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FACTORS AFFECTING BAD NUTRITION IN CHILDREN : A SYSTEMATIC REVIEW

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ABSTRACT

Malnutrition is a medical condition caused by inadequate intake, which is usually associated with malnutrition due to insufficient food intake, poor absorption, or excessive loss of nutrients. Malnutrition is caused by a lack of protein, calories or total energy. In toddlers, malnutrition is characterized by resistance to growth hormone (GH). This criterion used original articles, published in English and Indonesian. Articles published in the last 10 years. The review method used systematic review using PRISMA For Systematic Review, which was obtained from the Pubmed, Ebsco, Wiley database. It aims to be able to find out the factors which affect malnutrition in infants.
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INTRODUCTION

Nutrition in Indonesia is one of the main issues of human development. As a country with a complex and diverse population, Indonesia faces the dynamics of malnutrition. (Olsen et al., 2020)

Malnutrition, including stunting and underweight, is one of the main causes of morbidity and mortality in children under .(Joseph et al., 2014)

Malnutrition is a medical condition caused by inadequate intake, which is usually associated with malnutrition due to insufficient food intake, poor absorption, or excessive loss of nutrients. (Rahmawati et al., 2021)

Malnutrition is caused by a lack of protein, calories or total energy. In toddlers, malnutrition is characterized by resistance to growth hormone (GH).(Muhoozi et al., 2016)

Malnutrition or malnutrition interferes with growth hormone, such as lack of protein, zinc, vitamins, causing low insulin-like growth factor I (IGF-1) and growth hormone (GH). (Sari et al., 2021)

The effects of malnutrition, in addition to causing death, can also interfere with intellectual growth and development, with each person experiencing malnutrition reportedly at risk of losing 10-13 IQ points. May cause malnutrition.(Folayan et al., 2020).

Several studies have included preschool children in their study populations. Fewer studies have provided age-disaggregated data to examine the impact of the pre-two year critical growth window and its different sequelae.(Cascales & Olives, 2013)

Fewer studies have provided age-disaggregated data to examine the impact of the critical growth window before two years of age and the different sequela.(Schultink et al., 2021)

Early childhood is a period of growth and very rapid development. pesat. (Hecht et al., 2015)

Toddlers over the age of one year have started to understand language and have a strong sense of curiosity.(Baye et al., 2018)

The low quality of MP-ASI (supplementary food for breast milk) and inappropriate maintenance practices lead to insufficient energy requirements and certain micronutrients, especially iron (Fe) and zinc (Zn). Feeding is one of the factors that affect the nutritional status of infants. (Alexy et al., 2022)

In this regard, the provision of adequate complementary food for ASI, both in quantity and quality, is very important. (Riley et al., 2018)

Much of the discussion in the field of complementary feeding focuses on the "what" and "when" a child should be fed, with little focus on the concept of "how" to feed a child .(Cheikh Ismail et al., 2022)

There are many causes of malnutrition, but in general there are two factors, namely direct and indirect causes. (Huysentruyt et al., 2013).

Lack of food or nutritional intake for toddlers is caused by factors such as economic factors, education, knowledge and food safety.(Dubedout et al., 2016)

Malnutrition can be overcome by starting to increase maternal nutrition knowledge. ibu. (Sari et al., 2021)

METHOD

Systematic Review is a system review review that has the objective of identifying knowledge gaps, determining research agendas, identifying implications for decision-making and exploring widely through available evidence by mapping the concepts underlying research, sources of evidence and the types of evidence available (Tricco et al., 2016). The purpose of a systematic review is to map evidence on a topic of discussion based on the selected literature and identify the main concepts, theories, sources, and knowledge gaps (Tricco et al., 2018).

A literature search was carried out by accessing online electronic databases from Pubmed, Wiley, and Ebsco. System Review is a review of systems that have the objective of identifying knowledge gaps, determining research agendas, identifying implications for decision-making and exploring extensively through the available evidence by mapping the concepts underlying the research, sources of evidence and the types of evidence available.

The process of this systematic review was carried out using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses for Systematic Review (PRISMA-ScR) guidelines. The PRSIMA-ScR is designed to help readers (such as researchers, publishers, commissioners, policy makers, healthcare providers, guideline developers, and patients or consumers) have a better knowledge of related terminology, important concepts, and important elements to report for scoping reviews. . The following are 22 assessment steps in writing systematic reviews: title, Structured Summary, Rational, Objective, Protocol and Registration,

Eligibility Criteria, Information Sourch, Search, Selection of Sources (Optimal), Data Charting, Data item, Critical Appraisal Of Individual Of Evidence, Synthesis Of Result, Selection of Sources of Evidence, Characteristic of Sources of Evidence, Critical Appraisal Within Sources of Evidence , Results of Individual Sources of Evidence, Synthesis of Evidence, Limitations and Conclusions

RESULTS AND DISCUSSION

The results of a literature review of 7 journals, Baye Kaleab, et.al,. (2018) The anthropometric index is not related to energy intake, but the hemoglobin concentration is ($\rho = 0.178$, $P < 0.03$; . The results for both positive and negative disorders are inconsistent, possibly because of the difficulty in classifying them into factors that promote or prevent intake Hecht Christina, et al (2015), in this study BMI <2 SDS was found in 7.0% of patients on admission to the hospital (range 4.0-9.3% across countries) with a higher prevalence in infants (10.8%) and toddlers aged 1e2 years (8.3%) $p < 0.001$). Sari, et.al,. (2021) The median serum GH level in malnourished children was found to be lower, namely 1.25 ng/mL (minimum–maximum: 0.10–6.19 ng/mL) compared to well-nourished children, 11.01 ng/mL (1, 72–15.64 ng/mL). According to Rahmawati, et.al, (2021) The median serum IGFBP-3 level in malnourished children was found to be lower, namely 0.35 mcg/mL (minimum–maximum: 0.04–1.52 mcg/mL) compared to malnourished children. good 1.52 ng/mL (minimum–maximum 0.47–3.17 mcg/ml). The findings of Muhoozi, et.al, (2016) All indicators of nutritional

status except HCZ are positively and significantly related to the developmental domain. WAZ is the main predictor for all development domains. Cheikh Ismail, et. al, (2022) Overall, 4% of children are malnourished, 8% are underweight, 15% are stunted, 18% are at risk of being overweight, and 7% are overweight and obese. 95% of infants were ever breastfed and 37% were exclusively breastfed at 6 months of age. About 98% of babies get complementary foods introduced on time. Joseph, et.al, (2014) sixty nine percent of children have one or more siblings. Approximately half of children (50.1%) had received fluids (other than water and water-based drinks) or food before six months of age. Baseline sociodemographic and epidemiologic characteristics were similar in the 880 children whose stool specimens were examined by the Kato-Katz method compared with the entire study population of children (n = 1760) (results not shown).

CARRIER-INFANT FEEDING BEHAVIOR IS ASSOCIATED WITH ENERGY INTAKE IN AGED INFANTS

Knowledge is not a direct factor affecting the nutritional status of toddlers, mother's nutritional knowledge has an important role. Because as long as they have sufficient knowledge about health, a person can find out various kinds of health problems that may arise. Then based on direct observations made.

The results showed that the anthropometric index was not related to energy intake, but the hemoglobin concentration was ($\rho = 0.178$, $P < 0.03$; . The results for both positive and negative disorders were inconsistent, perhaps because of the difficulty in classifying them into factors that promote or prevent food supply.

DISEASE-RELATED MALNUTRITION CORRELATED WITH LONG HOSPITAL STAY IN CHILDREN

Income level is a factor that determines the quality and quantity of food consumed. The family's ability to buy food depends on the size of the income, families with limited income will most likely be unable to meet their food needs, especially to meet the needs of nutrients in the body. BMI <2 SDS was present in 7.0% of patients on admission (range 4.0-9.3% worldwide) with a higher prevalence in infants (10.8%) and toddlers aged 1e2 years (8.3 %). p<0.001).

MALNUTRITION IN CHILDREN ASSOCIATED WITH LOW GROWTH HORMONE (GH) LEVELS.

The effects of malnutrition, in addition to causing death, can also interfere with intellectual growth and development, with each person experiencing malnutrition reportedly at risk of losing 10-13 IQ points. The median serum GH level in malnourished children was found to be lower, namely 1.25 ng/mL (minimum–maximum: 0.10–6.19 ng/mL) compared to well nourished children, 11.01 ng/mL (1.72–15 .64ng/mL.

MALNUTRITION IN CHILDREN ASSOCIATED WITH LOW BINDING OF GROWTH FACTORS LIKE INSULIN

Malnutrition is a medical condition caused by inadequate intake, which is usually associated with malnutrition due to insufficient food intake, poor absorption, or excessive loss of nutrients. The median serum IGFBP-3 level in malnourished children was found to be lower, namely 0.35. mcg/mL (minimum–maximum: 0.04–1.52 mcg/mL) compared to well-nourished children 1.52 ng/mL (minimum–maximum 0.47–3.17 mcg/ml).

NUTRITIONAL STATUS AND DEVELOPMENT AMONG CHILDREN AGED 6 TO 8 MONTHS IN SOUTHWEST UGANDA: A CROSS-SECTIONAL STUDY

Nutrition in Indonesia is one of the main issues of human development. As a country with a complex and diverse population, Indonesia faces the dynamics of malnutrition. Malnutrition, including stunting and underweight, is one of the main causes of morbidity and mortality in children. All indicators of nutritional status except HCZ have a positive and significant relationship with the developmental domain. WAZ is the main predictor for all development domains predicted. The number of abortion incidents examined in this study was spontaneous abortion.

CONCLUSION

This systematic review of the review found many studies discussing the factors that influence malnutrition in toddlers. Factors affecting malnutrition in toddlers are divided into four major themes, namely influencing factors, early childhood factors and child development factors. Growth and development delays are still a health problem for early childhood and require the best treatment. It is hoped that medical staff can make efforts to socialize and prevent developmental delays, so as to prevent developmental delays in children as early as possible. Furthermore, the next researcher must accept the results that have been done.

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