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**The Relationship Between Knowledge of Allergy Triggers and Attitudes in Handling Asthma in Mothers of Toddlers in Kemayoran District, Surabaya**

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**ABSTRACT**

**Background:** Lack of knowledge about allergens in toddlers results in inappropriate asthma management. Inappropriate asthma management in toddlers results in the emergence of symptoms of chronic cough, shortness of breath, chest tightness, which can cause disruption to physical activity, lifestyle, and even death in toddlers. **Object:** Lack of knowledge about allergens in toddlers results in inappropriate asthma management. Inappropriate asthma management in toddlers results in the emergence of symptoms of chronic cough, shortness of breath, chest tightness, which can cause disruption to physical activity, lifestyle, and even death in toddlers. **Method:** Correlational research . The total number of mothers with toddlers in Kemayoran Village was 50 parents. The sample in this study was a portion of mothers with toddlers calculated using the Slovin formula, with a sample size of 45 parents. Sampling used simple random sampling. The measuring instrument used a questionnaire. Data were analyzed using the Spearman's rho statistical test with  $p < \alpha = 0.05$ . **Results:** The majority of mothers of toddlers (66.7%) had sufficient knowledge and positive attitudes towards handling the child, while a small proportion (13.3%) had insufficient knowledge and negative attitudes towards handling the child. The results of the Spearman's rho correlation test showed a  $p$  value of  $0.014 < \alpha = 0.05$ .

**Keywords:** Knowledge of Allergy Triggers, Attitudes, Asthma, Mothers and Toddlers

**BACKGROUND**

Asthma is a narrowing of the respiratory tract due to an excessive reaction to allergens that cause inflammation (Soedarto, 2012). Lack of knowledge about allergy triggers in toddlers results in inappropriate asthma management. Inappropriate asthma management in toddlers results in the appearance of symptoms of chronic cough, shortness of breath, chest tightness which can cause disruption of physical activity, lifestyle and even death in toddlers (Dawn, 2013). Mothers' knowledge and attitudes are needed to reduce morbidity, maintain and care for

the health of toddlers who are very susceptible to infection (Munazir, 2016).

Basic Health Research Data in 2018 stated that the prevalence of asthma in Indonesia was 4.5% with 4.6% being women. Data on asthma prevalence in East Java in 2018 was 2.57% and asthma prevalence in Surabaya in 2018 was 3%<sup>4</sup>). Asthma sufferers in toddlers will show symptoms of shortness of breath and lack of oxygen caused by the body's response to allergic triggers; pollution, exercise, stress and emotions, physical triggers, triggers from work, weather allergies, food and drugs (Wawan & Dewi, 2013). Spicy, cold, sour, salty foods can also be

triggers for asthma attacks, are irritating. This response can last for a short time or for days, even the symptoms can persist or become chronic (Munasir, 2016).

Mothers' knowledge of allergens is crucial for reducing morbidity rates in toddlers in the community. Mothers play a role as caregivers and must have an understanding of, and attitudes and behaviors necessary to maintain and care for the health of toddlers who are highly susceptible to infection. Modern asthma management and contemporary therapies enable toddlers with asthma to lead more active and meaningful lives. Knowledge and attitudes can determine the success of asthma treatment. Knowledge and attitudes for caring for toddlers with asthma require a general understanding of asthma as well as an understanding of how the disease manifests itself in specific individuals, combined with attentive medical care and a collaborative partnership between patient and doctor. Advances in medical knowledge have made asthma one of the most manageable childhood conditions.

The advent of anti-inflammatory medications has revolutionized asthma treatment. A child with well-controlled asthma should be able to participate in all physical activities and have minimal disruption to their lifestyle (Dawn, 2013). Knowledge of allergens; Types of sea fish, cow's milk, eggs, chocolate, nuts, spicy, cold, sour, salty foods can also be triggers for asthma attacks because they are irritating (Wawan & Dewi, 2013) and a good attitude in handling asthma related to allergic triggers in asthma attacks can minimize asthma attacks in toddlers. Efforts through modern asthma management and contemporary therapies enable people with asthma to lead more active and meaningful lives. Successful asthma treatment requires a general understanding of the disease as well as an understanding of how the disease manifests itself in a particular individual, combined with attentive medical care and

a collaborative partnership between patient and doctor. One way to prevent asthma flare-ups is to completely avoid or at least minimize exposure to triggers, which will significantly reduce asthma symptoms. If avoidance of known triggers is effective, the dose of asthma medication can be reduced once asthma symptoms are under long-term control (Nelwan, 2020). The purpose of this study was to determine the relationship between knowledge levels and asthma triggers. Allergy triggers and attitudes in managing asthma in toddlers.

## RESEARCH METHODS

### Research Design

The Design was correlational with a cross-sectional approach. The total population of mothers with toddlers in Kemayoran Village was 50 parents. The sample in this study was a portion of mothers with toddlers in Kemayoran Village calculated using the Slovin formula;  $n = N/1+N(d)^2$ , with a sample size of 45 parents. Sampling used simple random sampling.

### Instrument and Equipment

questionnaire items were designed to measure mothers' knowledge about allergy triggers and attitudes towards asthma management in toddlers using a Likert scale.

### Data Collection Methods

Data were collected using a questionnaire from April to May 2025 through home visits. Interviews were conducted to ensure proper understanding of the questions. Self-reported information was systematically cross-referenced with institutional records to improve data accuracy and minimize recall or reporting bias that could affect the validity of the study. Skills Training Workshop.

### Data Analysis

Data analysis in this study involved several key steps. First, descriptive statistics were used to summarize the demographic

characteristics of respondents, including age, education level, and occupation. Second, cross-tabulation was used to determine the relationship between knowledge of allergy triggers and asthma management attitudes among mothers of toddlers . The relationship analysis used

the SPSS 16.0 program and Spearman's rho statistical test to evaluate the relationship between personality types with a significance level of  $p < \alpha = 0.05$  <sup>(7)</sup>

## RESULT AND DISCUSSION

**Table 1.**

Distribution of Demographic Frequency of Mothers Based on Age, Occupation and Education of Mothers of Toddlers in Kemayoran Subdistrict , Krembangan Surabaya, May 2025

Demographics	Frequency	Percentage (%)
<b>Age</b>		
20 – 25 years	12	2.7
26-40 years	33	73.3
<b>Work</b>		
Doesn't work	15	33.3
Laborer	12	26.7
Trader	9	20.0
Government employees	3	6.7
Self-employed	6	13.3
<b>Education</b>		
Elementary school	6	13.3
Junior High School	12	26.7
Senior High School	18	40.0
College	9	20.0
<b>Total</b>	45	100

Table 1 shows that the age of the mothers of toddlers is mostly (77.3%) or as many as 33 people aged 26-40 years, the type of work of the mothers of toddlers is small (33.3%) or as many as 15 people are

not working and the education level of the mothers of toddlers is almost half (40%) or as many as 18 people have a high school education.

**Table 2.**

Frequency distribution of mothers of toddlers based on knowledge of allergy triggers and attitudes in handling asthma in toddlers in Kemayoran Village , Krembangan Surabaya, May 2025

Ability	Frequency	Percentage (%)
<b>Allergy Knowledge</b>		
Good	9	20.0
Enough	30	66.7
Not enough	6	13.3
<b>Attitude</b>		
Positive	39	86.7
Negative	6	13.3
<b>Total</b>	<b>15</b>	<b>100</b>

Table 2 shows that the majority (66.7%) or 30 mothers of toddlers have sufficient knowledge about allergies and the

majority (86.7%) or 39 have a positive attitude.

**Table 3.**

Relationship between knowledge of allergy triggers and asthma management in mothers of toddlers in Kemayoran Village , Krembangan Surabaya, May 2025

**Attitudes for Handling Asthma in Mothers of Toddlers**

Category	Positive		Negative		Total		
	N	(%)	N	(%)	N	(%)	
<b>Knowledge of Allergy Triggers</b>	Good	9	20.0	-	-	9	20.0
	Enough	30	66.7	-	-	30	66.7
	Not enough	-	-	6	13.3%	6	13.3
	Total	39	86.7	6	13.3%	45	100%

Spearman's rho  $p$  value = 0.014 <  $\alpha$  = 0.05

Table 3 shows that the majority of mothers (66.7%) or 30 people have sufficient knowledge and have a positive attitude towards handling, while the small majority (13.3%) or 6 people have insufficient knowledge and have a negative attitude towards handling. The results of the correlation test with

Spearman's rho obtained a  $p$  value = 0.014 <  $\alpha$  = 0.05.

**Discussion**

Spearman's rho test showed  $p$  value = 0.014 <  $\alpha$  = 0.05. Most of the mothers' high school education made them able to understand information related to

allergens, analyze information, complete and apply the knowledge gained in making decisions related to the mother's attitude in handling asthma in toddlers. Mothers who graduated from high school tend to have a positive attitude in handling asthma in toddlers. This positive attitude makes mothers able to avoid asthma triggers in toddlers, keep toddlers from having weak physiques so they are not easily attacked by disease and asthma attacks and their complications. The results of the study are in line with the theory that the higher a person's level of education, the higher the thinking ability and knowledge a person has, the more knowledge they have (Wawan & Dewi, 2013).

The knowledge capabilities of mothers with high school degrees differ from those of mothers with elementary school degrees. Mothers with elementary school degrees tend to have negative attitudes towards managing asthma in toddlers. Elementary school degrees lack the ability to understand information related to allergens, analyze information, resolve issues, and apply the knowledge gained to make decisions related to their attitudes towards managing asthma in toddlers. Mothers with elementary school degrees are only just beginning to develop critical thinking skills, leading to a tendency towards negative attitudes towards managing asthma in toddlers. Mothers are not yet able to understand proper actions in preventing asthma, resulting in inappropriate behavior. This is in line with Fitria's research findings, which state a relationship between the mother's role in preventing food allergy recurrences in toddlers, where the average mother's role is less than optimal, resulting in frequent and increasingly severe allergy recurrences (Rinawati, 2017).

Most mothers of toddlers are entering adulthood. Those entering adulthood tend to have maturity and stability in their thinking, as well as positive thought patterns. A positive mindset in adult mothers makes them

more open and absorb information about allergy triggers, and they are better able to solve and apply information about allergy triggers. A mother's adequate/good knowledge of allergy triggers will result in a positive attitude. In line with the theory that knowledge is the most important domain for shaping one's actions, therefore, behavior based on knowledge and awareness will be more durable than behavior that is not based on knowledge and awareness (Notoatmodjo, 2007).

Efforts to increase mothers' knowledge of allergy triggers and positive attitudes include providing broader insights. This can be achieved through health promotion, print/electronic media, and ongoing health education. These activities are expected to provide information and broaden knowledge regarding allergy triggers, thereby fostering positive attitudes toward asthma prevention in toddlers. A positive maternal attitude in managing asthma in toddlers will prevent asthma relapses and reduce the incidence of asthma, allowing toddlers to improve their developmental abilities and optimally achieve developmental tasks.

## CONCLUSION

A significant relationship was found between the level of knowledge Allergic triggers and attitudes toward asthma management in mothers of toddlers. Good knowledge tends to lead to good attitudes toward asthma management. Good knowledge of allergen triggers is directly related to better self-management skills, medication adherence, and optimal symptom control.

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