



Community Empowerment with Stunting Risk Factors Based on Home visit Approach: Scoping Review

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ABSTRACT

Background: Stunting is one of the health problems of children in the world, including Indonesia. Empowerment is the encouragement of knowledge and the role of individuals in opportunities, participation, and increasing access to health to improve the quality of life.

Purpose: This study aims to find scientific evidence related to community empowerment with risk factors for stunting through a home visit approach.

Methods: The literature search from 3 databases, Pubmed, ScienceDirect, Wiley Online Library and also using *grey literature* from Google Scholar, the inclusion criteria is primary articles from 2017-2022, articles in English and original articles on the topic Community Empowerment with Stunting Risk Factors through the Home visit Approach. This study used the *Joanna Bridge Institute (JBI) critical appraisal tool* to assess the quality of articles.

Results: The first 1711 articles obtained then selected into 7 articles that were eligible used a qualitative and mixed methods research design. Mapping the themes and Sub themes obtained from the analysis of the article is the first themes pattern of parenting of subthemes feeding practice, and second themes is socio-demographic aspects of subthemes knowledge, mother's autonomy in decision making, socio economics, clean water sanitation and disposal.

Conclusion: Targeted community empowerment is expected to reduce the factors that influence the incidence of stunting such as parenting through feeding and sociodemographic aspects which are strongly influenced by knowledge, the mother's autonomy in decision making, social economy, and environmental sanitation factors. The existence of community empowerment with stunting risk factors aims to increase opportunities, participation, and access to health services.

Keywords: *Community empowerment; stunting; scoping review*

BACKGROUND

Stunting is a chronic nutritional problem that results in indicators of growth problems, where the height of children under five years slows down or does not match their age (WHO, 2013). The World Health Organization (WHO) report stated that the global prevalence of under-fives experiencing stunting in 2020 was 149.2 (63.8%) million children. This number is the highest compared to the number of wasting as 45.4 million (19.4%) million and overweight as 38.9 million children (16.6%) (World Health Organization, 2021). Stunting is a problem that is increasingly found in developing countries, one of which is Indonesia. The United Nations International Children's Emergency Fund (UNICEF), stated that in 2013 one in three children under five was stunted. The incidence of stunting in Indonesia based on data from UNICEF (2013) is estimated to occur in 7.8 million children under five. This makes Indonesia one of the top five countries that have the highest prevalence of stunting under five in the world (World Health Organization (WHO), 2018). In addition to having an impact on physical growth, stunting can affect cognitive skills which result in a child's ability being low so it has an impact on the quality of human resources (HR) and poverty in the country (Tadesse et al., 2020).

According to the 2017 IDHS data after weighting, the percentage of neonatal deaths was 11.7%, and from the results of research Anisa, et al (2021) stated that childbirth complications, maternal age, ANC visits, birth weight, and sex of the baby were associated with neonatal mortality (Anisa et al., 2017). One of the national development priorities listed in the 2020-2024 RPJMN is the handling of stunting, with a target of reducing the stunting prevalence rate in 2024, which is 11.8%. The Indonesian Ministry of Health, in terms of handling stunting, provides a specific nutritional intervention program that is given in the first 1000 days of life. The First 1000 Days of Life (HPK) Movement Program is intended as the most appropriate effort in dealing with stunting because this period is classified as a critical period in a person's growth and development (Kraemer., 2021).

Community empowerment is an activity to strengthen and optimize the empowerment (ability) of community groups, including individuals who experience problems. Empowerment refers to the ability to participate, obtain opportunities and access the resources and services needed to improve the quality of life (both individually, in groups, and society in the broadest sense) (Goudet et al., 2019). Community empowerment can be useful in changing people's behavior for the better so the quality and welfare of their lives can gradually increase. In addition, empowered people feel free to act and can influence the implementation of the stunting reduction optimization program through awareness and participation (Yaya et al., 2020b).

A home visit is an interaction to improve and maintain the health of the family and its members. The method of community approach with a home visit aims to be able to interact directly with the target to be addressed, explore the information needed, provide health education to families about improving health and prevention and increase motivation in encouraging the community to actively and consciously participate in health service programs. Through an empowerment program for community groups who have stunting risk factors with health education between individuals through home visits (Onah, 2021b).

OBJECTIVE

The purpose of this scoping review is to map and identify the latest scientific evidence related to community empowerment with stunting risk factors through a homevisit approach.

METHODS

Scoping review is a type of literature review that aims to map and identify gaps between research articles. Article quality assessment process (Critical Appraisal) is not required in this scoping review (Fulpagare et al., 2019). The steps in determining the articles in this scoping review adopt the steps of Arksey O'Malley and Daniel Levac which include formulating research questions, formulating appropriate articles through identification with inclusion and exclusion criteria, charting data, and article extraction (Arksey & O'Malley, 2015).

Identifying Research Questions

This scoping review uses the PICO (Population, Intervention, Comparison, and Outcome) framework in determining the research articles to be reviewed. The research question in this review article is: “*How is community empowerment with stunting risk factors through a home visit approach?*”

Table 1

PICO Framework

<i>Framework</i>	<i>Keywords</i>
<i>Population</i>	<i>Community empowerment OR Empowerment</i>
<i>Exposure</i>	<i>Home Visit OR Community based intervention*</i>
<i>Outcomes</i>	<i>Stunting OR Stunt* OR Grow* disorder*</i>

Identifying Relevant Articles

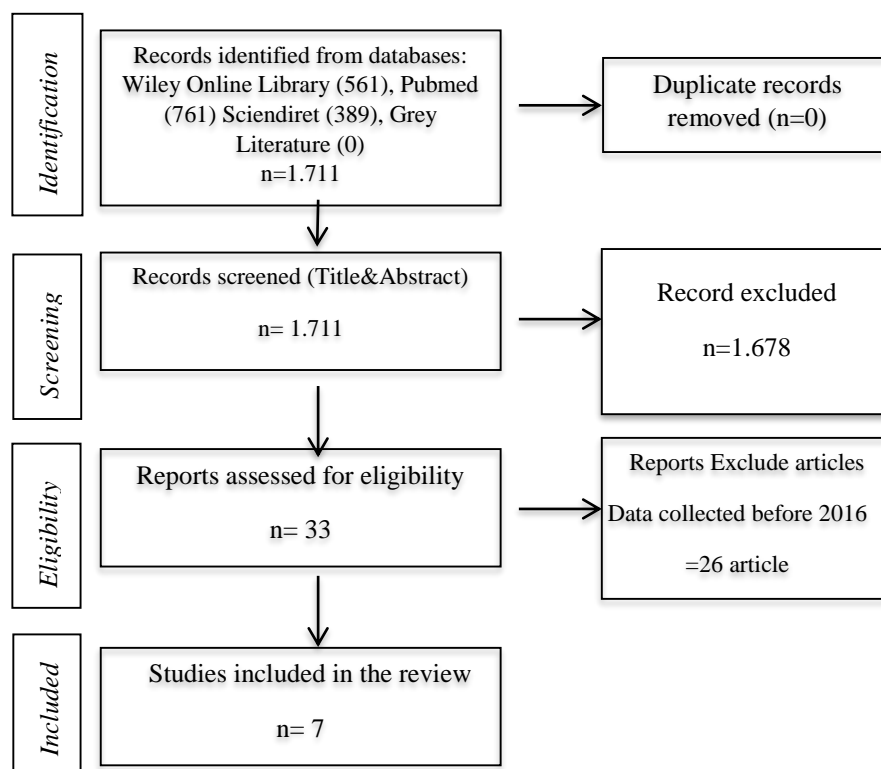
In the search for articles that match the purpose of this scoping review, inclusion criteria and exclusion criteria are determined to facilitate the search for articles. The inclusion criteria in this research article are primary articles from 2017-2022, articles in English and articles in English and original articles on the topic Community Empowerment with Stunting Risk Factors through the Home visit Approach. While the exclusion criteria for articles in this scoping review are research that do not discuss community empowerment related to stunting, book reviews, and articles on Standard Operating Procedures (SOP). In the article search process, the researcher use several strategies in articles search such as the use of truncation (*) and Boolean operators (OR, AND, and NOT). The databases used in this scoping review are Pubmed, ScienceDirect, and Wiley Online Library and also using *Grey literature* from *Google Scholar*. The use of keywords aims to make it easier to find articles that match the inclusion criteria and bibliography (Levac et al., 2016). The keywords used in the review include:

Table 2

<i>Population</i>	<i>Exposure</i>	<i>Outcomes</i>
Community empowerment OR Empowerment	Home visit* OR Community based intervention*	Stunting OR Stunt* OR Grow* disorder*
AND	AND	

Article Selection

In the article selection process, researchers used the framework from Arksey & O'Malley which started from the process of identifying articles from the database, duplication screening, title and abstract screening, screening of articles as a whole, to determining which articles were included in the exclusion category . Documentation is illustrated using Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) flow charts and the PRISMA-ScR Checklist (Arksey & O'Malley, 2015; Tricco et al., 2018).

**Figure 1. PRISMA Flow Chart**

Based on the search for articles using keywords and inclusion and exclusion criteria in 3 Databases and 1 *Grey Literature* . It was found as many as 1,711 articles and then

duplication checks were carried out. Then, the title and abstract of articles were screened for 1,711 articles and 1,678 articles were excluded. 33 articles were screened for full paper and 26 were excluded. 7 articles were reviewed in this scoping review.

Charting Data

Charting data includes article identity such as author, year, article title, purpose, country, type and research method, the sample used, research results, validation, and discussion with other research members (Peters et al., 2017).

No	Writer/ Year/Title	Country	Aim	Research Type, Participant/ Sample Size, Data Collecting Technique, DataAnalysis	Result
A1	Impact of an Integrative Nutrition Package through Home Visit on Maternal and Children Outcome: Finding from Locus Stunting in Yogyakarta, Indonesia (Siswati et al., 2022)	Indonesia	To assess the benefits of family intervention in supplementary feeding programs	Experimental study using pre-test post-test with control group design hold in Yogyakarta, Indonesia on March to May 2022. The family intervention is provided with weekly supplementary feeding for 4 weeks through homevisits.	Supplemental feeding through home visits has been shown to improve health status in both mother and child especially in children weight, height and developmental score. The effectiveness of supplementary feeding showed significant results fourth and eight week after intervention.
A2	Effectiveness of a community-based nutrition programme to improve child growth in rural Ethiopia: a cluster randomized trial (Kang et al., 2017)	Ethiopia	To explore the effectiveness of the CPNP for improving child growth in rural Ethiopia	A cluster randomized trial of a community-based participatory nutrition promotion intervention (CPNP). A total of 1790 children aged 6–12 months were divided into 875 children in the intervention group and 914 children in the control group. The community-based participatory nutrition promotion program (CPNP) intervention that uses a positive deviance approach involves mothers of children under five. This intervention was carried out for 2 weeks using the principle of learning while doing related to child feeding. Anthropometry was assessed every 3 months for 1 year	There was a lower prevalence of stunting in the intervention group 8.1% (p=0.02), compared to 6.3% (p=0.046) in the control group at the end of 12 months after follow-up.
A3	What does women's empowerment	Afrika	To understand the	This is a kuantitatif :desain <i>cross sectional</i> . Data collection used the	The results of the study explained that empowered women's empowerment through home visits

	have to do with malnutrition in Sub-Saharan Africa? (Yaya et al., 2020a)		relationship between women's empowerment and the nutritional status of children in sub-Saharan African countries.	Demographic and Health Survey (DHS) conducted between 2011 and 2017 in 30 countries in sub-Saharan Africa. The sample in this study was women aged 15 – 49 taken using cluster random sampling technique.	had an influence on fulfilling children's needs with a value ($p < 0.001$). This is related to the level of regulation in the household of women to reduce malnutrition among children and pay attention to factors in malnutrition among children as well as prevent disease.
A4	Women's Empowerment and childnutrition in South-Central Asia; how important is socioeconomic status? (Onah, 2021a)	South-Central	To investigate the relationship between women's empowerment, and women's socioeconomic status on nutritional status outcome in children	This research was conducted using the <i>Survey-Based Women's Empowerment Index</i> (SWPER) method with Women's empowerment indexes that are based on readily available cross-country routine surveys, with one of the approaches used is home visits. The sample in this study were women from 5 countries in south-central Asia with a total of 62,015 women. Data collection was carried out using a DHS (<i>Demographic Health Survey</i>) questionnaire.	The results showed that there was a relationship between women's empowerment, the socioeconomic status, and increased nutritional status in children. Empowering women in social independence and decision-making using Community-Based Interventions (Home visit) appear to not only reduce the probability of children being stunted, wasted, or underweight, empowerment in these two domains can potentially increase children's anthropometric nutrition z-scores
A5	Community-Based Interventions to Reduce Child Stunting in Rural Guatemala: A Quality Improvement Mode (Juarez et al., 2021b)	Guatemala	To determine the effectiveness of community-based interventions in reducing stunting in rural Guatemala	This research was conducted using the Quality Improvement model method. The intervention was carried out using the "Plan- Do- Study-Act" method. The intervention provides audit support and feedback to nutrition workers who are on the front line. The interventions provided are: <ol style="list-style-type: none"> 1. Training 2. Individual audit/home visit feedback 3. Creating a to-do list for stunting and monitoring lists, nutritional supplements, and clinical visits 4. Creating a dashboard of stunting monitoring process indicators, clinical visits, and nutritional supplements with 	The proportion of pre-intervention stunting in 2014 was an average of 42.4% and then decreased in 2020 to 30.6%. Meanwhile, based on sensitivity analysis, it was found that the decrease in stunting in children after the intervention was 17% with a p -value = 0.02. These results conclude that the impact of the audit and feedback strategy, one of which is home visits has a good impact on improvements in the indicators of the nutritional component delivery process

individual reviews
every month with
supervisors

The sample used was
households or about 125
165 children during the
2014-2020 period. The
analysis used was Minitab
18, STATA 14, dan R ver
3.6.3

A6	Mapping of Community Empowerment in Prevention Stunting in Kabupaten Wonogiri Through “Sego Sak Ceting” (Suranny & Maharani, 2021)	Indonesia	To determine the stages community empowerme nt activities through Sego Sak Ceting and analyze the effectiveness of programs, one of which is home visits in reducing stunting in Kabupaten Wonogiri	The data was collected by observation, interviews, and literature study. While for the data analysis, the study used qualitative descriptive analysis.	Sego Sak Ceting is an innovation in the health sector carried out in the context of preventing stunting in Kabupaten Wonogiri. The goal to be achieved through the Sego Sak Ceting program is to eliminate all forms of malnutrition, including stunted toddlers, and to fulfill the nutritional needs of adolescent girls, pregnant, and lactating mothers. One of the strategies implemented in the Sego Sak Ceting program is home visits to pregnant women with chronic energy deficiency conditions and babies with low birth weight. The result of the effectiveness of this strategy is able to reduce the percentage of pregnant women with chronic energy deficiency conditions and babies with low birth weight. Stages of community empowerment activities through Sego Sak Ceting are socialization of the program to the targeted community, implementation of activities, monitoring, and evaluation of the implementation of activities. Sego Sak Ceting also increased public awareness and knowledge that the stunting issue is a shared responsibility between local governments, businesses, and the community.
A7	Associations between women’s empowerment and child development, growth, and nurturing care	Sub- Saharan Africa	To find out the relationship between women’s empowerme nt and child development	This study used a cross- sectional method by collecting data from 6 countries in sub- Saharan Africa obtained from the Demographic Health Survey. Through women’s	The results of this study reveal that women’s empowerment has a positive effect on children’s cognitive development at an early age, child growth, and children nutritional status. Empowering women in terms of providing

practices in subSaharan Africa: A cross-sectional analysis of demographic and health survey data (Bliznashka et al., 2021)	, early learning, and nutritional status	Empowerment Interventions, such as: 1. increased access through visits and control over financial and economic resources 2. increased social contacts and resources 3. increased decision-making power; and improved gender attitudes	knowledge about nutrition can affect cognitive growth in children. whereas women who have a role in making decisions on child nutrition will have children who tend to have cognitive problems
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Article Quality Rating

Assessment of article quality is carried out carefully and systematically using a scientific approach (Al-Jundi & Sakka, 2017). Critical appraisal tools used in this review were the Joanna Bridge Institute (JBI) critical appraisal tools and Mixed Methods Appraisal Tools (MMAT). 6 articles used the Joanna Bridge Institute (JBI) critical appraisal tools with the following criteria :

2: Answers are narrated in full and in detail

1: Answers are narrated but incomplete

0: No answer

1 research article used *Mixed Methods Appraisal Tools* (MMAT) used the following criteria:

2: Answers are narrated in full and in detail (Yes)

1: Answers are narrated but incomplete (No)

0: No answer (Unanswered)

After evaluating the quality of the articles, the 7 articles were grouped based on 4 criteria/grades articles with the following conditions:

A : Final Grade 13-16

B : Final Grade 8-12

C : Final Grade 5-8

D : Final Grade 0-4

Based on the results of the quality assessment of 6 articles using (JBI) critical appraisal tools, all articles of quality B (A1, A2, A3, A4, A5, A7) were obtained, and for 1 article (A6) using Mixed Methods Appraisal Tools, the results showed that all question items answered "Yes", or qualified B.

RESULT

Characteristics of Articles

Characteristics of articles by country can be seen in Figure 2 below:

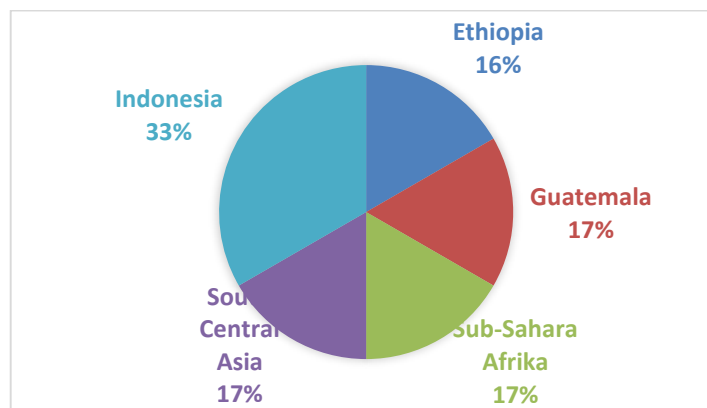


Figure 2. Characteristics of articles by country

Based on the diagram above, it is concluded that the 7 articles reviewed consist of the continents of Africa and Asia. On the African continent, it consists of Africa, Ethiopia, Guatemala, and sub-Saharan Africa, while on the Asian continent it consists of Indonesia and South-Central Asian countries

The characteristics of the article based on the research design can be seen in Figure 2 below:

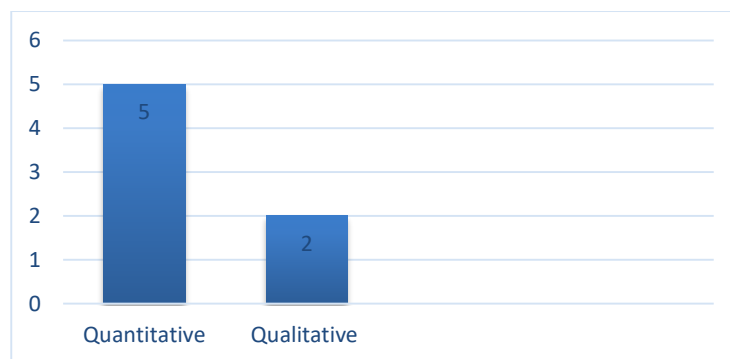


Figure 3. Characteristics of the article based on the research design

Based on the diagram above, it is concluded that 5 of the 7 research articles reviewed used a quantitative research design and 2 research articles used a qualitative research design.

Characteristics of articles based on quality can be seen in Figure 4 below:

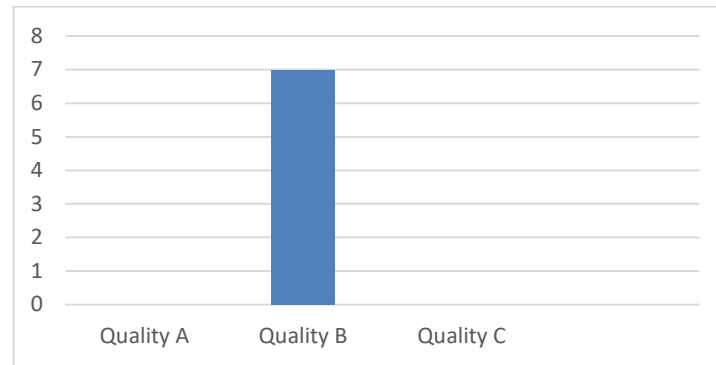


Figure 4. Characteristics of articles based on quality

Based on the diagram above, it is concluded that of the 7 articles that were assessed for quality, all articles were of B quality (A1, A2, A3, A4, A5, A6, A7).

Theme Analysis

Based on the articles that have been reviewed and the quality of the articles assessed, the authors identified the themes in this scoping review.

Table 4.

Analysis and Mapping of research article themes

No	Theme	Sub Theme	Research Articles
1	Parenting	Feeding Practice	A1, A2, A3, A6
2	Socio-Demographic Aspects	Knowledge	A1, A2, A5, A6,A7
		Mother's Autonomy in Decision Making	A3
		Socio-Economic	A4, A5, A6,A7

DISCUSSION

Theme 1: Parenting

Feeding Practice

Empowerment of women and their families increases their ability in knowledge and practice related to children outcomes especially in weight, height and developmental score. Empowerment given to women is proven to provide long-term benefits on nutritional status so that it can prevent stunting (Melesse, 2021). In addition, the feeding practice is

one of the contributing factors to malnutrition, one of which is stunting. Therefore, there is a need for socialization through home visits related to nutritional needs as well as providing knowledge and behavioral changes in the practice of giving the required food (Shilugu & Sunguya, 2019). Appropriate feeding of children is one of the factors that influence the stunting reduction acceleration program in Nepal (Brar et al., 2020). It is related to specific policies on nutrition that health workers emphasize the importance of increasing aid funding and development partners that lead to the expansion of health service providers and to increased capacity to empower maternal, newborn, and child health related to nutrition.

Theme 2 : Socio-Demographic Aspects

Knowledge

The existence of empowerment that increases the mother's knowledge related to nutrition can have an influence on stunting in children (Kumar & Lakhtakia, 2021). In addition, education during pregnancy related to the provision of micronutrients and macronutrients to pregnant women has been shown to prevent stunting in children (Goudet et al., 2019). Empowerment of related families through education provided to individuals, groups, and in the community and monitored through home visits has been proven to be able to provide behavioral changes in families (Islam et al., 2018). Mothers who have a high level of education have sufficient knowledge so that they can influence childcare patterns and understand how to improve children's nutritional status in preventing stunting (Bliznashka et al., 2021). This is in line with research that said that the level of a mother's education greatly affects health status, especially in improving the nutritional status of children (Ogechi, 2014).

Improving maternal education is also an important factor in increasing child height in Nepal. Along with increasing reproductive health services, improving education and empowering women have also been shown to reduce the rate of early marriage which is also associated with the nutritional status of children (Stephens et al., 2013). A woman who has broad and open knowledge is expected to be able to understand all kinds of problems, especially nutrition in children. The focus that is considered on the problem is to find the source of the problem, find solutions. and take precautions so it does not happen or recur. When women with less knowledge, are closed, it will be more difficult to be touched by health workers in providing education, especially nutritional intake for children (Juarez et al., 2021a).

Mother's Autonomy in Decision Making

Autonomy has power in decision making which is a dimension of women's empowerment in the household and significantly women's decision making about the nutritional status of children (Lopez-Morales et al., 2021). A mother's attitude in making household decisions affects the provision of food that is carried out in various ways to fulfill nutritional adequacy to prevent stunting (Yusran et al., 2020). In addition, mothers who are empowered in decision-making can also make it easier to access health services that aim to improve children's health by reducing stunting (Abreha et al., 2020). The

empowerment of women through home visits effectively affects the fulfillment of a good Nutrition Adequacy Rate (RDA) for children (Janmohamed et al., 2020).

The practice of empowering women has been proven to help accelerate stunting reduction. This is based on when a woman gets access to good education to achieve gender equality. The effect will be felt immediately by the whole woman's family. Good education is expected to bring good jobs, increase family income, and increase women's knowledge in solving problems, finding solutions, and making decisions for themselves and their families (Stephens et al., 2013).

Socio-Economic

Socio-economic conditions influence on stunting in toddlers. The low socioeconomic status of the individual affects the limitations of the individual's ability to access food. This is risky because of the limited amount of food to be consumed (Darulis et al., 2021). Low family income risks 3.92 times in producing stunting toddlers. On the other hand, high family income affects the nutritional growth of toddlers, and meets nutritional needs, especially diverse food needs. The intake of toddlers with family conditions with good economic status and having economic access and adequate nutrition will greatly affect the growth of nutritional status in these toddlers (Umaroh et al., 2016). This is in line with the results of research which stated that the diversity of food in each individual is closely related to nutritional status, especially in terms of the economic status of the family (Mlotshwa et al., 2017).

Empowerment of women can improve a person's socioeconomic status so that he can fulfill the nutritional adequacy given to children in preventing stunting. Women's ability to participate in empowerment can affect children's nutritional status (Bliznashka et al., 2021). Empowerment of women is a form of distribution aimed at improving living standards and nutrition, reducing poverty, and urbanization. This is closely related to gender equality in the field of work. Women have equal rights to good job positions along with men. Women also have the right to increase their family income to meet food needs related to the nutritional status of children (Brar et al., 2020).

Rural areas in Guatemala make most household heads work as farm laborers. The daily income they get is only enough to meet their daily food needs but has not been able to meet the necessary nutritional needs. Such a situation is of course one of the factors that allow an increase in stunting rates in rural areas because it is related to the limited primary health services in rural areas (Cunningham et al., 2017).

Clean Water Sanitation and Disposal

The problem of stunting is closely related to all aspects of the child's environment, including the fulfillment of nutrition, health care, and infection (Mbuya & Humphrey, 2016). Clean water sanitation and good disposal have a positive effect on stunting reduction. This is related to the history of infection suffered by the child. Infection greatly affects the growth and development of children due to reduced absorption of nutritional intake (Juarez et al., 2021a). Family empowerment through the home visit method is one

of the efforts made to reduce these problems. Education related to the provision of clean water and maintaining the cleanliness of the sewers greatly affects the occurrence of stunting in children. According to (Luby et al., 2018). Although the provision of nutritional supplementation and counseling can increase family knowledge, it is not certain that it will change the form of healthy living behavior. Everything is related to the obedience of each individual.

The researchers did not collect data directly, but the researchers analyzed of relevant studies that had been previously published so this became a limitation in this scoping review study.

CONCLUSION

Review of research articles using the scoping review method on 7 articles that were reviewed. It is found that women's empowerment greatly affects the health of mothers and families, especially the health of children. Community empowerment can increase the knowledge of mothers and families about the factors that influence the occurrence of stunting so that they can avoid or reduce the incidence of stunting in the family and increase access to maternal and family health services. Empowerment of women is proven to be closely related to increasing women's knowledge of reproductive health, especially the impact of early marriage which is associated with stunting. Empowerment of women through a home visit approach is expected to be able to increase the role and contribution of women in decision- making and help maximize potential in the family, especially related to infant nutrition.

ACKNOWLEDGMENT

We are very grateful to the authors who were involved in writing this scoping review, and we also thank the University of 'Aisyiyah Yogyakarta which has facilitated the preparation of this scoping review.

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