

## Mother's intention to provide balanced nutritious food to children 6-24 months

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### Abstract

**Context:** The nutritional problem in Indonesia based on SSGI in 2021 is 24.4%, while underweight is 17% and wasted is 7.1% [1]. When compared to the WHO standard regarding the amount of stunting prevalence that is not a problem, which is 20%, the prevalence rate is still considered high and efforts are needed to reduce the prevalence. In Surabaya City, it is known that there are underweight toddlers (BB/U) as much as 7.5%, short toddlers (TB/U) as much as 4.8%, wasting toddlers (BB/TB) as much as 6.1%, and overweight toddlers (BB/TB) as much as 3.4% [2].

**Methodology:** This research is a cross-sectional descriptive study. The sample size in this study used a saturated sample or the entire population was used as a sample, namely 61 people. Data analysis used in this study is using the chi-square test.

**Results:** Statistical test results of knowledge with intention showed a  $p$ -value (0.349)  $> 0.05$  which means that there is no relationship. Data analysis regarding the relationship between respondents' attitudes and intentions shows a  $p$ -value ( $<0.001$ )  $< 0.05$ , which means that there is a relationship. Data analysis regarding the relationship between respondents' subjective norms and intentions shows a  $p$ -value (0.008)  $< 0.05$ , which means that there is a relationship. Data analysis regarding the relationship between respondents' perceived behavioral control and intention shows a  $p$ -value (0.004)  $< 0.05$ , which means that there is a relationship.

**Conclusion:** From the results of the study it can be concluded that there is a relationship between attitude, subjective norms, perceived behavioral control with maternal intention. Conversely, the results showed no relationship between knowledge and mothers' intention in providing balanced nutritious food to children.

**Keywords:** Child; Mother; Nutrition; Knowledge; Intention

### 1. Introduction

The number of cases of nutritional problems in Indonesia based on the Indonesian Nutrition Status Study (SSGI) in 2021 was 24.4%, while underweight was 17% and wasted was 7.1% [1]. When compared to the WHO standard regarding the amount of stunting prevalence that is not a problem, which is 20%, this prevalence rate is still considered high and efforts are needed to reduce this prevalence. In Surabaya City, it is known that there are underweight toddlers (BB/U) as much as 7.5%, short toddlers (TB/U) as much as 4.8%, wasting toddlers (BB/TB) as much as 6.1%, and overweight toddlers (BB/TB) as much as 3.4% [2]. The number of nutritional problems in Surabaya City is mostly far from the provincial prevalence rate. However, the prevalence of overweight is only slightly different from the provincial prevalence, although it is still below the provincial prevalence.

Stunting is a nutritional problem caused by insufficient intake of nutrients obtained by the body for a long period of time, causing children's growth to be disrupted, which is shown through the child's below-average height. Children who

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are indicated to be stunted have a height-for-age of  $<-2$  SD to  $-3$  SD, while if  $<-3$  SD means that the child is acutely stunted. People consider a child's short height to be inherited from their parents. However, genetics has the least impact on health when compared to behavioral, environmental (social, economic, cultural, political), and health service factors [3].

Adequate nutritional intake during growth is very important. The golden age period is a time when children aged 0-59 months experience a very rapid process that requires more and high quality nutritional intake [4]. Children's nutritional needs are different from those of adults, because children are experiencing growth and development. Lack of nutritious food will cause growth retardation, while excess intake of nutritious food will cause obesity [5]. Infants aged 0-6 months can have their nutritional needs met through exclusive breastfeeding. Because, breast milk is one of the best food sources for babies. After the child is 6 months old and above, complementary food is needed as an additional nutritional intake. Complementary feeding must follow the development of the baby's digestive system, starting from liquid structured food, thick textured, semi-solid, until finally food with a solid consistency [6].

The mother is the main caregiver of the child, so the mother's parenting pattern is related to the preparation of the food menu, feeding the child, eating patterns and frequency of eating the child which will indirectly affect the child's growth and development [7]. Children who have a good diet do not necessarily have their nutritional needs met. So it is necessary to apply a balanced nutritional diet with nutritional intake that suits the needs of children. This nutritional intake is related to the type, amount, and diversity of food. Aspects that need to be considered in carrying out a balanced diet include meeting the body's needs both in terms of quantity and quality, including various nutrients such as energy, protein, vitamins, and minerals, and allowing the storage of nutrients needed to meet the body's needs [8].

Kedung Cowek Village is one of the villages in the northern part of Surabaya. Preliminary studies conducted on October 17-19, 2023 to 12 mothers with children who have nutritional problems found that 8 mothers admitted that they did not give fruit and vegetable foods every day to their children. Mothers admitted that giving fruits and vegetables was done only when the food was available. The mother's efforts to strive for children to eat nutritious food are also felt to be lacking.

Prediction of maternal intentions in providing balanced nutritious food can be done to prevent an increase in cases of problems regarding nutrition. prediction of intentions can be done using the theory of planned behavior (TPB). Therefore, the researcher intends to analyze the relationship between knowledge, attitudes, subjective norms, and perceived behavioral control with maternal intention in providing balanced nutritious food to children.

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## **2. Material and methods**

### **2.1. Study Design**

This study is a cross-sectional descriptive study conducted to determine the relationship between knowledge, attitudes, subjective norms, and perceived behavioral control with maternal intention in providing balanced nutritious food to children.

### **2.2. Study Area**

This research was conducted in Kedung Cowek urban village, Bulak sub-district, Surabaya city. Kedung Cowek Village is the working area of Kenjeran Health Center and is included in the North Surabaya area. The boundaries of this kelurahan are in the north and east bordering the Madura Strait, while the south is bordered by Bulak Village and the west is bordered by Tanah Kalikedinding Village. Kedung Cowek urban village is divided into 3 RW, namely RW1, RW2, and RW3.

### **2.3. Subjects**

The subjects in this study are mothers who have children aged 6-24 months and live in Kedung Cowek village.

### **2.4. Inclusion Criteria**

The inclusion criteria in this study are,

- a. Mothers who have children aged 6-24 months;
- b. Residing in Kedung Cowek Village, Bulak Subdistrict, Surabaya;
- c. Recorded in the data system owned by the Kenjeran Health Center.

## 2.5. Exclusion Criteria

Exclusion criteria in this study are,

- a. The subject was not willing to participate in the study;
- b. The subject was not present at the time of data collection;
- c. The subject moved house.

## 2.6. Populasi dan Sample

### 2.6.1 Population

The population of this study is based on the data system owned by the Kenjeran Health Center, which is 61 mothers with children aged 6-24 months.

### 2.6.2 Sample

Determination of the sample size in this study was carried out using the total population of 55 people because the population was less than 100.

## 2.7. Analisis Data

This study uses univariate data analysis which is used to describe the variables studied individually. And bivariate data analysis was carried out to determine the relationship between the two variables. Bivariate analysis was carried out through the chi-square test.

## 2.8. Data Collection

A total of 55 respondents were obtained according to the research criteria, namely mothers with children aged 6-24 months. Socio-demographic variables such as age, education, occupation, family income were accurately recorded in the questionnaire.

## 3. Results and discussion

### 3.1. Karakteristik Responden

A total of 55 respondents agreed and participated in this study. The socio-demographic characteristics of the respondents as shown in table 1. Their ages ranged from 20 - 35 years old as many as 43 respondents with a percentage of 78.2%. Their education is mostly at the secondary level (SMA) as many as 27 respondents with a percentage of 49.1%. Their occupations were mostly not working or housewives as many as 40 respondents with a percentage of 72.7%. Family income within 1 month was mostly below the Surabaya City regional minimum wage (Rp. 4,525,479) as many as 45 respondents with a percentage of 81.8%.

**Table 1** Distribution of socio-demographic characteristics of maternal respondents with children aged 6-24 months in Kedung Cowek Village, April-March 2024.

Socio-demographic factors	Frequency	Percentage
Age		
< 20 years	0	0
20 - 35 years	43	78.2%
> 35 years	12	21.8%
Education		
Elementary (not in school - junior high school)	21	38.2%
Intermediate (senior high school)	27	49.1%

<b>Socio-demographic factors</b>	<b>Frequency</b>	<b>Percentage</b>
High (College)	7	12.7%
<b>Jobs</b>		
Not working/ housewife	40	72.7%
Self-employed	3	5.5%
Civil servants	2	3.6%
Employee	10	18.2%
<b>Household Income</b>		
< Rp. 4.525.479	45	81.8%
≥ Rp. 4.525.479	10	18.2%
<b>TOTAL</b>	<b>55</b>	<b>100.0%</b>

### 3.2. Univariate Analysis

**Tabel 2** Distribution of maternal respondents with children aged 6-24 months based on knowledge, attitudes, subjective norms, perceived behavioral control and maternal intention in providing balanced nutritious food in Kedung Cowek Village April-March 2024 Period.

<b>Research variabls</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Knowledge</b>		
Bad	30	54.5%
Good	25	45.5%
<b>Attitude</b>		
Negative	27	49.1%
Positive	28	50.9%
<b>Subjective Norm</b>		
Weak	36	65.5%
Strong	19	34.5%
<b>Perceived Behavioral Control</b>		
Low	35	63.6%
High	20	36.4%
<b>Intention</b>		
Weak	28	50.9%
Strong	27	49.1%
<b>TOTAL</b>	<b>55</b>	<b>100.0%</b>

Based on table 2. Most mothers' knowledge is in the bad category as many as 30 respondents with a percentage of 54.5%. Most mothers' attitudes were in the positive category as many as 28 respondents with a percentage of 50.9%. Most of the mothers' subjective norms were in the weak category as many as 36 respondents with a percentage of 65.5%. Perceived maternal behavioral control was mostly in the low category as many as 39 respondents with a

percentage of 63.6%. Most mothers' intentions were in the weak category as many as 28 respondents with a percentage of 50.9%.

### 3.3. Bivariate Analysis

**Table 3** Relationship based on knowledge, attitude, subjective norms, perceived behavioral control with maternal intention to provide balanced nutritious food in Kedung Cowek Village April-March 2024 Period.

Research variables	Intention				p-value
	Weak		Strong		
	n	%	n	%	
<b>Knowledge</b>					
Bad	17	60.7%	13	48.1%	0.349
Good	11	39.3%	14	51.9%	
<b>Attitude</b>					
Negative	21	75%	6	22.2%	<0.001
Positive	7	25%	21	77.8%	
<b>Subjective norm</b>					
Weak	23	82.1%	13	48.1%	0.008
Strong	5	17.9%	14	51.9%	
<b>Perceived behavioral control</b>					
Low	23	82.1%	12	44.4%	0.004
High	5	17.9%	15	55.6%	

#### 3.3.1 Relationship between knowledge and intention

Table 3. Shows that 55 respondents who have weak intentions in providing balanced nutritious food to children, there are 17 (60.7%) respondents who have poor knowledge and 11 (39.3%) respondents have good knowledge. While respondents who have strong intentions in providing balanced nutritious food to children, there are 13 (48.1%) respondents who have poor knowledge and 14 (51.9%) respondents who have good knowledge. The results of statistical tests through the chi-square test showed a  $p$ -value (0.349)  $>$  0.05, which means that there is no significant and meaningful relationship between knowledge and the mother's intention to provide balanced nutritious food to children aged 6-24 months in Kedung Cowek Village.

The results of this study are in line with research conducted by Ainaya et al [10]. After the statistical test was carried out, the result obtained  $p$ -value (0.57)  $>$  0.05, which means that there is no significant relationship with the intention of adolescent girls to consume TTD. Another study conducted by Azzahra et al [9] found the result of  $p$ -value (0.646)  $>$  0.05, which means that there is no significant relationship between knowledge and intention to vaccinate covid-19 in the people of Java Island.

Knowledge is the result of someone knowing an object through the sensing process (eyes, ears, nose, and so on) [11]. Knowledge is considered as the main domain in an action so, knowledge plays an important role in shaping a person's actions. Behavioral intentions that are based on knowledge will result in more sustainable behavior than intentions and behaviors that are not based on knowledge. According to Notoatmodjo, the older an individual gets, the more he/she captures information and plays an active role in social life [12].

Based on these opinions and the results of this study indicate that most respondents with poor knowledge have weak intentions in providing balanced nutritious food to their children. This occurs because of the lack of information obtained by respondents regarding balanced nutrition, which affects their knowledge. Some respondents stated that counseling activities carried out by health workers during posyandu were rarely carried out. Based on table 1.

characteristics of respondents, it is known that most respondents are aged 20-35 years. The older the age, the less the respondent's ability to remember. This is an important role that can be played by health workers and local cadres to often conduct counseling or health education. To be able to make it easier for people to understand or understand the material, simple language can be used and material can also be given through leaflets, brochures, posters or other media that attract the public's interest.

### 3.3.2 *Relationship between attitude and intention*

Tabel 3. Shows that 55 respondents who have weak intentions in providing balanced nutritious food to children, there are 21 (75%) respondents who have a negative attitude and 7 (25%) respondents have a positive attitude. While respondents who have strong intentions in providing balanced nutritious food to children, there are 6 (22.2%) respondents who have a negative attitude and 21 (77.8%) respondents who have a positive attitude. The results of statistical tests through the chi-square test showed a  $p$ -value ( $<0.001$ )  $<0.05$ , which means that there is a significant and meaningful relationship between attitude and mother's intention to provide balanced nutritious food to children aged 6-24 months in Kedung Cowek Village.

The results of this study are in line with research conducted by Kharisma & Isni [14] on the Intention of Fertile Age Couples to Use Contraceptive Devices and Drugs during the Covid-19 Pandemic. This study states that there is a relationship between attitudes and respondents' intention to use contraceptives in Kedungjarian Hamlet with a significance value of 0.030. Other research conducted by Azzahra et al [9] states that there is a significant relationship between attitudes and respondents' intention to vaccinate covid-19 with a significance value of 0.00.

Attitude is an individual's belief about the consequences of the behavior they have done [15]. In this context, attitude is not just an immediate reaction to the situation, but also a reflection of the individual's understanding and perception of the impact of the behavior they choose to do. Individuals who have a positive view of something will tend to form positive intentions, and behave positively in accordance with their attitudes and beliefs.

Based on this opinion and the results of this study indicate that most respondents with a negative attitude have a weak intention to provide balanced nutritious food to their children. Whereas respondents with a positive attitude have a strong intention to provide balanced nutritious food to their children. This positive attitude occurs because most mothers have the opinion that knowledge about the types of food sources is important and children need to be given a variety of foods to meet their nutritional needs. Most mothers also continue to supervise the food consumed by their children even though they give it to other people or their caregivers. Although most mothers have a positive attitude, there are still some mothers who have a negative attitude in providing a balanced nutritious diet for children. So that the importance of the role of health workers and local cadres to always improve the attitude of mothers in providing a balanced nutritious diet for children through health education about the importance of nutritional intake with the types and needs appropriate to the age of the baby and the impact if there is malnutrition both in the short and long term.

### 3.3.3 *The relationship between subjective norms and intention*

Tabel 3. Shows that 55 respondents who have weak intentions in providing balanced nutritious food to children, there are 23 (82.1%) respondents who have weak subjective norms and 5 (17.9%) respondents have strong subjective norms. While respondents who have a strong intention to provide balanced nutritious food to children, there are 13 (48.1%) respondents who have weak subjective norms and 14 (51.9%) respondents who have strong subjective norms. Statistical test results through the chi-square test showed a  $p$ -value (0.008)  $<0.05$ . Which means that there is a significant and meaningful relationship between subjective norms and mothers' intention to provide balanced nutritious food for children aged 6-24 months in Kedung Cowek Village.

The results of this study are in line with research conducted by Kharisma & Isni [14] on the Intention of Fertile Age Couples to Use Contraceptive Devices and Drugs during the Covid-19 Pandemic. This study states that there is a relationship between subjective norms and respondents' intention to use contraceptives in Kedungjarian Hamlet with a significance value of 0.011. Other research conducted by Oktavianingtiyas & Muslichah [16] states that there is a positive and significant relationship between subjective norms and respondents' intention to buy Korean food that has MUI halal certification with a significance value of 0.00. Research conducted by Glanz et al [13] states that normative beliefs about partners have a greater impact than other sources on people's intention to use condoms with regular partners. Alam & Sayuti [16] state that subjective norms are social pressure felt by a person to meet the expectations of others in doing or not doing an action. This social pressure can come from friends, family, relatives, and so on. So it can be interpreted that subjective norms are an opinion that is believed by others and is considered an important thing for individuals so that it influences individuals to be able to do or not do this behavior. The more people who believe in this opinion, the more likely the individual is to believe and perform this behavior.

Based on this opinion and the results of this study, it shows that most respondents with weak subjective norms have weak intentions in providing balanced nutritious food to their children. The average respondent in Kedung Cowek Village has good subjective norms. This weak subjective norm occurs because most mothers do not believe and do things that are believed by others around them. One of the things that can affect subjective norms is the mother's belief in the prevailing norms. This will indirectly shape the mother's attitude and understanding of one thing [14].

### 3.3.4 Relationship between perceived behavioral control and intention

Tabel 3. Shows that 55 respondents who have weak intentions in providing balanced nutritious food to children, there are 23 (82.1%) respondents who have low perceived behavioral control and 5 (17.9%) respondents have high perceived behavioral control. While respondents who have a strong intention to provide balanced nutritious food to children, there are 12 (44.4%) respondents who have low perceived behavioral control and 15 (55.6%) respondents who have high perceived behavioral control. The results of statistical tests through the chi-square test showed a value of  $p$ -value (0.004)  $< 0.05$ , which means that there is a significant and meaningful relationship between perceived behavioral control and maternal intention to provide balanced nutritious food to children aged 6-24 months in Kedung Cowek Village.

The results of this study are in line with research conducted by Azzahra et al. [9] on the Relationship between Attitudes, Perceptions of Behavioral Control, Knowledge, and Willingness to Pay with Covid-19 Vaccination Intention in the Java Island Community in 2020. This study states that there is a relationship between perceived behavioral control and respondents' intention to carry out Covid-19 vaccination with a significance value of 0.000. Another study conducted by Oktavianingtias & Muslichah [16] states that there is a positive and significant relationship between perceived behavioral control and respondents' intention to buy Korean food that has MUI halal certification with a significance value of 0.00. Perceived behavioral control according to Bonne et al. [16] is a person's ability to control his behavior. Another opinion states that perceived behavioral control is an individual's way of assessing the ease and difficulty of performing a behavior. In the sense that perceived behavioral control provides an overview of the assessment of whether a behavior is easy or not which indirectly has implications for the actions of the individual himself. Perceived behavioral control along with intention can influence how to act, especially when individuals have control over their behavior and when their desire to control a behavior is high [13].

Based on this opinion and the results of this study indicate that most respondents with low perceived behavioral control regarding balanced nutritional feeding patterns have weak intentions. Also in providing balanced nutritious food to their children. Individuals who have low perceived behavioral control will not be likely to perform a behavior because they do not have confidence that their resources and opportunities are able to overcome obstacles. The high and low of this belief affects the determination and actions that will be taken.

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## 4. Conclusion

From the results of the study it can be concluded that there is a significant and meaningful relationship between attitudes, subjective norms, perceived behavioral control with maternal intention in providing balanced nutritious food to children. In contrast, the results showed no significant and meaningful relationship between knowledge and maternal intention in providing balanced nutritious food for children. This study also found that respondents' knowledge was dominated by a low level of knowledge. A person's action based on knowledge results in sustainable action. Therefore, an active role is needed from both health workers and local health cadres to provide information about maternal and child health, especially those related to balanced nutrition.

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## Compliance with ethical standards

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### *Disclosure of Conflict of interest*

I declare no conflict of interest in this research.

### *Statement of informed consent*

Informed consent was obtained from all individual participants included in the study.

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