.100469.
[39] J. A. Grieger and V. L. Clifton, "A review of the impact of dietary intakes in human pregnancy on infant birthweight," *Nutrients*, vol. 7, no. 1, pp. 153–178, 2014, doi: https://doi.org/10.3390/nu7010153.
[40] R. Anggraeni, M. A. A. Aljaberi, N. N. Nambiar, T. Bin Sansuwito, and N. L. Wati, "The relationship of supplementary feeding, breast milk (MP-ASI) to infants with the event of diarrhea," *Int. J. Nurs. Inf.*, vol. 1, no. 1, pp. 1–9, 2022, doi: https://doi.org/10.58418/ijni.v1i1.9.
[41] D. J. Millward, "Nutrition, infection and stunting: the roles of deficiencies of individual nutrients and foods, and of inflammation, as determinants of reduced linear growth of children," *Nutr. Res. Rev.*, vol. 30, no. 1, pp. 50–72, 2017, doi: https://doi.org/10.1017/S0954422416000238.
[42] H. Schreier and E. Chen, "Socioeconomic status and the health of youth: a multilevel, multidomain approach to conceptualizing pathways.," *Psychol. Bull.*, vol. 139, no. 3, p. 606, 2013.
[43] O. P. Thalia, "Understanding the Risk Factors and Vulnerable Populations in the Spread of Diarrhea and Typhoid Fever: Socioeconomic Influences, Malnutrition and Susceptibility among risk Groups," *IDOSR-JAS*, vol. 9, no. 1, pp. 1–6, 2024, doi: https://doi.org/10.59298/IDOSRJAS/2024/9.3.16001.
[44] O. Fadare, M. Amare, G. Mavrotas, D. Akerele, and A. Ogunniyi, "Mother's nutrition-related knowledge and child nutrition outcomes: Empirical evidence from Nigeria," *PLoS One*, vol. 14, no. 2, pp. 1–17, 2019, doi: https://doi.org/10.1371/journal.pone.0215110.
[45] D. Azriani, N. S. Qinthara, I. N. Yulita, D. Agustian, Y. Zuhairini, and M. Dhamayanti, "Risk factors associated with stunting incidence in under five children in Southeast Asia: a scoping review," *J. Heal. Popul. Nutr.*, vol. 43, no. 1, pp. 1–13, 2024, doi: https://doi.org/10.1186/s41043-024-00656-7.
[46] R. Himaz, "Stunting later in childhood and outcomes as a young adult: Evidence from India," *World Dev.*, vol. 104, no. 1, pp. 344–357, 2018, doi: https://doi.org/10.1016/j.worlddev.2017.12.019.
[47] S. Boulom, D. R. Essink, M.-H. Kang, S. Kounnavong, and J. E. W. Broerse, "Factors associated with child malnutrition in mountainous ethnic minority communities in Lao PDR," *Glob. Health Action*, vol. 13, no. sup2, p. 1785736, 2020, doi: https://doi.org/10.1080/16549716.2020.1785736.
[48] M. C. S. Fawzi *et al.*, "Lifetime economic impact of the burden of childhood stunting attributable to maternal psychosocial risk factors in 137 low/middle-income countries," *BMJ Glob. Heal.*, vol. 4, no. 1, pp. 1–14, 2019.
[49] I. S. Nasution and S. Susilawati, "Analisis faktor penyebab kejadian stunting pada balita usia 0-59 bulan," *FLORONA J. Ilm. Kesehat.*, vol. 1, no. 2, pp. 82–87, 2022, doi: https://doi.org/10.55904/florona.v1i2.313.
[50] I. S. Sukamto, N. B. Argaheni, and S. Juwita, "Upaya Pencegahan dan Penanganan Stunting dengan Pengenalan Program Siganting Melalui Kader Di Kota Surakarta," *J. Midwifery Community*, vol. 1, no. 2, pp. 11–23, 2023, doi: https://doi.org/10.20961/jmc.v1i2.79355.
[51] H. W. Wulandari and I. Kusumastuti, "Pengaruh peran bidan, peran kader, dukungan keluarga dan motivasi ibu terhadap perilaku ibu dalam pencegahan stunting pada balitanya," *J. Ilm. Kesehat.*, vol. 19, no. 02, pp. 73–80, 2020.
[52] S. Sukanti and N. Faidati, "Collaborative Governance Dalam Upaya Penanggulangan Stunting Di Kabupaten Sleman," *Caraka Prabu J. Ilmu Pemerintah.*, vol. 5, no. 1, pp. 91–113, 2021, doi: https://doi.org/10.36859/jcp.v5i1.418.
[53] A. Nugroho and S. Putri, "Perbedaan Determinan Balita Stunting di Pedesaan dan

https://doi.org/10.34011/jmp2k.v35i2.2668

e-ISSN: 2338-3445
p-ISSN: 0853-9987

Perkotaan di Provinsi Lampung," *J. Ilm. Keperawatan Sai Betik*, vol. 15, no. 2, pp. 84–94, 2020.

[54] A. Permatasari, N. Sofyan, and B. G. Walinegoro, "Stunting Prevention through Collaborative Governance in The Berbah Sub-District, Sleman," in *International Conference on Sustainable Innovation on Humanities, Education, and Social Sciences (ICOSI-HESS 2022)*, Atlantis Press, 2022, pp. 618–628. doi: 10.2991/978-2-494069-65-7_51.

[55] S. Sulistyaningsih, R. Aprillia, L. Annisa, and C. P. Febrianti, "The Effectiveness of Interprofessional Collaboration Practice to Reduce The Risk of Stunting: An Integrative Review," *J. Aisyah J. Ilmu Kesehat.*, vol. 8, no. 2, 2023, doi: 10.30604/jika.v8i2.1680.

[56] M. T. Ruel and H. Alderman, "Nutrition-sensitive interventions and programmes: how can they help to accelerate progress in improving maternal and child nutrition?," *Lancet*, vol. 382, no. 9891, pp. 536–551, 2013, doi: http://dx.doi.org/10.1016/ S0140-6736(13)60843-0.

[57] F. Azhimia *et al.*, "Strengthening the continuous integration model through multi-professional collaboration: Community midwifery project at Salam Babaris Health Center," *Integr. PROCEEDING*, vol. 1, no. 1, pp. 1–11, 2023.

[58] A. McCarthy *et al.*, "Prevalence of malnutrition in pediatric hospitals in developed and in-transition countries: the impact of hospital practices," *Nutrients*, vol. 11, no. 2, p. 236, 2019, doi: https://doi.org/10.3390/nu11020236.

[59] S. Ahmed, K. Ejaz, A. Mehnaz, and F. Adil, "Implementing WHO feeding guidelines for inpatient management of malnourished children," *J Coll Physicians Surg Pak*, vol. 24, no. 7, pp. 493–497, 2014.

[60] A. Khuzaimah, U. Kurniati, and M. Z. Haq, "Collaborative governance in stunting interventions at the local level," *Tamalanrea J. Gov. Dev.*, vol. 1, no. 3, pp. 39–51, 2024, doi: https://orcid.org/0009-0006-2729-643X.

[61] P. L. Curşeu, J. H. Semeijn, and I. Nikolova, "Career challenges in smart cities: A sociotechnical systems view on sustainable careers," *Hum. Relations*, vol. 74, no. 5, pp. 656–677, 2021, doi: 10.1177/0018726720949925.

[62] M. N. Afandi, E. Tri Anomsari, A. Novira, and S. Sudartini, "Collaborative governance in a mandated setting: shifting collaboration in stunting interventions at local level," *Dev. Stud. Res.*, vol. 10, no. 1, p. 2212868, 2023, doi: https://doi.org/10.1080/21665095.2023.2212868.

[63] M. Hossain *et al.*, "Evidence-based approaches to childhood stunting in low and middle income countries: a systematic review," *Arch. Dis. Child.*, vol. 102, no. 10, pp. 903–909, 2017, doi: https://doi.org/10.1136/archdischild-2016-311050.

[64] W. H. Organization, *Inheriting a sustainable world? Atlas on children's health and the environment*. New York: World Health Organization, 2017.

[65] J. M. Perkins, R. Kim, A. Krishna, M. McGovern, V. M. Aguayo, and S. V Subramanian, "Understanding the association between stunting and child development in low-and middle-income countries: Next steps for research and intervention," *Soc. Sci. Med.*, vol. 193, no. 1, pp. 101–109, 2017, doi: https://doi.org/10.1016/j.socscimed.2017.09.039.

[66] G. Weisstaub, A. M. Aguilar, and R. Uauy, "Treatment and prevention of malnutrition in Latin America: Focus on Chile and Bolivia," *Food Nutr. Bull.*, vol. 35, no. 2_suppl1, pp. S39–S46, 2014, doi: https://doi.org/10.1177/15648265140352S106.

[67] L. Huicho *et al.*, "Drivers of stunting reduction in Peru: a country case study," *Am. J. Clin. Nutr.*, vol. 112, no. 2, pp. 816S-829S, 2020, doi: https://doi.org/10.1093/ajcn/nqaa164.

[68] A. Komarulzaman, J. Smits, and E. de Jong, "Clean water, sanitation and diarrhoea in Indonesia: Effects of household and community factors," *Glob. Public Health*, vol. 12, no. 9, pp. 1141–1155, 2017, doi: https://doi.org/10.1080/17441692.2015.1127985.

https://doi.org/10.34011/jmp2k.v35i2.2668