

## Maternal Behavior Determination in Infant Nutrition: A Study of Planned Behavior Theory in Stunting Prevention

Firdausi Ramadhani<sup>1</sup>

<sup>1</sup>Universitas Gorontalo, Indonesia

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Corresponding Author:

Author Name\*: Firdausi

Ramadhani

Email\*:

[firdausi\\_ramadhani@unigo.ac.id](mailto:firdausi_ramadhani@unigo.ac.id)

**Abstract:** *This study aims to analyze the determinants of maternal behavior in fulfilling toddler nutrition as part of stunting prevention efforts using the Theory of Planned Behavior (TPB). Effective stunting prevention requires a comprehensive understanding of psychosocial factors shaping maternal intention and behavior, as knowledge-based interventions alone are insufficient to produce consistent behavioral change. A systematic literature review (SLR) was conducted by synthesizing 29 peer-reviewed articles published between 2015 and 2025 from Scopus, Web of Science, PubMed, and Google Scholar. Thematic synthesis indicates that maternal attitudes toward balanced nutrition significantly influence feeding intentions, while subjective norms such as support from husbands, extended family, and health workers can either strengthen or weaken these intentions. The most decisive factor is perceived behavioral control, which reflects mothers' ability to overcome structural barriers, including economic constraints, food access, time limitations, and the quality of health services. The three TPB components interact to shape actual feeding practices among mothers. This study concludes that stunting prevention interventions must integrate evidence-based education, strengthened family and community support, and improved access to health services to enhance maternal perceived behavioral control. These findings provide essential insights for developing behavior-focused nutrition interventions in Indonesia.*

**Keywords :** *Child Nutrition, Maternal Behavior, Social Support, Stunting*

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## INTRODUCTION

Stunting remains one of the most serious public health issues in the world and is seen as a long-term threat to the quality of human resources. The WHO reports that in 2023, there will be approximately 148 million toddlers experiencing stunting globally, which illustrates a downward trend that is still very slow compared to the 2030 Sustainable Development Goals (SDGs) target (WHO, 2023). South Asia and Sub-Saharan Africa are the two regions with the highest prevalence, at 32% and 34% respectively, due to a combination of poverty, inadequate access to food, and inadequate childcare practices (UNICEF, 2023).



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In Southeast Asia, Indonesia remains one of the countries with high stunting rates despite a decline in recent years. Data from the Indonesian Nutrition Status Survey (SSGI) shows that the national prevalence of stunting in 2022 will reach 21.6%, down from 24.4% in 2021, but still far from the government's target of 14% in 2024 (Indonesian Ministry of Health, 2023). This figure indicates that efforts to reduce stunting require a more systematic, comprehensive strategy that focuses on behavioral determinants, particularly mothers' behavior in meeting the nutritional needs of their children under five.

In the household context, mothers play a central role in determining the nutritional intake of children under five, from diet and provision of nutritious food to the use of primary health services such as integrated health posts (posyandu). Various studies show that maternal behavior is a dominant factor in preventing stunting. For example, a study by Rahmawati and Darmawan (2020) found that 52% of the variation in toddler nutritional status was influenced by maternal behavior in providing complementary foods (MP-ASI). In addition, research by Fitriani et al. (2021) revealed that mothers' decisions to give processed foods, foods high in sugar, or fast food are significantly associated with the risk of stunting in children under two years of age. These findings show that technical interventions alone, such as supplementation and food fortification, are not enough without changes in caregiving behaviors at the family level. Mothers' behaviors in terms of knowledge, attitudes, and practices of nutritional fulfillment are important factors that determine the success of stunting prevention at the most micro level.

Nutrition-related behaviors are greatly influenced by socio-cultural, economic, and psychological factors inherent in mothers' lives. In Indonesian society, decisions about nutritional fulfillment are often influenced by certain traditions or beliefs, such as prohibitions on certain foods for babies or misperceptions about children's nutritional needs. A study by Widyaningsih and Hapsari (2020) shows that some mothers still have misconceptions about the timing of complementary feeding, with 18% of them giving solid foods before six months of age. In addition, economic factors also play an important role in determining the quality and quantity of food that can be given to children. Mothers from low-income families tend to provide less varied foods due to limited access to nutritious foods (Putri & Wahyuni, 2022). This condition shows that mothers' behavior is not only determined by knowledge but also by beliefs, risk perceptions, and structural constraints that influence intentions and actual actions in nutritional practices.

In view of this complexity, health psychology theory is needed to gain a deeper understanding of the factors that influence mothers' behavior. One of the most relevant and widely used theories in health behavior research is the Theory of Planned Behavior (TPB) developed by Ajzen (1991). This theory explains that a person's behavior is determined by intention, and that intention is influenced by three main factors: (1) attitude toward the behavior, (2) subjective norms, and (3) perceived behavioral control. Various studies show that TPB is effective in predicting health behaviors, including nutritional behaviors. Research by McDermott et al. (2015) proves that TPB has strong predictive power for diet and nutrition-related behaviors in adult populations. In the context of mothers of young children, a study by Amare et al. (2022) in Ethiopia found that mothers' intentions to provide nutritious food are greatly influenced by community social norms and their perceived self-control over access to food. The relevance of TPB in the context of toddler nutrition provides a strong theoretical basis for understanding the determinants of maternal behavior towards stunting prevention, especially considering that nutritional behavior depends on a combination of attitudes, family norms, and perceived capabilities.

However, research related to stunting prevention in Indonesia still rarely uses TPB as the main theoretical framework. Many studies focus more on knowledge and sociodemographic aspects, even though behavioral change cannot be fully understood from these factors alone. This creates a significant research gap. Putri and Wahyuni's study entitled "Determinants of Stunting in Rural Central Java" (2022) identified the role of maternal education and family income, but did not examine the attitudes and subjective norms that influence nutritional behavior. Fitriani et al.'s study entitled "Maternal Dietary Patterns as a Risk Factor for Malnutrition in Toddlers" (2021) discusses maternal eating practices but does not use a theoretical behavioral model, thus failing to explain the psychological factors that influence mothers' decisions. Meanwhile, Amare et al.'s study entitled "Determinants of Maternal Feeding Behavior Using TPB" (2022) uses TPB, but was conducted in Ethiopia and does not consider Indonesia's very different socio-cultural structure. These three studies show that there is still a fundamental gap in Indonesian literature regarding how factors in TPB shape mothers' behavior in fulfilling toddler nutrition and how this affects stunting prevention efforts.

Based on these gaps, this study presents a novelty in the form of a comprehensive application of the Theory of Planned Behavior in analyzing the determinants of maternal behavior towards infant nutrition in Indonesia. This approach provides a deeper understanding of how maternal attitudes, family and community norms, and perceptions of self-control shape intentions and actual practices in nutrition provision. In addition, this study also integrates empirical data on toddler nutrition factors with psychosocial determinants described in TPB, resulting in a more complete mapping of the factors causing stunting at the family behavior level. This study aims to analyze in depth how factors in TPB, including attitudes, subjective norms, and perceived control, influence mothers' behavior in meeting toddler nutrition needs as a stunting prevention strategy. By understanding behavioral determinants more comprehensively, this study is expected to contribute theoretically to the development of behavioral change models and provide practical implications for the formulation of family-based stunting prevention intervention programs in Indonesia.

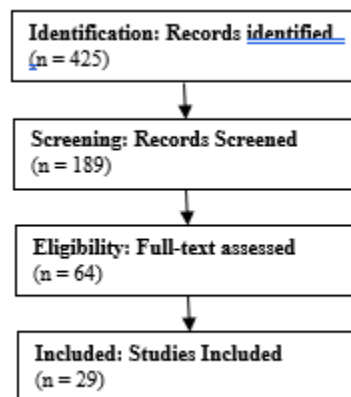
## METHODOLOGY

This study uses a systematic literature review (SLR) approach to comprehensively examine the determinants of maternal behavior in fulfilling toddler nutrition based on the Theory of Planned Behavior (TPB) framework. The SLR approach was chosen because it provides a transparent, replicable, and structured scientific synthesis of research developments in a field (Snyder, 2019). SLR is highly relevant to this topic given that research on stunting prevention and maternal nutritional behavior is scattered across various disciplines such as public health, nutrition, and health psychology. By adopting this approach, the study can identify patterns, inconsistencies, and relationships between variables that shape maternal behavior, as recommended by Xiao and Watson (2019) in modern SLR practice. This approach is in line with the research objective, which is not only to assess behavioral factors partially, but also to understand the structure of maternal behavior determinants comprehensively based on the three main components of TPB: attitude, subjective norm, and perceived behavioral control.

The literature search was conducted through reputable scientific databases such as Scopus, Web of Science, PubMed, and Google Scholar with a publication range of 2015–2025. Keywords included "maternal feeding behavior," "child nutrition," "stunting prevention," "Theory of Planned Behavior," "maternal attitude," and "behavioral determinants." Articles included in the analysis had to meet the inclusion criteria of being empirical research, using a maternal behavior perspective in the context of toddler nutrition, and being relevant to the TPB components. Non-peer-reviewed articles, opinion pieces, non-

academic reports, and publications that were not available in full text were excluded from the study to ensure scientific validity, referring to the PRISMA 2020 guidelines (Page et al., 2021). The eligibility of the literature was assessed based on methodological quality, relevance, and its relationship to nutritional behavior variables. Eligible articles were then analyzed using the thematic synthesis technique as recommended by Thomas and Harden (2008) to identify consistent conceptual patterns related to maternal behavior determinants in the context of toddler nutrition.

Through this SLR approach, the article selection process is transparently illustrated using a PRISMA diagram, starting from the initial identification process, screening, eligibility assessment, to the determination of the final articles to be analyzed. This methodological transparency aims to ensure the integrity of the SLR process and enable readers to assess the robustness of the research results. The following PRISMA model provides a comprehensive overview of the number of articles identified and those ultimately retained after a rigorous selection process.



## RESULTS AND DISCUSSION

### Mothers' Attitudes toward Meeting Toddlers' Nutritional Needs from the Perspective of Planned Behavior Theory

Mothers' attitudes toward meeting the nutritional needs of their toddlers are one of the main determinants in the Theory of Planned Behavior (TPB), because attitudes play a direct role in shaping intentions that ultimately influence nutritional behavior. Attitudes in the context of TPB refer to a person's positive or negative evaluation of a behavior (Ajzen, 1991). In the context of toddler nutrition, mothers' attitudes include beliefs about the benefits of nutritious foods, perceptions about the importance of appropriate complementary feeding, and assessments of the short- and long-term consequences of nutritional practices. Studies in various countries show that mothers' positive attitudes toward the importance of balanced nutrition are consistently associated with better feeding behaviors. For example, research by Amare et al. (2022) found that mothers' attitudes who believe that nutritious food can prevent stunting are significantly associated with a stronger intention to provide quality food. This relationship confirms that mothers' understanding of the benefits of nutrition is the foundation for the formation of healthy behaviors in toddlers.

In the Indonesian context, mothers' attitudes toward nutrition are greatly influenced by their knowledge and cultural beliefs regarding children's food. A study by Widyaningsih and Hapsari (2020) shows that many mothers still have misconceptions about complementary feeding, such as the belief that solid foods can be given before six months of age to accelerate growth. Such misconceptions indicate that

even though knowledge about nutrition has increased, misguided attitudes can still dominate daily practices. Research by Putri and Wahyuni (2022) also shows that mothers' attitudes that instant foods are more practical and safe for children result in high consumption of processed foods among toddlers, which is significantly associated with an increased risk of stunting. This reflects that the formation of attitudes is not only influenced by knowledge, but also by tradition, personal preferences, and economic constraints. For example, the perception that high-protein foods such as meat or eggs are “hot” for toddlers is still common in some areas and influences mothers' decisions to limit consumption of these foods.

In addition to internal factors, mothers' attitudes toward nutritional fulfillment are also influenced by personal experiences and external information received through the mass media, health workers, and social networks. The research by McDermott et al. (2015) is important because it shows how media exposure to healthy foods increases positive attitudes toward choosing nutritious foods. However, the media can also contain biased or inaccurate information, which can shape negative attitudes toward certain foods. For example, the trend of carbohydrate-free or extreme diets that go viral on social media can influence mothers to make decisions that are not in line with their children's nutritional needs. In the local context, research by Rahmawati and Darmawan (2020) found that mothers who are frequently exposed to information about child nutrition from health workers have more positive attitudes than mothers who rely on information from family or social media. These findings emphasize the importance of formal education-based interventions as a strategy for shaping mothers' positive attitudes toward nutritional fulfillment.

Mothers' attitudes are also influenced by their belief in their own ability to influence their children's health. Mothers who believe that their actions can prevent stunting will have a more positive attitude towards nutritional behavior. According to Ajzen (1991), attitudes are formed through behavioral evaluations based on beliefs about the results to be achieved (behavioral beliefs). In nutrition studies, this can be seen in mothers who believe that exclusive breastfeeding can improve their children's immunity and growth, making them more consistent in doing so. Fitriani et al. (2021) found in their research that the attitudes of mothers who believe in the benefits of natural foods and home cooking are more closely related to optimal nutrition than mothers who have a low perception of their ability to determine the best food for their children. Such attitudes are very important because they form the basis for the intention to behave in accordance with health recommendations.

Analysis of mothers' attitudes also needs to consider that positive attitudes do not necessarily result in appropriate behavior. Ajzen (1991) emphasizes that intention is an intermediary between attitude and behavior, so that positive attitudes will only result in healthy behavior if they are followed by strong intentions. In some cases, mothers have positive attitudes towards the importance of nutrition but are unable to apply this knowledge due to time constraints, access to food, or inadequate family support. Research by Putri and Wahyuni (2022) shows that although most mothers have positive attitudes toward nutritious food, only 43% actually implement a balanced diet for their toddlers, mainly due to economic factors and limited food choices. This indicates that attitude is only one component of behavioral determination and must be viewed in interaction with subjective norms and perceived behavioral control.

Studies using TPB in the context of child nutrition also show that attitude is an important predictor but not the strongest one. McDermott et al. (2015) found that perceived behavioral control often has a greater influence than attitude, especially when individuals face structural barriers such as poor food access or financial constraints. However, attitudes remain a fundamental factor that shapes intentions and forms the basis for self-control in making decisions about food. In the context of stunting prevention, mothers' attitudes toward nutritious foods, nutritional supplements, and maternal and child health services greatly determine the behavioral patterns they adopt. Amare et al. (2022) showed that mothers with very positive attitudes toward food safety and child nutrition had higher levels of compliance with recommended



nutritional practices, such as feeding high-protein foods, consuming fruits and vegetables, and utilizing health facilities.

Sociocultural factors in Indonesia indicate that mothers' attitudes are closely related to local norms and values. In some communities, there is a belief that babies “should not be too fat” or that thin children are considered normal if they are active. This belief influences mothers' attitudes toward monitoring their children's growth and nutritional intake. Widyarningsih and Hapsari (2020) found that more than 27% of mothers were unaware that their children were stunted because they had misconceptions about ideal height and weight for children. This misguided attitude is very risky because it makes mothers unaware of the importance of nutritional intervention. This discrepancy in perceptions of the ideal child leads to many cases of stunting going unidentified until the child is older, thereby limiting the effect of nutritional fulfillment on growth recovery.

Thus, mothers' attitudes in the context of the Theory of Planned Behavior play a fundamental role in preventing stunting because they guide intentions and ultimately shape actual behavior in meeting the nutritional needs of toddlers. However, it is important to emphasize that attitudes do not stand alone; they interact with subjective norms and perceptions of behavioral control. Positive attitudes need to be accompanied by social support, access to resources, and an environment that enables mothers to implement proper nutritional practices. Understanding the dynamics of these attitudes is the basis for developing more effective behavior-based interventions to prevent stunting, particularly through comprehensive health education, family involvement, and social interventions that support nutritional practices at the household level. This analysis confirms the main finding of the study that the determination of maternal behavior can only be fully understood when attitudes are interpreted within the holistic framework of TPB.

### **Subjective Norms and Social Influence on Mothers' Behavior in Meeting Toddlers' Nutritional Needs**

Subjective norms are one of the main components of the Theory of Planned Behavior (TPB), which explains how social pressure, family support, and the influence of reference groups shape mothers' intentions and behaviors in meeting the nutritional needs of toddlers. Ajzen (1991) defines subjective norms as a person's perception of the social expectations of important individuals or groups that encourage or discourage a behavior. In the context of toddler nutrition, the groups that influence mothers include husbands, parents, in-laws, health workers, community leaders, and local communities. A number of studies show that subjective norms are strong predictors of nutritional behavior because mothers' decisions are often influenced by family structure and local culture. For example, research by Amare et al. (2022) in Ethiopia found that social pressure from extended families played a significant role in mothers' decisions to provide nutritious complementary foods, even exceeding the influence of the mothers' own personal attitudes. These findings are relevant in Indonesia, where communal culture makes the family a dominant actor in household decision-making, including in terms of feeding children.

In Indonesian society, extended families often play an important role in shaping toddlers' eating habits. Research by Widyarningsih and Hapsari (2020) shows that 36% of mothers follow the advice of their parents or in-laws in providing complementary foods, even though some of these recommendations contradict health recommendations. Furthermore, research by Fitriani et al. (2021) found that when husbands supported healthy feeding practices, mothers' intentions to prepare nutritious meals doubled. This confirms that subjective norms are not only a negative pressure but can also serve as positive support that strengthens mothers' intentions to implement recommended nutritional behaviors. In the context of public health programs such as nutrition education or stunting prevention interventions, the involvement of husbands and other family members has been shown to increase the success of interventions. Research by Rahmayana et al. (2020) on the “father cares about nutrition” program also shows the significant impact of father involvement on increasing toddler dietary compliance.

Apart from the family, health workers also have a major influence in shaping subjective norms. Mothers who regularly consult with midwives or posyandu cadres tend to have stronger subjective norms to follow nutritional recommendations. Research by McFadden et al. (2017), in a Cochrane Review, concluded that nutritional counseling from health workers increases mothers' compliance with recommendations for breastfeeding and complementary feeding. This has important implications in the Indonesian context, where posyandu are primary health care centers for toddlers that are very close to the community. However, research by Putri and Wahyuni (2022) also found that the level of mothers' attendance at posyandu is still low in some areas due to negative social influences, such as the perception that posyandu visits are not very important or are only done when the child is sick.

Such negative social norms are a significant barrier to ensuring child growth monitoring and nutritional fulfillment. Social influence also arises from peer groups in the mother's environment, especially in the digital age. A study by Coyne et al. (2021) shows that online communities such as mother groups on social media have a significant impact on nutritional decisions, both through experience sharing and social pressure regarding parenting standards.

However, not all information circulating in these communities is medically accurate. For example, trends in feeding certain foods or specific diets for infants are often not based on scientific evidence, thereby influencing mothers' decisions incorrectly. In this context, subjective norms can be ambivalent: they can support healthy nutritional practices if the source is valid, but they can also reinforce unhealthy behaviors if they are rooted in myths or misinformation. This phenomenon is important to analyze because stunting is not only a nutritional problem, but is also influenced by the social dynamics that govern feeding behaviors within families and communities.

To provide a more systematic academic overview of the empirical evidence related to subjective norms in maternal nutritional fulfillment behaviors, the following table synthesizes the research:

**Table 1. Empirical Evidence on Subjective Norms Influencing Maternal Feeding Behavior**

| Country Context            | Key Findings on Subjective Norms                                                                     | Studies                       |
|----------------------------|------------------------------------------------------------------------------------------------------|-------------------------------|
| Ethiopia                   | Family expectations strongly influence maternal intention to provide nutritious complementary foods. | Amare et al. (2022)           |
| Indonesia                  | Husband's support significantly increases mother's intention to provide varied, nutritious food.     | Fitriani et al. (2021)        |
| Indonesia                  | Grandparents' advice shapes early feeding practices, often leading to inappropriate MP-ASI timing.   | Widyaningsih & Hapsari (2020) |
| Global (Systematic Review) | Health worker counselling improves adherence to recommended feeding practices.                       | McFadden et al. (2017)        |
| United States              | Online peer groups influence maternal feeding decisions; misinformation is common.                   | Coyne et al. (2021)           |

This table shows that subjective norms play a major role in shaping nutritional behavior, both through normative pressure and social support. The findings of Amare et al. (2022), for example, confirm that family structure influences almost all aspects of mothers' behavior in providing nutritious food. Fitriani et al. (2021) show that spousal support (as part of positive subjective norms) has a significant influence on nutritional decisions.

However, research by Widyaningsih and Hapsari (2020) shows that subjective norms can also be negative when family advice conflicts with health recommendations. This shows that subjective norms are two-sided: they can either strengthen or weaken nutritional fulfillment behavior. Social norms at the community level also influence mothers' behavior through peer pressure or local culture.

For example, in some areas, there is a belief that giving eggs or meat too often can make children “hot” or sick. Beliefs like this then become strong social norms and influence mothers' behavior. Rahmayana et al. (2020) in their intervention study showed that when social norms began to shift through community education, mothers' behavior in providing nutritious food also changed significantly. This confirms that changing subjective norms requires collective efforts and social interventions, not just individual education.

Thus, subjective norms are a critical aspect in determining mothers' behavior based on TPB. Subjective norms work through complex social mechanisms, including spousal support, family pressure, the influence of health workers, and the influence of online communities. This analysis shows that successful stunting interventions require strategies that focus not only on mothers as individuals but also on the social environment that shapes their intentions. In this context, understanding subjective norms is crucial for designing effective intervention programs, including family education programs, husband involvement, and strengthening the role of health workers as sources of positive social norms.

## **Perceived Behavioral Control and Mothers' Barriers to Meeting Toddler Nutritional Needs**

Perceived behavioral control (PBC) is the most important component of the Theory of Planned Behavior (TPB) because it describes the extent to which a person feels capable of controlling certain behaviors in real-life situations.

Ajzen (1991) asserts that PBC encompasses two main aspects, namely self-efficacy (individual belief in one's own abilities) and controllability (perception of external factors that facilitate or hinder actions). In the context of infant nutrition, PBC relates to mothers' belief that they are capable of providing nutritious food, regulating their children's eating patterns, and utilizing health facilities to monitor their children's growth. In addition, PBC is also greatly influenced by external factors such as food availability, household income, available time, and social support. Many studies show that even if mothers have positive attitudes and supportive subjective norms, their nutritional behavior will not be optimal if they feel unable to control obstacles in their environment (McDermott et al., 2015). Therefore, PBC is a determining factor that bridges intentions and actual behavior in the context of stunting prevention.

In the Indonesian context, economic barriers are one of the largest external determinants shaping mothers' PBC. Research by Putri and Wahyuni (2022) found that mothers' ability to provide high-protein foods is greatly influenced by family purchasing power. Mothers from low-income families often feel unable to provide nutritious food every day even though they have a strong intention to do so. This condition shows that PBC is not only influenced by knowledge or attitudes, but also by structural realities that limit behavior. A study by Rahmawati and Darmawan (2020) also noted that mothers from underprivileged families have a lower perception of control in determining food variety due to limited access to food. This means that stunting prevention interventions need to consider economic and accessibility factors, not just behavioral education, in order to effectively improve PBC.

In addition to economic barriers, time is an important barrier for mothers, especially in households where both parents work. Research by Coyne et al. (2021) shows that mothers who work more than 40 hours per week have lower PBC in providing healthy food due to limited time for shopping for ingredients



and preparing nutritious meals. Many mothers end up choosing instant or ready-to-eat meals as alternatives, which can potentially increase the risk of malnutrition in children. This situation is also found in Indonesia, where urbanization and changes in family structure have caused many working mothers to balance formal workloads and household responsibilities. According to Fitriani et al. (2021), mothers with limited time tend to feel unable to manage their children's meal schedules consistently, so low PBC hinders them in implementing recommended nutritional fulfillment behaviors.

PBC is also influenced by mothers' ability to access health services such as posyandu and puskesmas. Posyandu is a basic health service that monitors toddler growth and provides nutrition education to mothers. However, the level of mothers' attendance at posyandu is still a challenge in some areas. Putri and Wahyuni (2022) found that mothers whose homes are more than 3 kilometers away from posyandu are twice as likely to not attend regularly, indicating that geographical factors significantly affect PBC. In addition, the quality of posyandu services also affects mothers' perception of control. When mothers feel that the posyandu does not provide clear information or friendly services, they tend to feel less helped and have low PBC to follow nutritional recommendations. This is in line with the findings of McFadden et al. (2017), which show that the quality of nutritional counseling from health workers is one of the important determinants in increasing mothers' self-efficacy in providing healthy food.

PBC analysis also needs to consider cultural aspects that influence mothers' perceptions of their ability to regulate their children's diets. In some regions of Indonesia, decisions about food are not always made by mothers, but may be determined by other family members such as in-laws or local community leaders. This causes mothers to have low PBC even though they have a strong intention to implement proper nutritional practices. Research by Widyaningsih and Hapsari (2020) found that the role of in-laws in deciding what to feed babies can hinder mothers from providing complementary foods according to health recommendations. When mothers do not have full authority in determining their children's diets, their perception of control decreases, so their intentions are not realized in actual behavior. This situation shows that family social structure has a significant influence on shaping PBC and should be a focus in stunting prevention interventions.

PBC is also closely related to mothers' experiences in dealing with children's health challenges. For example, mothers who have experienced difficulties in overcoming picky eating in children or dealing with children who are often sick may have a lower perception of control. Research by Amare et al. (2022) shows that controllability can decrease in mothers who often face behavioral barriers in children when eating, such as refusing food or being sensitive to texture. Mothers who experience these difficulties tend to feel unable to provide healthy food consistently, which has a negative impact on their children's nutritional quality. In this context, behavioral interventions need to be tailored to the needs of mothers who face psychological barriers related to self-efficacy, so that PBC can be improved through counseling, education, and social support.

In addition, information from both health workers and social media also influences mothers' PBC. Accurate information about how to prepare healthy meals, appropriate portions, and food variety can increase mothers' confidence in implementing healthy eating patterns for their children. However, the prevalence of misinformation on social media can decrease PBC by providing a false perception of certain foods or feeding methods that are not in line with health recommendations. A study by Coyne et al. (2021) in the *Journal of Nutrition Education and Behavior* noted that exposure to contradictory information on social media causes confusion for mothers, thereby reducing PBC. In the Indonesian context, this phenomenon is increasingly relevant as the use of social media as a source of health information increases.

Thus, PBC is the most decisive component in TPB because it links intentions with actual behavior. In preventing stunting, mothers who have positive attitudes and strong social support still need adequate perceived control in order to implement proper nutritional behaviors. Efforts to increase PBC must involve

comprehensive interventions, ranging from increasing food access, affordability of nutritious foods, improving the quality of posyandu services, to evidence-based education provided by health workers and the community. This analysis confirms that stunting prevention cannot be achieved through an educational approach alone, but must involve structural interventions that support the formation of mothers' perceived control so that infant nutrition behaviors can be optimally implemented.

## CONCLUSIONS

This study shows that the determination of maternal behavior in meeting toddler nutritional needs cannot be understood partially, but requires a holistic approach through the Theory of Planned Behavior (TPB) framework. Mothers' attitudes proved to be an important foundation in shaping behavioral intentions, where positive beliefs about the benefits of balanced nutrition, including understanding the timing of complementary feeding, food variety, and long-term effects on growth, were directly related to mothers' tendency to implement healthy nutrition practices. However, the analysis showed that positive attitudes alone were not enough if they were not supported by conducive subjective norms. Subjective norms, especially the influence of husbands, extended families, health workers, and mothers' social groups, play a significant role in promoting or inhibiting nutritional fulfillment behaviors. When social support is strong, mothers' intentions increase; conversely, social pressure based on misguided traditions or inaccurate information from the environment can weaken intentions and nutritional practices.

The most decisive factor, as shown in the PBC analysis, is mothers' perceived behavioral control in facing structural and psychosocial barriers. Economic limitations, access to food, time, quality of posyandu services, and low self-efficacy have been shown to reduce mothers' ability to implement optimal nutrition practices even if they have positive attitudes and social support. PBC is a key component that bridges mothers' intentions with actual behavior, and without an increase in perceived control, stunting prevention efforts risk being ineffective. Therefore, this study emphasizes that stunting prevention intervention strategies must move beyond knowledge education toward strengthening social support and improving environmental structures that enable mothers to consistently implement healthy nutrition practices.

The findings of this study provide practical advice that stunting prevention programs need to integrate all three components of PBC simultaneously. The government and policymakers need to strengthen evidence-based health education programs to shape positive attitudes, involve husbands and families in nutrition campaigns to change subjective norms, and ensure the availability of nutritious food, optimization of integrated health service posts, and community social support to increase mothers' perceived control. Interventions designed based on the dynamics of mothers' behavior will be more effective in encouraging long-term behavioral change and accelerating the decline of stunting in Indonesia.

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