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### **Abstract Acceptance Notification**

August 30th, 2022

To :  
Yoyok Beki Prasetyo

On behalf of the Organizing Committee, it is our pleasure to inform you that your abstract title “Family Experiences in Caring for Asthma Sufferers during the Covid-19 Pandemic in Indonesia: A Qualitative Research” **has been accepted** for the Oral Presentation at **THE 3RD HEALTH SCIENCE INTERNATIONAL CONFERENCE (3<sup>rd</sup> HSIC)** October 5<sup>th</sup>, 2022 in Malang, East Java Indonesia. We welcome you to join us by submitting the Full Paper before September 20<sup>th</sup>, 2022 and sharing your knowledge in this event.

This is to confirm that your registration was successful and you will receive new publication alerts via this email address: [hsic@umm.ac.id](mailto:hsic@umm.ac.id)

If you have any further questions, please feel free to contact us by telephone number +6281553302413.

Warm Regards,

General Chair,

  


**Sri Sunaringsih Ika Wardoyo, SKM., M.PH., PhD**

# Family Experiences in Caring for Asthma Sufferers during the Covid-19 Pandemic in Indonesia: A Qualitative Research

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## Abstract

**Introduction:** Family involvement and support are essential in the care of asthma patients during the Covid-19 pandemic. Family support helps clients in making asthma care decisions during the Covid-19 pandemic. This study aims to explain the family experience in providing Asthma care during the Covid-19 pandemic in Indonesia. **Settings and Design:** This qualitative study was conducted with a content analysis approach in three families of people living with Asthma in East Java Province, Indonesia. **Materials and Methods:** Data were collected from 3 families using semi-structured interviews from 2020–2021. The inclusion criteria were the family with family members suffering from asthma. Sampling was purposeful with maximum variation. Immediately after each interview and recording, the content was transcribed using Word software. Interviews were individually conducted in the home. **Statistical Analysis Used:** Data was analyzed by the conventional content analysis method simultaneously based on five steps. **Results:** The data analysis shows three main themes, namely: family burdened and disrupted activities when asthma relapses, use a mask / keep your stamina/mind relaxed/stay away from the crowd as an effort to prevent asthma during the Covid-19 pandemic, pharmacological and non-pharmacological treatments carried out by families during the Covid-19 pandemic. **Conclusions:** There is a burden and limited activity when the disease recurs can be used as family anticipatory measures in overcoming this problem by cooperating between family members in providing care to patients. The family also has a vital role in limiting the patient's activities when the disease relapses.

**Keywords:** Family, Experiences, Asthma, Qualitative research, Covid-19

## Introduction

Asthma is a chronic inflammatory disease that attacks the respiratory tract and is characterized by recurring and reversible symptoms <sup>1</sup>. Genetic factors make a person more susceptible to asthma, and environmental factors can increase the risk (Djamil et al., 2020). People with asthma are expected to be more vigilant during the Covid-19 pandemic. The coronavirus attacks the respiratory system making a person more susceptible to severe illness due to coronavirus (Ilpaj & Nurwati, 2020).

Covid-19 is the first in Indonesia, with two positive cases on Mar 2, 2020, <sup>4</sup>. Covid-19 is caused by Coronavirus 2 or Sars-CoV-2<sup>5</sup>. There were more Covid-19 cases compared to SARS cases<sup>6</sup>. Common symptoms of Covid-19 include fever, cough, diarrhea, and weakness(Fadli et al., 2020). Prompetchara, Ketloy, & Palaga (2020), mentioned that

another symptom of Covid 19 is shortness of breath, an acute respiratory syndrome disorder. Shortness of breath is one of the most commonly felt symptoms and is found in sufferers of Covid-19<sup>9</sup>. In general, people with asthma complain of shortness of breath<sup>10</sup>.

According to Kartina et al. (2020), the prevalence of asthma worldwide is predicted to increase by 400 million in 2025. Meanwhile, in Indonesia, Asthma is one of the ten most extensive diseases in Indonesia. (Djamil et al., 2020). Asthma requires good management. During the COVID-19 pandemic, asthmatics were afraid to have regular check-ups in the hospital for fear of contracting it<sup>12</sup>. Family involvement and support are essential in the care of asthma patients during the Covid-19 pandemic. Family support helps clients make asthma care decisions during the Covid-19 pandemic<sup>13,14</sup>. This study aims to explain the family's experience in asthma care during the Covid-19 pandemic.

### **Material and Method**

This research design is a qualitative study with a content analysis approach. Participants in this study were three families in rural Indonesia caring for one of their family members with asthma. Participants were divided into three criteria based on the age of people with asthma, namely: respondents aged 5-11 years (children), respondents aged 26-50 years (adults), and respondents aged  $\geq 56$  (elderly). A purposive sampling technique was used in starting the interview. Data was collected using semi-structured interviews that focused on respondents with asthma and their families. The time used for the interview is 45-60 minutes. Some questions include: How do you carry out the effect of asthma recurrence on the activities? What are you doing to prevent the recurrence of asthma you suffered during the Covid-19 pandemic? Data analysis was carried out simultaneously with data collection. Data analysis was carried out with a content analysis approach, including (1) transcripts of data from the interview results, (2) reading the entire script to get a comprehensive understanding of the content and determining the central unit and code, (3) abstracting the main unit and code, (4) unit classification and the same main code in a more general category, (5) determine the main theme<sup>15</sup>.

### **Result**

#### **General participant information**

The first participant is the mother of child A (8 years), who has had asthma for almost two years. Participants were both Mrs. S (47 years), who had suffered from asthma for 30 years since he was in high school (teenager). The third participant Mr. J (75 years), had asthma for four months; apart from Asthma, Mr. J also suffered from heart disease, namely cardiomegaly, for almost one year.

The results of the study found three main themes: family burdened and disrupted activities when asthma relapsed, use a mask / keep your stamina/mind relaxed/stay away from the crowd as an effort to prevent asthma during the Covid-19 pandemic, pharmacological and non-pharmacological treatments carried out by families during the Covid-pandemic. 19 (table 1).

#### **The family is burdened, and the client's activities are disrupted**

The theme of the family feeling burdened and the client's activity disrupted when Astma's disease recurs constructed from a family that feels burdened, such as being tortured by difficult conditions when the client experiences a recurrence.

When it has relapsed, it will be like being tortured with difficult conditions " (Participant 1).

Apart from feeling burdened by family, the client also feels disturbed in his activities when asthma recurs and is accompanied by weakness.

"Activity is disturbed. You are disturbed, right? Your energy is decreasing" (Participant 2). "Yes, activities become a concern, sometimes yes ... accompanied by weakness" (Participant 3).

**Use a mask, keep your stamina, and mind relaxed, and stay away from the crowd to prevent asthma during the Covid-19 pandemic**

This theme describes Astma's prevention efforts during the Covid-19 pandemic by wearing a mask outside the home, keeping the mind relaxed not to be stressed, managing adequate rest, and avoiding crowds.

"When Covid is like this, wear a mask (in Indonesian) "(Participant 1). "Don't be too tired, especially those thoughts, don't think too heavy" (Participant 2). "You often wear a mask; you don't hang out with other people" (Participant 3).

**Table 1** Family experience in handling asthma during the Covid-19 pandemic

<b>Theme</b>	<b>Category</b>	<b>Sub Categories</b>
Burden's family and disrupted client activity	Burdened family	Burdened family when the client experiences an asthma recurrence
	Interrupted activity	Activity is interrupted when asthma recurs
Use a mask / keep your stamina/mind relaxed/stay away from the crowd to prevent asthma during the Covid-19 pandemic	Using a mask	Wear a mask during Covid-19
	Keep your stamina and mind relaxed	Keep your mind relaxed and control your activities so you don't get too tired
	Move away from the crowd	Wear a mask and stay away from the crowd
Pharmacological and non-pharmacological treatment in the management of asthma during the Covid-19 pandemic	Control diet and rest	Use the inhaler, control food and rest, and see a doctor
	Using pharmacological and non-pharmacological drugs	Consuming salbutamol and turmeric
	Doing breathing exercises	Follow breathing exercises
	See a doctor	Get treatment

**Pharmacological and non-pharmacological treatment of asthma**

The handling efforts made by the three respondents in overcoming asthma recurrence were by taking pharmacological drugs (inhalers, salbutamol, carbide, dexamethasone 0.5 tablets, bromhexine HCL 8 mg, and fargoxom 0.25 mg) and consuming herbal medicines (turmeric with added eggs. ), always control activities, rest and eat a healthy lifestyle, and give more

attention by doing regular health checks to the doctor. This can be proven by the statements of the three respondents as follows:

"... I use the device as an inhaler, take my child to a doctor, always provide medicine, and I go to the doctor regularly, his diet continues to rest so my child can't be tired" (Participant 1). "Always have salbutamol on hand" (Participant 2). "The effort is, of course, we will be treated like that, bro, besides that, yes, use an inhaler, mas" (Participant 3).

## **Discussion**

In general, clients with asthma experience problems with their daily activities, especially when their asthma is relapsing. The family feels burdened due to the disruption in these activities; as Stridsman et al. (2017) stated, asthma can affect the patient's general health and employability. A person who has a history of asthma experiences limited activities, especially when doing work activities.

People with asthma at the age of children experience disturbances in their activities, especially play activities, considering that daily play activities dominate children's activities. Lam et al. (2016) stated that the level of physical activity in children with asthma was limited compared to their peers. Still, that asthma did not prevent children from participating in any activity or even being more active than their peers. In addition to the activities undertaken, the effects of asthma treatment can also affect daily physical activity in children with asthma. However, it cannot be denied that asthma is most common in children; although asthma can start at any age, most of it begins before school age due to genetic susceptibility and the incidence of viral infections (Ding & Lu, 2020).

People with asthma in adults and the elderly also experience disturbances in their daily activities. However, activity disruption in adults and the elderly is different considering the third respondent is 75 years old, whose activity is reduced due to physiological changes, so the family feels burdened in the supervision process. This can be concluded that asthma can result in inhibited activity. In line with Nejjari et al. (2016), asthma is a disabling disease in children and adults regardless of age. This can create difficulties in doing some work for adults and children and sometimes lead to illegality.

Clients with asthma are currently more careful in carrying out their daily activities, considering the current condition of the Covid-19 pandemic, which is not over yet. Clients with asthma wear masks outside the home and avoid crowds to protect against the Covid-19 virus. Lam et al. (2016) stated that people with asthma are advised to maintain personal hygiene, including using a mask and maintaining a social distance of 2 m during the Covid-19 pandemic. In some asthma patients, wearing a face mask can cause difficulty breathing, but it is vital to wear a mask outside the home. However, choosing a type of show that is easy to use for breathing is better so that optimal asthma control can be the best protection strategy for all asthma patients during the Covid-19 pandemic.

Also, clients with asthma keep their minds relaxed so they don't get stressed and manage adequate rest. This is done to maintain the body's resistance to minimize asthma recurrence during the Covid-19 pandemic. Djamil, Hermawan, Febriani, & Arisandi (2020) stated that one of the triggers for asthma recurrence could be emotional turmoil/stress and fatigue due to physical activity. The stress experienced is often ignored by asthmatics, while stress can cause changes in the lungs' conditions that make asthma possible. This causes the frequency of recurrences to become more frequent and can result in the patient falling into a bad state.

According to Gautier & Charpin (2017), stress can increase airway inflammation by modulating immune cell function via neural and hormonal pathways.

Clients always need pharmacological and non-pharmacological treatment with asthma in an effort to overcome asthma recurrence. The pharmacological treatment uses inhalers and salbutamol (oral), while non-pharmacological uses medicinal plants such as turmeric mixed with chicken eggs as a medicinal herb. Fadzila, Bayhakki, & Indriati (2017) states that patients with asthma always provide a variety of pharmacological drugs used for the treatment of asthma in the form of tablets, syrups, and inhalers. According to Zazuli, Ramasamy, & Adnyana (2018), Asthma medication is most often given, namely medicine through an inhaler that helps get the drug directly into the lungs' airways. Meanwhile, salbutamol is one of them. Fast-acting  $\beta$ 2-agonists are the drugs of choice to treat acute asthma attacks with the usual doses. Still, asthma medication choice depends on the severity or severity of the disease (Haryanti et al., 2016).

Elderly clients with asthma take carbide, dexamethasone 0.5 tablets, 8mg bromhexine HCL, and 0.25 mg fargoxom every day because the history of disease suffered by the third respondent is not only asthma but also a history of heart disease (cardiomegaly). Nejjari et al. (2016) revealed that asthma is not an uncommon disease in subjects aged 65 years and over. Asthma management in elderly patients controls symptoms and reduces aggravating triggers. There are essential exacerbation factors for older patients, including comorbidities, appropriate drug use, drug-drug interactions, drug side effects, and physiological differences<sup>23</sup>.

The use of drugs in the management of asthma is known as controllers and relievers. Controllers are used in the type of medications taken daily on a long-term basis with anti-inflammatory effects. At the same time, the reliever is included in the types of drugs used during an asthma attack only to reduce symptoms (Airlangga, 2017). Udayani, Amin, & Makhfudli (2020) revealed that pharmacological medications are beneficial when asthma recurrence occurs, but it has side effects if not controlled medication in long-term use. Therefore, it is necessary to use non-pharmacological therapies through physical activity and breathing exercises that are developed to complement pharmacological drugs in improving asthma control.

Non-pharmacological therapy used by clients with asthma is by participating in breathing exercises that can relieve asthma recurrence symptoms. The reason for participating in breathing exercises is to try to reduce the use of drugs. In line with Evaristo et al. (2020), Breathing exercises are a non-pharmacological intervention that can improve asthma control and have been considered a vital adjuvant to medical treatment. These exercises have been widely used because they are low cost, easy to apply, and safe. Breathing exercises can reduce the number of drug use by 86%, and some asthma patients are instructed to use breathing exercises before taking synthetic drugs whenever asthma symptoms show.

Controlling diet and rest is also very important; besides using pharmacological and non-pharmacological drugs, the respondent's family tries to do the best possible to minimize the recurrence of asthma by routinely carrying out medical examinations with the doctor. Effort in Asthma control in children and adults is related to the family's knowledge. Apart from experience and medicine, the family also pays attention to the client's fitness so that asthma can be controlled. Therefore, the family should consult a doctor about proper precautions when an asthma attack worsens<sup>27</sup>. As stated by K. Kumar, Hinks, & Singanayagam (2020)

that Family prevention efforts are essential in determining the chosen treatment therapy so that it can help improve asthma control.

Asthma in the elderly is generally poorly understood and is underdiagnosed or misdiagnosed and treated. Appropriately managing any chronic disease in the elderly, including asthma, should include a multidimensional assessment (MDA) of the physical, psychological, cognitive, and social factors that can influence successful treatment <sup>29</sup>. Apart from using family-supported drugs, it is also hoped that they will reduce the frequency of asthma recurrences. This support can be in the form of instrumental, informational, judgmental, and emotional support. So the family must have some health knowledge of how attitudes and actions are carried out in dealing with asthma attacks and how to prevent these asthma attacks <sup>30</sup>.

In general, people with asthma experience an impaired immune response to viral infections in the respiratory tract that have the potential to trigger or worsen asthma symptoms <sup>31</sup>. Morais-Almeida et al. (2020) argued the importance of keeping asthma under control using appropriate medication. Also, treatment adherence is one factor determining the success of treatment. Factors influencing asthma treatment success include age, genetics, comorbid diseases, medications, patient habits, and psychological and social conditions <sup>22</sup>.

### **Conclusion**

This study's findings describe the family's experience caring for family members who had asthma during the Covid-19 pandemic. There is a burden and limited activity when the disease recurs can be used as family anticipatory measures in overcoming this problem by cooperating between family members in providing care to patients. The family also has a vital role in limiting the patient's activities when the disease relapses. Further research can be developed to explore the experiences of Asthma patients during the Covid-19 pandemic.

### **Limitations**

Treatment of people with asthma during the Covid-19 pandemic has limited access to health service facilities. Also, families of people with asthma must be disciplined again to use masks, physical distancing, and other prevention efforts.

### **Conflicts of interest**

There are no conflicts of interest.

### **Authors' contribution**

FAP is the primary researcher in research design and data collection. YBP analyzed the data and compiled a manuscript for publication.

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### **Ethical Clearance**

Ethical permission was obtained from the University of Muhammadiyah Malang. The study protocol was evaluated and approved by the IRB of the Faculty of Health Sciences. Written



consent is taken from the child's parents. Confidentiality is also maintained by removing respondents' names and identities (both children and parents) because they are not relevant to the research. Furthermore, the study is in line with the Declaration of Helsinki.

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