
The Role of the Family in Preventing Child Wasting: A Systematic Literature Review

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ABSTRACT

Wasting is one of the public health nutrition problems in developing countries, including South Asia, Africa, and Indonesia. This condition can lead to an increased risk of death in children under five years of age and affect their physical and cognitive development. Research shows that, in addition to nutritional factors, the role of the family, including parenting, feeding, and social support, plays a significant role in preventing and overcoming wasting in children. This systematic literature review aims to explore the role of families in preventing wasting in children, focusing on factors that may influence its incidence. This study used a systematic literature review (SLR) approach, searching across various academic databases, including Scopus. The selected articles analyzed family factors that contribute to the occurrence of wasting in children, including the role of mothers, parental education, household economic status, and social support. Data were collected from various surveys and studies in countries with a high wasting prevalence, including those in South Asia and Africa. The analysis showed that family factors, such as the mother's education level, nutritional knowledge, good parenting, and access to health facilities, played a significant role in preventing wasting in children. In addition, families with low socioeconomic status, limited access to clean water, and poor sanitation are more at risk of wasting events. Some effective family-based interventions include providing nutrition education to parents, supplemental feeding programs, and increased social support for high-risk families. The role of the family is very important in preventing wasting in children, especially through improved parenting behaviors and nutritious feeding. Waste prevention programs need to actively involve families by providing nutrition education and adequate social support, as well as access to health facilities.

Keywords: Prevention Of Wasting, Role, Family, Children, Social Support, Parenting Behavior.

INTRODUCTION

Wasting is a malnutrition condition characterized by significant underweight

when compared to the child's height. This condition indicates acute malnutrition and

is at high risk of causing death in children under the age of five(1). Based on data from the World Health Organization (WHO), it is estimated that around 45.4 million children in the world experienced wasting in 2020, and more than 6.6% of the global child population experienced this condition. The high prevalence occurs in South Asia and Sub-Saharan Africa, where factors such as poverty, limited access to nutritious food, poor sanitation, and limited health care are the main drivers (2–4).

Wasting in children is closely related to nutritional and environmental factors, including food security, sanitation, and the quality of health services (5). Socioeconomic factors, including the mother's education level and family economic status, also play an important role in determining whether a child is at risk of wasting (6). However, several studies show that the family, especially the mother, plays a significant role in coping with this problem. Good parenting, knowledge of nutrition, and proper feeding habits have a significant impact on preventing wasting in children (7). In many developing countries, including Indonesia, family-based interventions for wasting prevention have not been optimal. Studies show that although many nutrition and health programs are designed to prevent malnutrition in children, family factors, especially in terms of nutritious feeding, remain a major challenge (8). In this condition, the family plays a very important role, providing nutritious food, clean water, and social support in facing health challenges (9).

Factors that affect the incidence of wasting in children include not only insufficient nutritional intake but also the mother's health status during pregnancy, the mother's diet during breastfeeding, and the level of sanitation in the living environment (2). Studies have shown that higher levels of maternal education are associated with a better understanding of child nutrition and healthier, more nutritious feeding practices.

In addition, mothers with knowledge of health and nutrition tend to take their children more often for necessary health care, such as immunizations and regular nutritional checkups (3,10). However, although the role of the mother is very important, environmental and social factors also influence the incidence of wasting. Studies conducted in different countries show that children living in areas with limited access to clean water and poor sanitation are more susceptible to infections that can worsen their nutritional conditions, thereby increasing the risk of wasting (6,11). In addition, the family's socioeconomic status has a significant influence. Children from low-income families and those with limited access to nutritious food are at higher risk of wasting (12).

Addressing wasting in children cannot be done in isolation, but requires a multisectoral approach involving families, governments, and the wider community. Family-involved interventions, such as nutrition education for mothers, supplemental feeding for children, and increased access to basic health services, are essential to preventing wasting (7). Studies in Indonesia show that families who actively monitor child growth and have a good understanding of nutrition are more likely to prevent wasting (8,13). On the other hand, although various nutrition programs and interventions have been implemented, many have not succeeded in significantly reducing the prevalence of wasting. This suggests that the issue requires a more holistic, evidence-based approach. Programs that involve families as agents of change in wasting prevention should be complemented by effective education on healthy eating behaviors, increased access to sanitation and clean water facilities, and family economic empowerment to increase food security(14). This research study can provide a clearer picture of the role of the family in preventing wasting in children.

This study aims to evaluate the factors that affect the incidence of family role-based wasting. Thus, efforts to prevent wasting in children can be more effective and

sustainable by involving all related parties, especially families, in creating an environment that supports healthy child growth and development.

METHOD

This study uses a systematic literature review (SLR) to explore the role of the family in preventing wasting in children. This SLR aims to identify, analyze, and synthesize findings from relevant studies on family factors that influence the incidence of wasting in children, and to evaluate family-based interventions that are effective in preventing it. After conducting an

internet search, 574 articles were found to be relevant to the research topic. Of the 361 articles, 154 were selected based on titles. The researcher then reviewed the abstracts of 154 articles and identified 7 relevant articles. From the 7 articles, the researcher then reviewed the full content of each. The process of selecting articles can be seen in the diagram below:

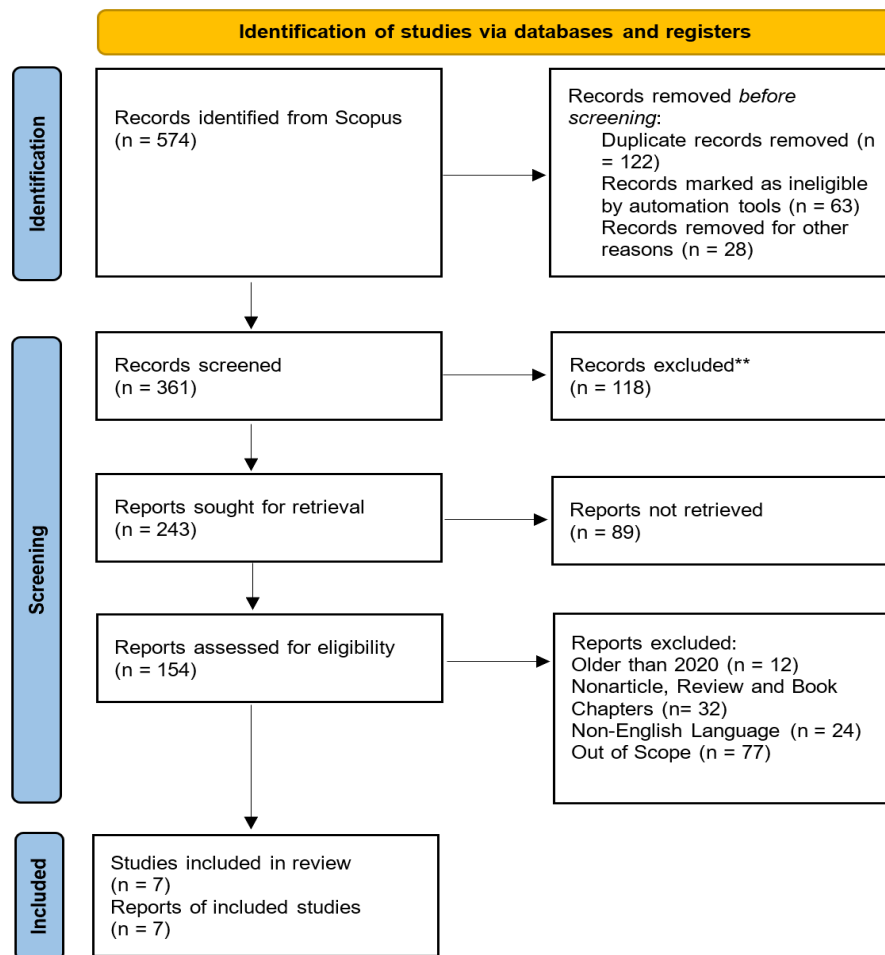


Figure 1. The PRISMA flow diagram detailing the screening and selection process of literature.

Inclusion and Exclusion Criteria

This research involves articles that meet the following criteria:

a. Criteria included:

1. Research focused on the role of the family in preventing wasting in children.
2. Articles published in academic journals, research reports, or

publicly accessible documents between 2010 and 2025.

3. Research that includes quantitative or qualitative data on the role of parents, especially mothers, in wasting prevention, as well as analyses of social, economic, and environmental factors that affect the incidence of wasting.
4. The research was conducted in developing countries with high wasting prevalence, including those in South Asia, Africa, and Indonesia.

b. Exclusion criteria:

1. Research that does not address the role of the family or that focuses only on medical or technological aspects without considering social and cultural factors.
 - 1) Articles not available in English or Indonesian.

Data Sources and Article Search

The articles used in this SLR were obtained through systematic searches in various academic databases and repositories, including Scopus and Google Scholar. Keywords used in searches include "family roles", "child wasting", "nutrition", "child malnutrition prevention", "caregiving behavior", and "parental education". This search was limited to peer-reviewed articles that discussed research results from countries with a high prevalence of wasting.

Article Selection Process

The article selection process is carried out in several stages:

1. Initial Screening: Articles identified through initial searches are reviewed in their abstracts to assess their relevance to the research topic. Articles that are irrelevant or that do not meet the inclusion criteria are removed.
2. Full Screening: Articles that meet the initial criteria are read in full to evaluate methodologies, outcomes, and findings related to families' roles in wasting prevention. Research that has

quantitative or qualitative data that can be evaluated in depth is included in the synthesis.

3. Critical and Codified: Each accepted article is assessed using a research quality assessment tool to evaluate its validity and reliability. The researcher recorded the factors that affect outcome wasting in the family's role.

Data Analysis

The data obtained from the selected articles were then systematically analyzed using the qualitative synthesis method. This approach is used to identify key themes that emerge from existing articles, including:

- 1) Family factors related to wasting prevention (e.g., parenting, maternal education, family income, social support).
- 2) The role of mothers in providing proper nutritional intake and child care.
- 3) Family-based interventions implemented and evaluated in related studies.
- 4) The relationship between socioeconomic factors and the incidence of wasting in children.

Once these themes were identified, the researchers synthesized the relevant findings and concluded that various family-based interventions are effective for wasting prevention.

Quality Assessment

To ensure the quality of the results obtained, each article analyzed is assessed using standard guidelines for quantitative and qualitative research. This assessment includes:

- 1) Research design strengths: Quantitative research is assessed based on data collection methods, sample size, and statistical analysis. Qualitative research is assessed based on data collection methods (interviews, focus group discussions, etc.) and depth of analysis.
- 2) Limitations of the study: The researcher also noted the limitations reported in the article, including

limitations in generalizing the findings, potential bias, and the analysis methods used.

RESULTS AND DISCUSSION

The selected research articles used quantitative and qualitative approaches during 2017-2025, with 7 articles included in the systematic literature review analysis related to the role of families in preventing wasting in children. Topics covered in the

article include food waste, child nutrition, family-based interventions, and environmental sanitation and health. Details of the relevant articles are presented in Table 1.

Table 1. Summary of Selected Research Findings on the Role of Family in Preventing Wasting in Children

No	Researcher Name	Judul Penelitian	Purpose	Method	Research Results/Findings
1	Harding, K. L., Aguayo, V. M., Webb, P.(2)	Factors associated with wasting among children under five years old in South Asia	Examine the factors associated with wasting in children in South Asia and their impact on children's health.	Analysis of secondary data from demographic and health surveys in Bangladesh, India, Nepal, Pakistan, Afghanistan, and the Maldives using multivariate logistic regression methods.	Factors related to wasting include the child's age (0-5 months), low maternal BMI, household economic status, and access to clean water and sanitation. Prevention programs should focus on the early period of life and on the mother's health before and during pregnancy.
2	Tamir, T. T., Zegeye, A. F., Workneh, B. S., Ali, M. S., Gonete, A. T., Techane, M. A., Wassie, M.(3)	Childhood wasting and associated factors in Africa: evidence from standard demographic and health surveys from 35 countries	Assess the prevalence and factors associated with wasting in children in 35 African countries.	Analysis of secondary data from the Demographic and Health Surveys (DHS) of 35 African countries used a mixed logistics regression model to analyze factors	The prevalence of wasting in Africa is 7.16%. Factors related to wasting include economic status, maternal education, not getting ANC (antenatal care), and home births. Environmental factors, such as water sources and sanitation facilities, also play a role.

				associated with wasting.	
3	Permatasari, R. D., Sulistyawati, H., Mildiana, Y. E.(7)	Family roles and the incidence of wasting in toddlers: A study at Pulo Lor Health Center, Jombang Regency	Researching the relationship between the role of the family and the incidence of wasting in toddlers at the Pulo Lor Health Center, Jombang.	The design of a quantitative analytical research with a cross-sectional approach, using a total sampling technique on 12 families with toddlers who experienced wasting.	The findings suggest that the family's inadequate role in nutritional planning and feeding habits increases the risk of wasting in children. A significant influence was found between the implementation of family roles and wasting incidence ($p = 0.025$).
4	Soviyati, E., Sulaeman, E. S., Sugihardjo, I., Wiboworini, B.(8)	Effect of applying the health promotion model in stunting prevention and behavior control in Indonesia	Evaluating the effectiveness of the implementation of health promotion models in stunting prevention and behavioral control in mothers in Indonesia.	A quantitative analytical study with a cross-sectional approach using a survey of 228 mothers of stunted children in Indonesia.	The important roles of maternal education, exclusive breastfeeding, sanitation, and social support in preventing stunting and wasting. Variables that affect preventive behaviors include self-efficacy, social support, and maternal education.
5	Ruel, M. T., Ashorn, P., Berkley, J. A., Dewey, K. G., Golden, K., Huybregts, L., McCaul, M., Naude, C. E., Weise Prinzo, Z., Daniel, A. I.(6)	Prevention of wasting and nutritional oedema: evidence gaps identified during WHO guideline development	Highlight gaps in the evidence on wasting prevention and nutritional edema, and provide recommendations for effective interventions.	The commentary is based on a literature review and on discussions with the WHO guideline development group, analyzing evidence on wasting prevention.	A large gap exists in the evidence on the effectiveness of wasting prevention interventions, especially regarding strategies targeting vulnerable groups and the implementation of multisectoral programs. Prevention programs must be evidence-based and tailored to the local context.

6	Brander et al.(15)	Preventing Relapse From Wasting: The Role of Sociodemographic, Child Feeding, and Health Care Determinants and of Wasting Prevention Interventions in Burkina Faso and Mali	Assess the prevalence and factors associated with wasting among children in 35 African countries.	Using secondary data from Demographic and Health Surveys (DHS) surveys of 35 African countries, and analysis using a mixed logistics regression model to identify wasting-related factors.	The prevalence of wasting in Africa is 7.16%, with related factors including economic status, maternal education levels, and access to sanitation and clean water facilities.
7	Wulandari et al..(16)	Community-Based Insights on Maternal Nutrition Knowledge and Its Role in Preventing Stunting and Wasting in Rural Indonesian Children	Assessing the application of the health promotion model in stunting prevention and behavioral control in mothers in Indonesia.	Quantitative research design with a cross-sectional approach used survey techniques on 228 mothers with children who were stunted in Indonesia.	The role of social support, self-efficacy, and good sanitation was found to have a significant effect on stunting and wasting prevention behavior.

Based on a synthesis of seven articles on the role of the family in preventing wasting in children, the analysis shows that family members, especially mothers, have a significant effect in preventing wasting in children. The findings obtained from the articles that have been analyzed are the role of the family in providing nutritious food, family socioeconomic factors, social support and community role, maternal education and nutrition knowledge, the role of breastfeeding and complementary foods of breast milk, environmental conditions

and access to sanitation, and effective family-based interventions.

Wasting is an acute form of malnutrition that greatly affects children under the age of five. In contrast to stunting, a chronic nutritional problem, wasting occurs when a child loses weight relative to their height (17). This problem not only increases the mortality rate in children but also affects their physical and cognitive development. One factor that greatly affects the incidence of wasting is the role of the family. Based on the systematic results of the literature review in this discussion, the

findings of the synthesized articles will be explained in detail, involving factors such as:

The Role of the Family in Nutritious Feeding

Several studies show that family provision of nutritious food, especially by mothers, significantly affects children's nutritional status. The mother's education factor is closely related to the mother's ability to plan nutritious meals and meet the nutritional needs of children. In countries such as India and Bangladesh, educated mothers are more likely to feed their children healthy foods, thereby reducing the risk of wasting (18,19). One of the findings from a study conducted in Pulo Lor, Jombang, showed that families with a strong role in meal planning, such as providing nutritious food that meets children's needs, have a lower risk of experiencing wasting events (7). In addition, mothers with good knowledge of the importance of exclusive breastfeeding and supplemental feeding have healthier children and avoid wasting (20). One of the most important factors in preventing wasting in children is providing nutritious food. Based on research by Harding et al. (2018) and Tamir et al. (2025), it was found that the family, especially the mother, plays a major role in ensuring that children receive adequate and balanced nutrition. In many countries, including India and Bangladesh, educated mothers are more likely to provide their children with healthy, nutritious food, thereby reducing the risk of wasting. Mothers with higher levels of education are better able to access information about child nutrition and apply it in their daily lives (2,3,15).

Research in Pulo Lor, Jombang, by Permatasari et al. (2024) also revealed that families who actively participate in planning and providing nutritious food have healthier children. This includes supplemental feeding rich in energy and protein after six months of age, which is a critical period in a child's growth. This

shows that nutrition education for mothers and families is essential to prevent acute nutritional problems such as wasting (7). Furthermore, a study in Kenya by Sidze et al. (2026) found that children from families with greater nutritional knowledge tended to have a healthy weight. They provide food appropriate to the child's developmental stage and pay attention to the quality of the food. Thus, the role of the family, especially regarding nutritional knowledge, is highly influential in preventing wasting (21).

Socioeconomic Factors and Their Impact on Wasting

The family's socioeconomic status also plays a significant role in preventing wasting. Some studies have found that children from low-income families are more at risk of wasting compared to children from more economically well-off families (22). Tamir et al. (2025) noted that the prevalence of wasting in Africa, particularly in countries with high poverty rates, is much higher. This factor is related to limitations in accessing nutritious food, health facilities, and adequate sanitation (3). In Indonesia, a study by Soviyati et al. (2023) found that low economic status is directly associated with a high prevalence of wasting among children. Low-income families often face difficulties in providing adequate and nutritious food for their children, leading to malnutrition and increasing the risk of wasting. Economic limitations also affect access to quality health services, which are important for preventing and treating wasting conditions in children (8).

A family's socioeconomic status, including income levels, parental employment, and access to basic facilities, also plays an important role in preventing waste. In many studies, children from low-income families or living in areas with limited access to health services and clean water are at greater risk of wasting (20,23). Research in Ghana also found that families with higher economic status had a lower prevalence of wasting, while families with

low incomes and limited access to good sanitation were more prone to child nutrition problems (20). In addition, poverty is also associated with a lack of access to clean water and proper sanitation, which is another risk factor for wasting incidents. Tamir et al. (2025) note that children living in households without access to clean water or adequate sanitation facilities are more susceptible to infections, such as diarrhea, which worsen their nutritional status (3). Infections caused by poor sanitary conditions will worsen wasting conditions, as they lead to decreased appetite and decreased ability of the body to absorb nutrients (24).

Maternal Education and Nutrition Knowledge in Preventing Wasting

Maternal education is a key factor in wasting prevention. Based on data analysis from various studies, including those by Harding et al. (2018) and Tamir et al. (2025), it is known that mothers with higher levels of education are better able to manage their children's nutrition. They better understand the importance of nutritious feeding and are more involved in maintaining their children's health, including regularly taking children to health facilities for nutrition and health checkups. Mothers' education not only affects their knowledge of nutrition but also their behavior in providing exclusive breastfeeding to their babies. Based on research by Permatasari et al. (2024) in Pulo Lor, Jombang, well-educated mothers are more likely to provide exclusive breastfeeding during the first 6 months of a child's life, an important period for preventing acute malnutrition and reducing the risk of wasting (6,7). Exclusive breastfeeding helps children get all the nutrients they need for growth, strengthens the immune system, and prevents infections that can lead to wasting (25). Research across various countries shows that maternal education plays a significant role in preventing wasting. Mothers with higher levels of education tend better to understand

the importance of balanced nutrition for their children and are better able to plan appropriate meals for their children's age and nutritional needs. Well-educated mothers are also more likely to access health services and immunizations necessary to prevent infections that can lead to weight loss and worsen wasting conditions (26,27).

Social Support and the Role of Community in Wasting Prevention

Social support also has a very important role in preventing wasting in children. Based on research by Ruel et al. (2025), families who receive social support from extended family and the community are better able to provide high-quality care for their children. This social support includes access to public health programs, food assistance, and health facilities that can help families cope with child nutrition challenges (6). Community-based programs that involve families in child growth monitoring and nutritious feeding have shown positive results in reducing the prevalence of wasting. This can be seen in a study in Indonesia conducted by Soviyati et al. (2023), which found that increased social support for mothers, such as the presence of nutrition learning groups in the community, contributed to a decrease in the prevalence of wasting in some areas (8,28). In addition to economic and educational factors, social support and the role of the community were identified as important factors in preventing wasting in children. Some studies have shown that families who receive social support, both from extended families and communities, are better able to provide good care for their children, including in terms of nutritious feeding and addressing challenges related to children's health (16). Community-based interventions that involve families in monitoring child growth and nutrition, as well as in providing nutritious food and nutrition and health information, are effective in reducing the prevalence of wasting. Programs like these increase parental awareness and give them

the tools they need to better care for their children (29,30).

The Role of Breastfeeding and Complementary Foods for Breastfeeding

One of the consistent findings in the studies analyzed is the importance of exclusive breastfeeding and complementary foods (MP-ASI) in preventing wasting in children (31). Exclusive breastfeeding during the first six months of a child's life helps meet the baby's basic nutritional needs and strengthens their immunity to infections that can cause wasting. Research by Permatasari et al. (2024) shows that late or unattended exclusive breastfeeding can cause children to be more susceptible to malnutrition conditions (7,32). Nutritious complementary foods, given after six months of age, are also important for preventing wasting (33). Various studies, including those conducted by Harding et al. (2018) and Tamir et al. (2025), show that children who are fed complementary foods that match their nutritional needs tend to have better nutritional status and a lower risk of wasting (2,3). Exclusive breastfeeding during the first six months of a child's life is also an important factor in preventing wasting. Some studies show that exclusive breastfeeding not only provides optimal nutrition for the baby but also boosts the baby's immune system and prevents infections that can lead to wasting. Mothers who do not exclusively breastfeed or are late in providing complementary foods have children who are more susceptible to malnutrition and wasting (34,35).

Environmental Conditions and Sanitation Access

Environmental conditions, especially sanitation and access to clean water, have a major impact on the incidence of wasting in children. Research by Tamir et al. (2025) and Soviyati et al. (2023) shows that children living in environments with poor sanitation and limited access to clean water are more susceptible to infections that can affect their nutritional status (3,8).

Infections caused by poor water quality and sanitation, such as diarrhea and respiratory diseases, can worsen a child's nutritional status and lead to significant weight loss. As such, the government and relevant agencies need to improve public access to clean water and good sanitation facilities, especially in areas with a high prevalence of wasting. In addition, waste prevention programs should include sanitation and environmental aspects, as well as nutrition education and proper feeding (36). Environmental conditions, especially access to clean water and adequate sanitation, are closely associated with the incidence of wasting among children. Research shows that families living in areas with poor sanitation and limited access to clean water are more likely to experience health problems that affect a child's nutritional status(37).

Children who are exposed to an unhealthy environment are more susceptible to infections such as diarrhea and respiratory diseases that worsen their nutritional state. Based on the study's results, interventions involving families in providing nutrition education and monitoring child growth have been proven effective in preventing wasting. Permatasari et al. (2024) noted that programs that involve mothers in regularly monitoring children's nutritional status through posyandu or health clinics, as well as providing nutritious supplemental food, can reduce the prevalence of wasting (7,16). Effective family-based interventions should actively engage parents and provide them with the knowledge needed to care for their children in ways that support healthy growth and development (38,39). Family-based interventions, such as supplemental feeding programs and education on healthy eating, have been shown to be effective in preventing wasting. In many countries, programs involving mothers in nutrition education and child growth monitoring have shown positive results in reducing the prevalence of wasting(40). Research in

Indonesia shows that providing education about providing nutritious food and good

sanitation to mothers is very important to prevent wasting in children.

CONCLUSION

It was found that the family, especially the mother, plays a very important role in preventing wasting in children. Factors such as maternal education, family socioeconomic status, social support, and access to sanitation and clean water have a significant impact on the

incidence of wasting. Therefore, interventions involving families in providing nutrition education, increasing access to health services, and improving the quality of family life can reduce the prevalence of wasting in children, which continues to be a global health problem.

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