



## PRECONCEPTION HEALTH COUNSELING AND STUNTING PREVENTION LITERATUR REVIEW

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### ABSTRACT

This paper presents the results of a literature review on the importance of preconception health counseling to prevent stunting in newborns. Literature searches refer to the Preferred *Reporting Items for Systematic Reviews* (PRISMA) guidelines. The literature in this study is mostly sourced from online journals accessed from scientific article sites with open access, such as ScienceDirect, PubMed and ProQuest. The strategy used was *the PICOS framework*, resulting in 171 articles. This article was then further analyzed in the title and abstract, and 12 eligible articles were obtained. Various interventions have been carried out to prevent stunting, including improving nutrition through nutrient supplementation. This nutrition intervention must be supported by various sensitive interventions such as education and counseling to improve community knowledge and skills in stunting prevention efforts. In some articles, it is found that counseling and counseling efforts must be carried out using directed and theory-based modules.

**Keywords:** Health counseling, preconception, stunting

### INTRODUCTION

Stunting is a condition of failure to grow caused by various factors, both direct and indirect causes. Direct causes include consumption patterns and diseases. The indirect causes are sanitation, family income, and food insecurity. In some developing countries, low birth weight is also one of the factors causing stunting. (Access, 2020; Young et al., 2018)

Various direct and indirect factors influence the high prevalence of stunting. Efforts to handle the stunting problem have been formulated through various policies and intervention efforts. Many interventions are carried out directly in cases (toddlers & pregnant women). There have not been many intervention efforts in mothers-to-be, which, according to several studies, influence the occurrence of stunting problems in toddlers.

Research conducted in several countries in Asia and Africa concluded that optimal nutrition promotion and intervention in the preconception period, even since adolescence, is believed to have good implications for the quality of pregnancy and baby growth. (Michael Hambidge et al., 2014). Another study that looked at the critical point of nutritional interventions in handling stunting found that adolescence is a period of additional opportunities for nutritional interventions. (Prentice et al., 2013).



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## METHOD

Based on the PRISMA reference, the review stage is to identify articles from the database source (*Identification*), filter articles based on inclusion and exclusion criteria (*screening*), select all accessories that meet the inclusion criteria (*eligibility*) and determine articles that match the design of the research plan.

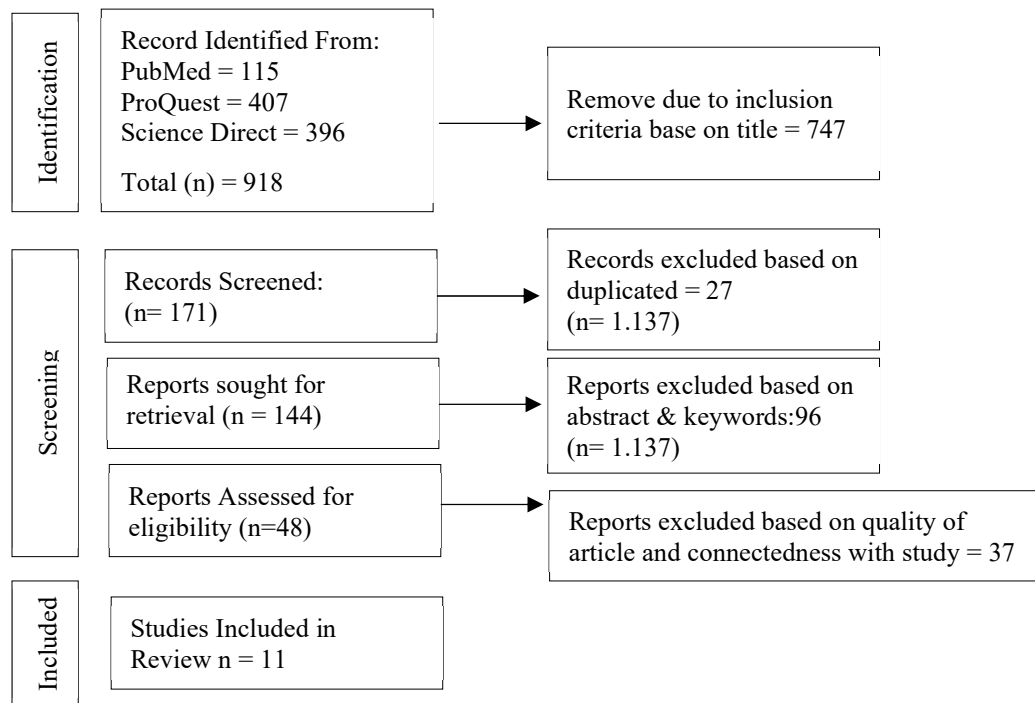


Figure 1. Article Selection Process (PRISMA)

## RESULTS AND DISCUSSION

### A. STUNTING

Stunting is a condition of poor linear growth, and stunting is diagnosed as body length growth based on age less than -2 standard deviations from the median child growth standard set by the World Health Organization (WHO 2006). The impact of these conditions is immediate and long-term, including increased morbidity and mortality, poor child development, increased risk of infections and non-communicable diseases in adulthood, and decreased productivity and economic ability

Stunting is a complex entity that may reflect several etiologies, especially poverty, unbalanced diets and insufficient macro/micronutrient intake. Other things that also play a role in the incidence of stunting are social factors, including family resources and configurations, and the broader political and economic conditions in which the child lives. (Vonaesch et al., 2018).

Other contributors to stunting are malnutrition in prenatal and postnatal ages and systemic infections. However, some studies have found a central role of dysfunction due to enteric bacteria in the environment, a common disorder in the structure and function of the small intestine that has been found to have a high prevalence in children living in areas with poor sanitation conditions (Owino et al., 2016). The first 1000 days of life are factors related to linear growth delay/stunting.

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## **B. PRECONCEPTION NUTRITION**

A series of observational and experimental studies have shown that intra-uterine growth retardation (IUGR), premature birth (PTB) and stillbirth are partly derived from early pregnancy. When the fetus is smaller than expected in the first trimester, there is an increase in the prevalence of PTB and IUGR. (Mook-Kanamori et al., 2010). Low maternal weight gain in early pregnancy, an indication of suboptimal maternal nutrition, has been reported as a specific cause of BBLR caused by effects on gestation length and fetal growth rate.

Since 2013, the World Health Organization (WHO) has begun to emphasize the importance of nutrition interventions and preconception care. On the other hand, stunting is now a focus of the Indonesian government's efforts to handle nutritional problems and produce superior and advanced Indonesian human resources. Stunting is a condition of a short body due to growth failure.

The problem of stunting can be prevented if given the right targets; various sensitive and specific intervention programs can be carried out as stunting prevention programs. In efforts to prevent stunting, priority targets still focus on groups of pregnant women and breastfeeding mothers as well as children under two years old. This target is intended as the target of the program to accelerate nutrition improvement in the first 1000 (thousand) days of life, the 1000 HPK Movement (Sumarmi, 2017)

A study in Ghana in 2018 with the administration of lipid-based nutritional supplements to mothers and babies to see differences in the growth of infants' body length did not find significant differences in the three treatment groups. The difference was found by looking at the nutritional status of preconception mothers. Where mothers with normal nutritional status during preconception have babies with better body length than mothers who are overweight during preconception (Kumordzie et al., 2019). This is proof that the nutritional status of preconception mothers is one of the factors that affect the growth of babies.

## C. PREMARITAL COUNSELING

Premarital Health Counselling (PMHC) has emerged as a trend that has grown almost worldwide. Recognizing the importance of PMHC, many countries have implemented National Screening programs, while some countries, such as the UAE, have required couples to undergo a pre-marriage screening process. Government hospitals and health institutions in India have started providing these facilities. However, their use is still limited due to certain barriers such as lack of adequate knowledge, educational, religious and cultural reasons and fear of examination results. (Puri et al., 2016).

Research conducted on migrants in China related to the impact of counseling on folic acid supplement intake found a positive relationship between preconception counseling and preconception folic acid supplement intake (You et al., 2015). This study recommends improving preconception counseling, especially through intervention studies focusing on certain age groups (20-24 years) and families with more than one child and providing in-depth knowledge about maternal health care.

Based on qualitative research, preconception services in Nigeria found no specific guidance regarding preconception services in health services. Preconception services received by the community are still undirected and unsystematic, so the country has no directional guidelines for preconception care services. (Ojifinni & Ibisomi, 2020).

Research in Malawi that included pregnant women in the first trimester found that counseling efforts positively impacted increasing dietary diversity scores and changes in eating patterns. (Ziyenda Katenga-Kaunda et al., 2020). In addition, research in Ethiopia that studies counseling carried out using standardized guidelines increases the proportion of pregnant women who have proper dietary practices (Demilew et al., 2020a), They are effectively improving the nutritional status of pregnant women. (Demilew et al., 2020b), Which ultimately affects the baby's birth weight. (Demilew et al., 2020c). The results of this study recommend the need to design a theory-based counseling and counseling model.

The study, which was carried out for one year in Ethiopia, showed that counseling is one intervention that can impact the quality of pregnancy. It was carried out using standardized modules to achieve the final goal of counseling implementation.

The results of nutrition education research conclude that the following elements greatly determine the effectiveness of nutrition education. These elements include

1. Nutrition education interventions are more likely to be effective if they use educational strategies
2. Effective nutrition education includes consideration of the school environment
3. Interventions in larger communities can improve school nutrition education

## CONCLUSION

Several studies have found that stunting prevention efforts are quite effective before 1000 HPK, in this case, before conception. The specific form of intervention carried out so far in supplementation is highly dependent on the availability of supplements. Not many interventions have implemented community empowerment to carry out stunting prevention efforts independently.

Some studies suggest sensitive interventions should underpin specific intervention efforts. One form of sensitive intervention that can be done is through premarital nutrition counseling. To support the success of counseling, the counseling and counseling model carried out using standardized modules based on theory will positively impact the quality of pregnancy and the fetus conceived.

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