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# Mother Behavior in Stunting Prevention Based on an Integrated Behavior Model that Adapts the Theory of Planned Behavior: Model Development

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***Abstract***

*Stunting is a type of malnutrition condition that occurs due to insufficient nutrient intake in the past. It is considered a chronic nutritional issue that can lead to an increased risk of pain and death, sub-optimal brain and delayed motor development. This study aims to construct a model of maternal behaviour in the prevention of stunting in Bangkalan, Indonesia. The cross-sectional technique combined with analytical observational research methodology was used in this study. The moms who have children under five make up the research population. Techniques for sampling use multistage random sampling. A large sample of 280 mothers with children aged two to five. Instrument research using a questionnaire. Data analysis using SEM PLS 3. Research has found several things: A substantial correlation was seen between the mother's intentions and perceived control (p-value = 0.000), as well as between self-effectiveness and intention (p-value = 0.000) and intention and behaviour (p-value = 0.000). Your motivation to engage in stunting prevention will increase with higher goals, and the likelihood that you won't engage in stopping prevention activities will decrease with lower intentions. The approach of stopping prevention efforts through increased intention, perceived control, and efficaciousness of mothers about the importance of staking prevention in the first 1000 days of a child's life as a critical phase of the child's development, shows that intention is directly influenced by perceived control and self-efficaciousness and it directly affects stunting prevention behaviour.*

***Keywords:*** *Behaviour, Integrated, Prevention, Stunting.*

## Introduction

Stunting is a chronic nutritional problem that is measured by a young person's height or length, age, and gender. It is caused by inadequate nutrient consumption in the past. It poses risks such as increased pain and mortality, as well as suboptimal brain and delayed motor development [1]. Efforts to prevent stunting or nutritional problems in children aged 0-24 months can be made by promoting positive attitudes toward feeding nutritious foods to children. Research has shown that stunting in children, particularly those under two years of age, is directly or indirectly related to the mother or caregiver's feeding practice [2]. Some mothers or caregivers may unknowingly give their children foods that could harm their health or may be unaware of the risks that may arise in the future [3]. It is also stated that malnutrition and infections during early life, particularly from the womb to the first two years, are primary causes of stunting [4]. The effects of stunting include short stature in adulthood, and cognitive and academic performance deficits [5].

Data from UNICEF and WHO indicate that approximately 22% or 149.2 million young children globally suffer from stunting, with Indonesia ranked third in stunting prevalence in Asia in 2017. According to the World Health Organization, 149.2 million people, or 22% of

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children under the age of five worldwide, were estimated to be stunted as of April 20, 2020. The 2018 Risk-Based Data showed the prevalence of stopping in children nationally in 2018 was 30.8%, whereas according to WHO standards, the predominance of staking in Indonesia is considered to be severe because it is in the range of 30-39% [6]. According to the Indonesian Nutrition Status Study (SSGI) data of the district/city in 2021, the prevalence of stunts in Eastern Java is ranked 14th out of 34 provinces at 23.5%, with Bangkalan district ranked first with a prevalence of 38.9% [7]. Stunting surpasses other nutritional problems such as malnutrition, underweight, and obesity [8].

Basic Health Survey 2018 data showed a national stunting prevalence in 2018 was 30.8%, whereas according to WHO standards, stunting prevalence in Indonesia is considered severe because it is in the range of 30-39% [9]. According to the Indonesian Nutrition Status Study data of the district/city in 2021, the prevalence of stunts in Eastern Java is ranked 14th out of 34 provinces at 23.5%, with Bangkalan district ranked first with a prevalence of 38.9%. According to the Department of Health's May 2022 report on the weighting of the puskesmas in the Bangkalan district, stunting is quite common in the village of Jaddih, with a rate as high as 26%. This puts the village in second place out of 22 puskesmas in the district.

The information provided in Table 1 indicates that Bangkalan exhibits the highest incidence of stunting in East Java, standing at 38.9%. Stunting is caused by malnutrition and infections that often occur from the prenatal stage up until the first two years of life [10]. A study conducted by Illahi et al. in the Bangkalan district showed that 14.5% of infants did not receive early initiation of breastfeeding (IMD), and 22.6% of moms chose not to use colostrum because they feared contaminants or hygiene [11]. In addition, pre-lacteal feeding was given to 59.7% of newborns. A study on height lends credence to Evoy and Visscher's viewpoint, showing that genetic factors account for only 4.8-7.9% of a person's birth height in women. However, the impact of hereditary factors on height tends to grow in babies as people become older. In addition, 35.5% of nursing mothers breastfeed their newborns before the age of six months to promote their growth. Newborns frequently "other" rice with bananas at this age.

**Table 1.** Prevalence of Stunting Children Under Five (HAZ or height-for-age Z-score) by District or City in East Java Province, 2022

| District/City | Percentage (%) | District/City | Percentage (%) | District/City | Percentage (%) |
|---|---|---|---|---|---|
| Mojokerto | 6.9 % | Trenggalek | 20 % | Bojonegoro | 23.9 % |
| Madiun | 12.4 % | Probolinggo | 20.1 % | Tuban | 23.9 % |
| Blitar | 12.9 % | Ponorogo | 20.5 % | Nganjuk | 25.1 % |
| Tulungagung | 13.1 % | Banyuwangi | 21.2 % | Malang District | 25.3 % |
| Blitar District | 14.5 % | Lamongan | 21.5 % | Malang City | 25.7 % |
| Sidoarjo | 14.6 % | Lumajang | 22.1 % | Mojokerto | 25.7 % |
| Batu | 15 % | Pasuruan City | 22.7 % | Surabaya | 27.4 % |
| Kediri | 16.2 % | Pasuruan District | 23 % | Sumenep | 28.9 % |
| Madiun | 17.2 % | Pacitan | 23.3 % | Lumajang | 29 % |
| Ngawi | 17.2 % | Gresik | 23.7 % | Bondowoso | 37 % |
| Sampan | 18 % | Probolinggo District | 23.9 % | Pamekasan | 36.7 % |
| Magetan | 18.1 % | Situbondo | 23.9 % | Bangkalan | 38.9 % |
| Kediri | 19 % | Jember | 23.7 % | | |

Source: Secondary SSGI data for 2022

The immediate consequences of stunting include compromised brain cognitive development, diminished intelligence, disruptions in physical growth, and metabolic disorders, as well as an elevated risk of morbidity and mortality. The medium-term impact of stunting is low intellectual and cognitive abilities, while the long-term effect of stopping is increased risk of infectious diseases, less optimal learning capacity and performance in schooltime, and less optimal productivity and working capacity. The impact of stunting is short-lived adulthood, poor cognitive performance poor school performance [5] and suffering from degenerative diseases.

The government's initiatives to enhance public engagement in stunting prevention are structured within a national strategy comprising five pillars, with the second pillar focusing on the national campaign and communication for behavioural change [1]. To effectively prevent stunting within the first 1000 days of a child's life, fostering family autonomy is a vital aspect. This independence is shaped by three primary factors that play an essential role: community culture, family values, and familial roles [12]. Individual prevention efforts entail ensuring the child's optimal health status and receiving adequate nutrition during the initial 1000 days of life. Furthermore, in addition to the three variables contributing to behavioural intention, the Integrated Behavioral Model (IBM) incorporates knowledge and skill acquisition, habitual behaviour, environmental constraints, and perceived benefits of the behaviours, all of which directly or indirectly influence individuals' actions. The objective of this study is to formulate a model of maternal behaviour in preventive stunting within the Bangkalan district.

## Materials and Methods

### Research Design and Sample

This cross-sectional study was conducted between June and July 2023 in Bangkalan District, Madura Island, East Java, Indonesia. The mothers in the Bangkalan District of the Health Department who are the parents of children under five make up the study's population. The Bangkalan district has eighteen districts that are separated into three clusters: metropolitan areas, coastal areas, and agricultural areas. Multistage random sampling is used in sampling methodologies. A total of 36 locales are employed as research samples, with one urban district and one rural district representing each cluster. Next, the samples are stratified using the proportional stratified random sampling technique. The PAUD in Bangkalan district served as the site of the sampling procedure for this investigation. Sample counting by stratified sampling with a Lemeshow formula (WHO). A large sample large of 280 mothers with children aged two to five. The inclusion criteria were: (a) Mother and child living in the same house (b) Mothers are capable of writing, reading, and understanding Bahasa (the national language of Indonesia) (c) Mother in a healthy physical condition (d) Mother and son residing in the district of Bangkalan. Exclusion criteria are: (a) Mothers working outside the island or abroad who do not take care of their children; (b) mothers who are chronically ill and terminally ill/ unable to care for the child; (c) mothers who are mentally impaired; (d) children who are ill.

### Variable and Instruments

The mother's traits, the child's characteristics, and other variables are included in this study. The variables include conduct to prevent stunting, attitude, knowledge, personal agency, perceived norm, intention, and behaviour (Table 2).

**Table 2.** Research Variable Behavior Model for Stunting Prevention of Mother

| Latent Variables | | Observe Variables | |
|---|---|---|---|
| X1 | Attitude | X1.1 | Experimental attitude |
| | | X1.2 | Instrumental Attitude |
| X2 | Perceived Norm | X2.1 | Injunctive Norm |
| | | X2.2 | Descriptive norm |
| X2 | Personal Agency | X2.1 | Perceived control |
| | | X2.2 | Self-efficacy |
| X3 | Knowledge and skill | X3.1 | Knowledge |
| | | X3.2 | Skill |
| Y1 | Intention of behavior | Y1.1 | Behavioural motivation |
| | | Y1.2 | The intention that moves the action |
| Y2 | Behaviour | Y2.1 | Monitoring |
| | | Y2.2 | Mentoring |
| | | Y2.3 | Modelling |

**Setting and Location**

In June and July of 2023, the study was carried out in Bangkalan District, East Java, Indonesia. Researchers introduced themselves, explained the benefits, goals, and approval processes, and then emailed participants the informed consent form. In addition, questions about attitude, personal agency, knowledge and abilities, environmental impediments, habits, intention, and conduct were given out by the researchers to the respondents.

**Measurement**

Data collection using the questionnaire is distributed directly with the involvement of 3 enumerators. Six questionnaires use among others attitudes, perceived norms, personal agencies, knowledge and skill, intentions, and behaviour. The Theory of Planned Behavior (TPB) and the idea of stunting prevention served as the foundation for the questionnaires. The observed variable or indicator that is being used has strong validity if, according to the results of the SmartPLS4 analysis, loading the entire indicator factor is greater than 0.7. When the composite reliability exceeds 0.7, it can be said that the latent variable has a high level of reliability. Extracted Average Variance/AVE The resultant value is more than 0.5, suggesting that the aforementioned model has strong convergence validity.

**Attitude**

The prevention of stunting was evaluated through the use of a questionnaire designed to assess the attitudes of individuals towards behaviour. The 10 questions on the questionnaire, which are divided into two sections, were designed with the Theory of Integrated Behavior Model (IBM) in mind. Part two looks at instrumental attitude, while part one concentrates on experimental attitude. The Likert scale, which ranges from 1 to 4, is used in the questionnaire as a nominal scale. In contrast to negative attitudes, which are scored lower than the mean t-score, positive attitudes are scored higher. In terms of positive questions, four is considered strong agreement, three is considered agreement, two is considered disagreement, and one is considered strong disagreement. Scores of 1 for highly agree, 2 for agree, 3 for disagree, and 4 for strongly disagree are assigned to the negative questions.

**Perceived Norm**

The Theory of Integrated Behavior Model (IBM) served as the foundation for the questionnaire's development, and specific indicators intended to prevent stunting were added. There are two pairs of statements in this questionnaire, totalling ten statements. The injunctive norm is covered in the first section, while the descriptive norm is covered in the second. Every question on the questionnaire has been divided into favourable and unfavourable categories to be scored. If a score is less than or equal to the mean, it is regarded as poor. Answers to positive questions (+) are scored as follows: 4 for highly agree, 3 for agree, 2 for disagree, and 1 for strongly disagree. Conversely, the negative questions receive a different score.

**Personal Agency**

The Theory of Integrated Behavior Model (IBM), upon which the questionnaire was based, was modified to include indicators about stunting prevention. There are ten statements on this quiz, broken up into two pieces. While self-efficacy is the main topic of the second segment, perceived control is the main focus of the first. There are five assertions in each part, with numbers 1 through 5 denoting perceived control and numbers 6 through 10 denoting self-efficacy. Whether the score is above or below the mean determines how it is scored. Scores below the mean are regarded as inferior to scores above the mean. The following is the scoring system for favourable items (+): 4 = highly agree, 3 = agree, 2 = disagree, and 1 = strongly disagree. Regarding the negative items (−), the scores are as follows: 1 = highly agree, 2 = agree, 3 = disagree, and 4 = severely disagree.

**Knowledge and Skill**

Based on the Integrated Behavior Model, the researchers assessed the degree of knowledge and proficiency in stunting prevention. They also made modifications to the questionnaire to incorporate questions about the causes and prevention of stunting. Ten questions with true or false type answers make up the instrument. An ordinal scale is used in the questionnaire, with scores ranging from 76% to 100% being good, 56% to 75% being moderate, and <56% denoting less.

**Intention**

Ten statements make up the instrument, which was designed with the Theory of Integrated Behavior Model (IBM) in mind. An ordinal scale with a Likert scale ranging from 1 to 4 is used in the questionnaire. The questionnaire has a mean score of ≥ mean, which denotes good, and a score of < mean, which denotes less. Positive questions are scored as follows: 4 represents a strong agreement, 3 suggests agreement, 2 indicates disagreement, and 1 indicates significant disagreement. The opposite is true for unfavourable questions (−), where 1 denotes highly agree, 2 agree, 3 disagree, and 4 denotes severely disagree.

**Behaviour**

The 10 statements on the test were designed using the Theory of Integrated Behavior Model (IBM) as a basis. The Likert scale on the questionnaire went from 1 to 5. Positive questions (+) are scored as follows: A score of 5 denotes always, a score of 4 frequently, a score of 3 occasionally, a score of 2 seldom, and a score of 1 denotes never. The following is the scoring system for negative questions (−): 1 means always, 2 means often, 3 means occasionally, 4 means rarely, and 5 means never.

**Data Collection**

A questionnaire that was distributed to 280 moms whose children, ages 2 to 5, attend early childhood education was used to collect the data. With the help of three enumerators, the researcher collected the data. The moms themselves are required to complete the questionnaire; caretakers or other family

members are not permitted to do so. A home visit will be made for mothers who are unable to attend.

**Data Analysis**

The study employed several descriptive statistics, such as mean, standard deviation, percentages, and numbers, to exhibit the demographic attributes of the participants. This study also used multivariate analysis, namely Structural Equation Modeling-Partial Least Squares (SEM-PLS), a component- or variance-based structural equation model, to find complex intervariable connections. Two elements comprised the model evaluation in this analysis: the outside and inner models. The external model was in charge of evaluating the indicators' reliability and validity. By evaluating the correlation between the reflecting indicator and latent variable scores, convergent validity was ascertained. An indicator's validity was deemed to be indicated by a factor loading value between 0.5 and 0.6. Examining the cross-loading correlation value with the latent variable—which ought to be greater than the correlation with other possible variables—was how discriminant validity was determined. It was deemed acceptable to have an average variance extracted (AVE) of more than 0.5 and a composite reliability value of > 0.7.

Assessing the influence or interrelationships between the variables under investigation was the goal of the inner model evaluation. The R-square (coefficient of determination) and Q2 value (relevance of prediction) were computed to accomplish this. The degree to which the independent variable affects the dependent variable is shown by the R-square value. If the Q2 value is close to one and more than two, the model is very important for prediction. In contrast, if the Q2 value is smaller than zero, it is not predictively relevant.

**Ethical Considerations**

The ethical commission approved this study in District Bangkalan, East Java, Indonesia with No. 1799/KEPK/STIKES-NHM/EC/VI/2023 on April 15th, 2023. Written consent was obtained from all participants, who were provided with an explanation of the study's purpose, and informed consent forms were collected.

## Results

Based on Table 3, shows that 1) the Attitude variable has 4 indicators with factor loading values: 0.907; 0.887; 0.882; and 0.862 greater than 0.7 with composite reliability 0.892; and 0.864 greater than 0.7, meaning the indicators are valid and reliable. The injunctive norm variable has factor loading values: 0.913; 0.693 greater than 0.7 and composite reliability 0.790 greater than 0.7, meaning it is valid and reliable. The descriptive norm variable with 2 indicators has factor loading values: 0.910; 0.732 greater than 0.7 with a composite reliability of 0.888, meaning it is valid and reliable. The self-efficacy variable has factor loading values of 0.898; and 0.727 greater than 0.7 with a composite reliability of 0.799, meaning it is valid and reliable. The knowledge variable with factor loading values 0.748; 0.865 greater than 0.7 with composite reliability 0.789 greater than 0.7, meaning it is valid and reliable. The intention variable with factor loading values: of 0.881; 0.847 greater than 0.7 with a composite reliability of 0.855, meaning it is valid and reliable, and the behaviour variable with factor loading values of 0.933; 0.915 with a composite reliability of 0.855 greater than 0.7, meaning it is valid and reliable.

**Table 3.** Outer Model

| Indicator | Loading Factor | Composite Reliability | AVE |
|---|---|---|---|
| Experiential Attitude 2 | 0.907 | 0.892 | 0.805 |
| Experiential Attitude 3 | 0.887 | | |
| Instrumental Attitude 1 | 0.882 | 0.864 | 0.761 |

| | | | |
|---|---|---|---|
| Instrumental Attitude 5 | 0.862 | | |
| Injunctive Norm 1 | 0.913 | 0.790 | 0.657 |
| Injunctive Norm 5 | 0.693 | | |
| Descriptive Norm 1 | 0.905 | 0.888 | 0.728 |
| Descriptive Norm 2 | 0.910 | | |
| Descriptive Norm 4 | 0.732 | | |
| Perceived Control 2 | 0.843 | 0.838 | 0.721 |
| Perceived Control 4 | 0.856 | | |
| Self-Efficacy 2 | 0.898 | 0.799 | 0.668 |
| Self-Efficacy 3 | 0.727 | | |
| Knowledge 1 | 0.748 | 0.789 | 0.653 |
| Knowledge 2 | 0.865 | | |
| Intention 2 | 0.881 | 0.855 | 0.747 |
| Intention 3 | 0.847 | | |
| Behavior 3 | 0.933 | 0.922 | 0.855 |
| Behavior 4 | 0.915 | | |

Table 3 above indicates that when the entire indicator factor is loaded and the result is more than 0.7, the used observed variable or indicator is considered to have good validity. When the composite reliability exceeds 0.7, it can be said that the latent variable has a high level of reliability. The Average Variance Extracted/AVE value of the model is greater than 0.5, indicating its strong convergence validity.

Three factors, namely the relationship between intention and conduct with a statistic, are found to have a significant association based on Table 4. There is a substantial correlation between intent and behaviour (T-value 16.637 > 1.96 and p-value 0.000<0.005). There are correlations between the mother's intention and perceived control, as indicated by the statistical T of 5.518 > 1.96 and the p-value of 0.000 < 0.05 for perceived control with intention. There is a relationship between the mother's aim to prevent stunting and her level of self-efficacy, as indicated by the T Statistics 4.040 > 1.96 and p-Value 0.000 < 0.05.

**Table 4.** Interpretation Inner Model

| | **Original Sample (O)** | **Sample Mean (M)** | **Standard Deviation (STDEV)** | **T Statistics (\|O/STDEV\|)** | **P Values** |
|---|---|---|---|---|---|
| Descriptive Norm → Intention | 0.060 | 0.068 | 0.065 | 0.913 | 0.362 |
| Experiential Attitude → Intention | 0.049 | 0.047 | 0.056 | 0.888 | 0.375 |
| Injunctive Norm → Intention | -0.051 | -0.048 | 0.060 | 0.859 | 0.391 |
| Instrumental Attitude → Intention | -0.021 | -0.026 | 0.062 | 0.342 | 0.732 |
| Intention → Behavior | 0.775 | 0.777 | 0.047 | 16.637 | 0.000 |
| Knowledge → Behavior | 0.068 | 0.066 | 0.047 | 1.448 | 0.149 |
| Perceived Control → Intention | 0.528 | 0.522 | 0.096 | 5.518 | 0.000 |
| Self-Efficacy → Intention | 0.360 | 0.362 | 0.089 | 4.040 | 0.000 |

T Statistics > 1.96

According to Table 5, the mother's intention and conduct model for preventing stunting has an R square of 0.665 > 0.26, indicating that the model fits or is good. The R-square value of the

intention variable is 0.665, meaning the intention variable is influenced by other variables in the model by 66.5%. The variables that influence intention include perceived control and self-efficacy. The remaining 33.5% is influenced by factors outside the model. The R-square value of the behavioral variable is 0.622, meaning the intention variable is influenced by other variables in the model by 66.2%. The variable that influences behaviour is behavioral intention. The remaining 33.8% is influenced by factors outside the model.

**Table 5.** R-Square Analysis

| | ***R-Square*** | ***Adjusted R-Square*** |
|---|---|---|
| **Intention** | 0.665 | 0.658 |
| **Behaviour** | 0.622 | 0.619 |

Based on Figure 1, shows that behaviour is significantly influenced by intention, while behavioral intention is directly influenced by perceived control and self-efficacy. The results of the study demonstrated a statistically significant and favorable intention-to-behavior link, which was supported by a p-value of 0.0005 and a statistical T-value of 16.637 > 1.96. Stated differently, the results imply that people are more likely to carry out a specific conduct when they have a strong intention to do so. According to the study's findings, self-efficacy and intention are significantly correlated, with a T statistic of 4.040 > 1.96 and a P value of 0.000 < 0.05. Perceived control and self-efficacy make up a sub-factor of personal agency. While competence refers to an individual's real skill set, self-efficacy is the belief in one's ability to act. The results of the study indicate a strong relationship between a mother's goals and perceived control with intention of behaviour.

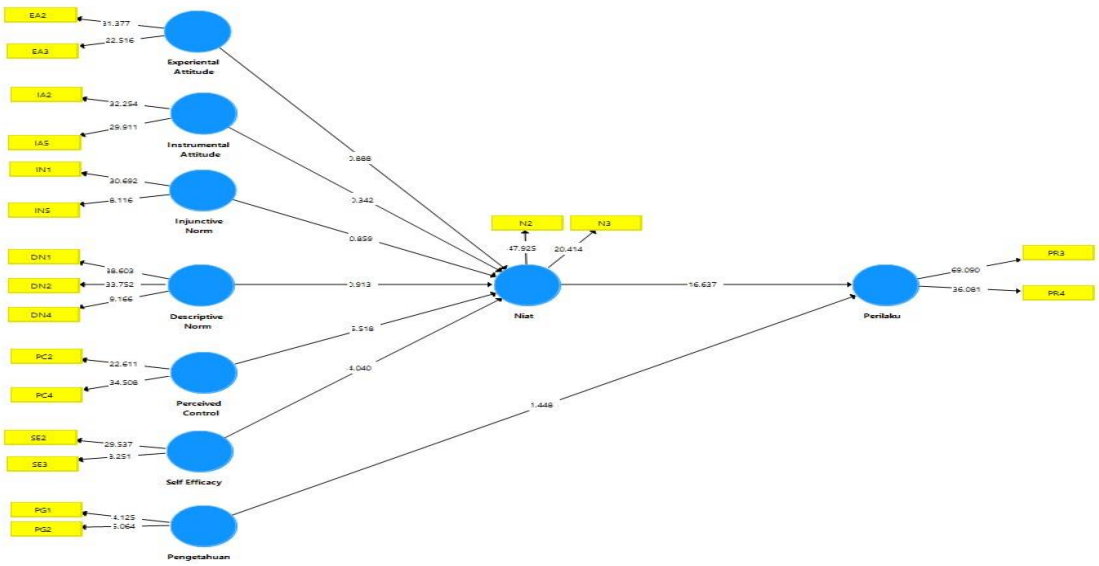


**Figure 1.** Path Coefficient The Mother's Purpose Directly Influences the Inner Model Mother's Actions in Preventing Stunting

## Discussion

### Relationship between Perceived Control with Intention

The results of the study indicate a strong relationship between a mother's goals and perceived control with intention of behaviour. The results are supported by a study by[13], which shows the relationships between each construct and the intention of DM women to adopt a healthy diet. A fifth of the variance in the intention to adopt a healthy diet was

explained by the three components. Following correction for prior behaviour and additional factors. Ajzen clarifies that behaviour is influenced by a person's willpower as well as outside variables like opportunity and resource availability, as well as particular abilities. A psychological concept known as perceived control describes a person's subjective conviction that they are capable of carrying out a specific behaviour. When assessing someone's intentions, decisions, and behaviours, perceived control is a key factor. A person will be less driven to engage in an activity with significant intensity if they feel they don't have the means or opportunity to do so (poor behavioural control). Perceived control is a word used to characterize an individual's perception of their capacity to control particular behaviours, according to the findings of [14]. This view is predicated on the presence or lack of elements that could either make an action easier or harder to carry out. An individual's assessment of the degree of difficulty or ease of acting influences their feeling of control. The experiences of others, including friends, spouses, and family, can also have an impact on how someone perceives a behaviour.

Ajzen [15] revealed that behavioural control is a person's belief that something can control behaviour or perception of the ease or difficulty in undertaking a behaviour under specific influences. When someone has these three controls, then he/she can have a strong determination to show that behaviour, in this case, the ability to invest [16]. Research by Chen et al. states that behavioural controls can influence one's intentions in investing [17]. The perception of behavioural control had a positive impact on the willingness to invest. The condition explains that the smaller or at least the perceptible obstacle to investing, the stronger one's intention to invest. Relevant to the results of the study [13], we also found that the intention to adopt a healthy diet was negatively affected in GDM+ women with reduced control felt in adopting healthy diets when they had access to food in their surroundings. Similarly, in a Danish woman study of GDM+, most of them identified difficulties in continuing their healthy diet during the postpartum period, talking about appetite and having a will to withhold foods such as candy and chocolate among other obstacles.

Ajzen presented the idea of perceived control as a function based on beliefs known as control beliefs. These beliefs relate to a person's perception of elements that encourage or prevent them from engaging in a particular action. (essential control ideas). These beliefs are based on an individual's previous experience with the behaviour, the information they have observed about the behaviour, and other factors that can affect an individual's perception of the behaviour's difficulty. Generally speaking, the more an individual perceives supportive factors and the fewer inhibitory factors there are, the more likely they are to be able to perform a behaviour, then an individual will tend to feel the ease of performing such behaviours; on the contrary, the less an individual sense the supportive factors and more the inhibitors in being able to carry out a behaviour, then the individual will tend to feel it difficult to perform such behaviours.

According to Pertiwi et al. [18] Perceived control in someone will affect a person's tendency to seek information about something (perceived information). Information media exposure plays a vital role as a source of knowledge, strengthening knowledge, and strengthening public awareness [19]. Perceived control is a personal characteristic that affects a person's psychological condition and adjustment. If the perceived control of a mother has a vulnerability then it will affect the mother's awareness of stunting prevention so the potential of the child experiencing stunting is so great that it occurs in the mother with the vulnerability [20]. Perceived control is an individual's assumption of his or her ability to show behaviour under certain conditions [21].

Perceived control is based on three components: individual abilities, self-assessment, and self-control of possessed abilities [22].

According to research findings of Ong et al., 2023, comprehension significantly influences perceived benefits directly (β: 0.898; p = 0.002) [23]. It was discovered that Cues to Action had a substantial direct positive effect on PBC (β: 0,460 and p = 0,020) and that Perceived Barriers were found to be positive and directly affect attitudes (β: 0,484 and p = 0,021). According to Ajzen's (2005) theory of planned behaviour, as stated in Ganz et al. (2020), an individual's belief about the availability of resources, such as tools, compatibility, competence, and opportunity, as well as the degree to which these resources support or obstruct predicted behaviour, determine how much control they feel they have over the behaviour and how much power they have over it [15]. People who have a strong sense of control will keep pushing themselves and working hard to achieve their goals because they believe they can overcome their obstacles given the right tools and chances.

Individuals with high perceived control are usually confident in their ability to perform a particular action but they tend to feel a small gap between their current ability and the desired ability to a goal. As a result of these small gaps, individuals with high perceived control tend to experience self-satisfaction, and thus less motivation to engage in cognitive endeavours. Individuals with high perceived control tend to use available resources to process or shape the intention to do something. To conclude the level of perceived control affects the formation of one's intentions to do something [24]. A mother's perceived control reflects her perception of her ability to prevent stunting in her child. Factors that can either boost or diminish her aim to prevent stunting in her children are influencing her perception. The degree to which a mother views this behavioural control as positive depends on her experiences and how easy or difficult she believes the intended behaviour to be. Mothers need information about the experiences of others, such as family, partners, and friends, who have successfully implemented stunting-prevention parenting, which will influence their perception of stunting prevention as an important behaviour that must be undertaken. This positive perception shapes the mother's intention in stunting prevention parenting.

**Relationship between Self-Efficacy with Intention**

According to the study's findings, self-efficacy and intention are significantly correlated, with a T statistic of 4.040 > 1.96 and a P value of 0.000 < 0.05. Perceived control and self-efficacy make up a sub-factor of personal agency. While competence refers to an individual's real skill set, self-efficacy is the belief in one's ability to act. Perceived control involves the sense of control that an individual feels over their behaviour [15].

Self-efficacy refers to the conviction or ability of an individual to move motivations, cognitive abilities, and actions necessary to meet the demands of a situation. Based on research on the relationship of self-efficiency of mothers with cognitive development and stunting on news in the Puskesmas Region of Kalirungkut City of Surabaya obtained the result that mothers who have low self-efficiency on average have no will to provide healthy nutrition and physical activity for their children. If the mother's self-effectiveness is high then it will increase her confidence in taking care of and caring for the child well. Implications of this study are very important for mothers to develop a high level of confidence in caring for their children so that their growth can be optimal [25]. Self-efficacy encompasses women's sentiments regarding their role as mothers and their confidence and competence in fulfilling maternal responsibilities [26]. Numerous studies examining the correlation between self-efficacy and infant and child

nutrition behaviours have primarily concentrated on breastfeeding practices. Additionally, findings from other studies indicate that diminished levels of maternal self-efficacy can impact various aspects of childcare [27]. According to [28] the self-efficiency of mothers can influence the behaviour of the mother's nursing, self-effectiveness directly will affect the determining factors of the child's growth (For example, good responsiveness, interactive behaviour, and strategies in performing roles as a more disciplined parent.

**Relationship between Intention with Behavior**

The results of the study demonstrated a statistically significant and favorable intention-to-behavior link, which was supported by a p-value of 0.0005 and a statistical T-value of 16.637 > 1.96. Stated differently, the results imply that people are more likely to carry out a specific conduct when they have a strong intention to do so. It is pertinent to the study's findings that attitudes have a beneficial impact on behavioral intentions, which in turn have a good impact on ICCDM behaviour. In line with the TPB theory and other studies on physician behaviour, behavioural intents are the mediating variable of the conversion of behavioural attitudes into treatment. Put differently, intention can function as both a prerequisite for behaviour preparation and an internal motivator of attitude.

Theory of Reason Action (TRA) and Theory of Planned Behavior (TPB) are two theories that are combined into the complete approach known as the Integrated Behavioral Model (IBM). These ideas emphasize how important behavioral intention is in determining behaviour. Behavior is greatly influenced by motivation. It is not possible for a person to effectively implement recommended behaviour without motivation. Four other components directly influence behaviour. Three of them are crucial in determining whether behavioral intentions can implemented into actual behavior.

First, a person needs more than just a strong intention to behave in a certain way. He also needs the knowledge and skills to put that intention into action. Second, there should be little to no environmental constraints that make it extremely difficult or impossible to engage in that behaviour. Third, the behaviour must be noticeable, visible, and easily recognizable. Finally, if a person continues to implement the behaviour, it can become a habit, and the intention becomes less important in determining their performance. IBM highlights that having a clear intention is important for motivating a person to behave in a certain way. Without motivation, one is unlikely to follow through with recommended behaviour. IBM emphasizes that the biggest factor in determining an individual's behavioural change is their intention to do so. IBM highlights intention as the driving force behind the behaviour, emphasizing that without motivation, one is unlikely to engage in recommended behaviour.

A person's intention to exhibit a behaviour is a result of their attitudes toward exhibiting that behaviour as well as their subjective norms. While behavioural behaviour is an actual act carried out, behavioural intentionality is an interest that denotes the desire to carry out a behaviour. Regarding the research findings of Najafi et al. (2023), the average behavioural intensity score of the experimental groups significantly increased four months after the educational intervention [29]. This is in line with the research findings of Najafi et al. (2023) which demonstrated the impact of an education intervention on increased behavioral intensity in the intervention group. Regarding the relationship between behavioural intent and tobacco use, therefore, it is possible to prevent and control the use of hookah by influencing the behavioural intent of Hookah users. According to the research of Sobaih et al. (2023), the most important element positively influencing protective behaviour is the purpose to prepare

(β = 0,542, p = 0,001) [30], that the intention of personal water protection behaviour is positively linked to civilian water conservation behaviour. Predicts the intent to engage in pro-ecological behaviours

A person's purpose influences their decision-making, according to Glanz et al. (2020) Theory of Planned Behavior (TPB) [15]. The direct drivers of intention are attitude toward the behaviour, subjective norm, and perceived behavioral control [31]. The notion of reasoned action holds that a person's intention determines their actions. The act of intending to engage in a behaviour denotes a shift from one's thoughts or beliefs to a planned course of action. This intention manifests when there is a positive attitude and normative support from the surrounding environment to carry out the behaviour. A person's behavioural attitude is shaped by their judgment of the consequences of their actions as well as their underlying ideas about behaviour. In the same way, subjective norms are affected by the beliefs about norms and the willingness to conform [25].

## Conclusions

The study's findings demonstrate that not all variables that may theoretically affect behaviour have been demonstrated, including a mother's degree of understanding. This suggests that the high understanding and perception of the mother about stunting prevention is unable to move the mother. Furthermore, it has not been demonstrated that attitudes, injunctive norms, or descriptive norms have an impact on the variable of intention. It means that the cultural factors and norms that apply in society do not improve the intention of the mother's behaviour. However, to prevent stunting in children between the ages of two and five, the mother must have a strong intention that is shaped by her strong sense of self-efficacy and positive self-control. Recommended to the health care staff at the village level and health care facilities to take the approach of enhancing mothers' intentions through family empowerment activities, positive affirmations in enhancing perceived control and self-efficacy of mothers about the importance of stunting prevention and efforts to increase mothers' confidence in stunting prevention.

## Conflict of Interest

There is no conflict of interest.

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