



## Analysis of Factors that Affect Health-Seeking Behavior in Parents with Stunted and Obese Children during the Pandemic



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### Keywords

education;  
health-seeking behaviour;  
obesity;  
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stunting;  
support system;

### Abstract

This study aims to determine the factors that affect health-seeking behaviour in parents who have children aged 3-5 years who are stunting and obese indications during the pandemic. This research is quantitative analytics with a cross-sectional approach. The Independent variable is health-seeking behaviour and the dependent variable is education, knowledge, income, affordability of health facilities and health workers, family support, community support, and belief. The population of 147, was sampled using totality sampling with inclusion criteria. The instrument to use questionnaires health-seeking behaviour list with Linkert scale closed questions through validity and reliability tests. The analytics process uses a double-liner regression with  $p=0.05$ . Meanwhile, for models using SEM by looking at the value of the goodness of fit indicator. Overall, the independent variables together affect the health-seeking behaviour by 0.705 with an adjusted R of 0.720 which means that the independent variable affects the dependent variable together by 72% while 18% is influenced by other factors. The modelling results is finding that the model presented as a whole can be accepted as a model for the form of health-seeking behaviour during the pandemic with Chi-Square ( $\chi^2$ )= 1.39, Probability= 0.278, CMIN/DF=1.189, RMSEA=0.041, GFI=0.921, AGFI=0.934

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## 1 Introduction

The World Health Organization (WHO) emphasizes that nutritional problems in children are a burden on health problems, especially in developing countries. Malnutrition, stunting, and obesity are some of the nutritional status problems experienced by most children aged 2-6 years (Health Research and Development Agency of the Center for Humanities and Health Management, 2018). The Indonesian Toddler Nutritional Status Survey (SGGI) in 2021, the prevalence of stunting in Indonesia is 24.4%, which means that there are 5.33 million children aged 2-5 years indicated stunting, with the following details of moderate stunting of 5.4% and severe stunting of 19.0% (Ministry of Health of the Republic of Indonesia, 2021; Health Research and Development Agency, Center for Humanities and Health Management, 2018; Unicef, 2015). Meanwhile, based on age, stunting occurs at the age of 0-59 years. The prevalence of stunting has been reduced, but it still has not reached the targeted figure of 14% by 2024. (Ministry of Health of the Republic of Indonesia, 2021) The consequences of stunting toddlers include impaired growth and development, decreased quality of performance in adulthood, and increasing the risk of infectious diseases (Dhami et al., 2019; Ministry of Health of the Republic of Indonesia, 2020; Mechanick et al., 2021)

In addition to stunting, another problem of nutritional status in toddlers is obesity. Based on the Indonesian Toddler Nutritional Status Survey (SGGI) in 2021, the prevalence of obesity in children reached 3.8%. While the results of Riskesdas East Java in 2018, the prevalence of obesity in children reached 9.3%. Childhood obesity contributes to non-communicable diseases in adults such as diabetes, hypertension and heart disease which contributes to a mortality rate of 2.8 million each year.

Some of the factors that affect the prevalence of nutritional status include the socioeconomic status of the family, the health service system, policies, the living environment, and the nutritional status of the first 1000 days of life ((TNP2K), 2018; Ministry of Health of the Republic of Indonesia, 2020; Ministry of National Development Planning/Bappenas, 2018; Nisa, 2018). The handling of prevention and control of stunting and obesity in toddlers that have been carried out includes nutritional supervision in the first 1000 of life, The purpose of this procedure is to meet the target of reducing stunting to 14% and keep childhood obesity from experiencing an increase in cases ((TNP2K), 2018; Ministry of Health of the Republic of Indonesia, 2021; Ministry of National Development Planning/Bappenas, 2018). Therefore, it is necessary to monitor community behaviour that leads to activities that can increase the trend of stunting and obesity (Perkins et al., 2017; Saran et al., 2002). Among the behaviours that need attention is health-seeking behaviour. Health-seeking behaviour is an action carried out by individuals who experience health problems or diseases to get treatment (Haileamlak, 2018; Widayanti et al., 2020). Who indicates that the main area of health-seeking behaviour can be seen in the context of awareness of the initial symptoms, utilization of health facilities, and adherence to effective treatment. One of the factors that affect health-seeking behaviour is the pandemic policy (Anwar et al., 2012; Ahmed et al., 2006). This policy urges the public to limit visits to health facilities and health workers unless the condition is a sign of illness. This policy risks increasing the prevalence of stunting and obesity, because these two cases are considered physiological conditions. Research from Silver, et al (2020); Huang et al. (2019); Huang et al. (2019); Silver et al. (2020); Widayanti et al. (2020); describe that help-seeking behaviour is influenced by policies, health information systems, the comfort of health workers and health facilities. Meanwhile, this study will examine several factors that affect health-seeking behaviour in parents who have toddlers aged 2-5 years with indications of stunting and obesity (Hernández-Garduño, 2020).

## 2 Materials and Methods

### *Design*

This type of research is quantitative analytics with a cross-sectional approach, independent variables are health-seeking behaviour while dependent variables are the level of education, knowledge, income, affordability of health facilities and health workers, family support, community support, and confidence. The study was conducted in the cities of Surabaya and Sidoarjo in 2022

### *Population and Sample*

The population is all parents who have children who are indicated to be stunted and obese in Surabaya and Sidoarjo. Sampling uses totality sampling with a rule of thumb where each dependent variable has a sampling opportunity of 10 samples so that the sample amounts to 147 respondents.

### *Data Collecting*

First, the researcher conducts a preliminary study, then carries out the research licensing process, and satisfies the research instrument with a questionnaire on demographic data and the characteristics of respondents. Data collection is carried out by providing questionnaires that have been tested for validity and reliability

### *Data Analysis*

Analytic uses a double regression liner with  $p = 0.05$ . Meanwhile, for models using SEM AMOS by looking at the value of the goodness of fit indicator

## 3 Results and Discussions

### 1. Characteristics of respondents

Table 1  
Characteristics of respondents

Characteristics of respondents	N	Frequency	Percent
<b>Education Level</b>	<b>147</b>		
Elementary School		11	7.5
Junior High School		55	37.4
Senior High School		64	43.5
Bachelor		17	11.6
<b>Income</b>	<b>147</b>		
Less than MSE		66	44.9
MSE Standart		81	55.1
<b>Nutritional Status</b>			
Obesity		109	74.1
Stunting		38	25.8
<b>Child age</b>			
0-23 months		21	14.3
24 - 35 months		14	9.5
36 -47 months		34	23.1
48-59 months		40	27,2
60 months		38	25.9

<b>Work</b>		
Merchant	75	51
Day labourer	11	7.5
Factory workers	45	30.6
Private / Non-Private Employees	16	10.9
<b>Health Believe Model</b>		
Perceived Sucebility	36	24.5
Perceived severity	42	28,6
Perceived barriers	36	24.5
Perceived benefits	22	15
Decision making	11	7.5

Table 1 explains that most respondents have a high school education rate of 43.5%, working as a factory worker at 30.6% with income following the minimum working wage of 55.1%. Most respondents had children aged 48-59 months with an obesity nutritional status of 74.1% and stunting status of 25.8% and most respondents had a health belief model on the *Perceived severity* indicator of 28.6%.

## 2. Variable description

Table 2  
Variable description

Education Level	Frequency	Percentage
Elementary School	11	7.5
Junior High School	55	37.4
Senior High School	64	43.5
Bachelor	17	11.6
<b>Level of Knowledge</b>		
Low	57	38.8
Keep	44	29.9
Tall	46	31.3
<b>Work</b>		
Day labourer	11	7.5
Corporate Labor	45	30.6
Trader/micro-enterprise	75	51
Private/non-private employees	16	10.9
<b>Income</b>		
Less than MSE	19	12.9
More from IMK	48	32.7
<b>Family support</b>		
Not - Support	50	34
Support	58	39.5
Very Support	39	26.5
<b>Community Support</b>		
Not - Support	52	35.4
Support	61	41.5
Very Support	34	23.1
<b>Belief</b>		
Not believing	76	51.7
Believes	71	48.3
<b>Health Workers</b>		
Less affordable	103	70.1

Affordable	44	29.9
<b>Health Facilities</b>		
Less affordable	87	59.2
Affordable	60	40.8
<b>Policy</b>		
Support	48	32.7
Less support	99	67.3
<b>Health Seeking Behaviour</b>		
Self Healing	28	19
Health resources Therapy	36	24.5
Massage	38	25.9
Herbal	23	15.6
Hypnosis	22	15

Table 2 explained that most respondents received family support in determining treatment search efforts, which was 39.5% while community support was 41.5%, while varied beliefs gave unsure answers of 51.7% which means that respondents did not believe in myths about non-pharmacological treatment behaviour. non-health has a negative influence on the condition of his body. The affordability variable of health workers and health facilities obtained data that most respondents answered that they could not reach health workers (70.1%) and health facilities by 59.2%. This condition is due to the policy of limiting visits to health facilities. In the variable of health search efforts, most choose massage (25.9%) as a first aid effort when the body experiences a health problem.

### 3. Classical Assumption test results

Table 4  
Results of the classical assumption test

Classical assumptions	Significance		
Normality with Kolmogorov Smirnov	Sig= > 0.20 ( sig > 0.05)		Heteroskedesity
Multicholineritas	T >0:10	VIF= <10	P > 0.05
Education Level	0.14	6.923	0.911
Level of Knowledge	0.80	1.250	0.970
Belief	0.83	1.199	0.932
Family support	0.86	1.154	0.992
Community Support	0.86	1.157	0.966
Health facilities	0.49	2.043	0.974
Health Workers	0.11	9.623	0.978
Income	0.80	1.243	0.988
Policy	0.11	9.240	0.781
Type of Work	0.14	7.097	0.998
Autocorrelation	<b>Significance dL&gt;d&lt; (4-dU)</b>		
d	1.882	1,882 >1,5878	1,882 < 2,1227
Dl	1.5878		
Du	1.8773		
4-dU	2.1227		

Table 3 illustrates that the data that has been submitted has met all the assumptions of classic multivariate, so it can be continued for double liner regression tests

## 4. Bivariate test

Table 4  
Bivariate test results using person correlation test

Variable	Significance		r table product moment 5%
	Sig 2 tailed p=<0.05	Pearson Correlation p>r table	
Education Level	0.001	0.276	
Level of Knowledge	0.015	-0.181	
Belief	0.035	0.214	
Family support	0.001	-0.287	0.159
Community Support	0.015	0.670	
Health facilities	0.080	0.069	
Health Workers	0.070	0.075	
Income	0.003	0.766	
Policy	0.004	0.413	
Type of Work	0.005	0.233	

Table 4 illustrates that the overall variability has a strong positive relationship, except for the variable of health facilities and health workers with a  $p > 0.05$ . The level of education has a positive significant influence on health-seeking behaviour with  $p = 0.001$  and  $r$  table of 0.276. The knowledge level has a value of  $p = 0.015$  with a table  $r$  of  $-0.181$ , which means that the level of knowledge has a less strong impact on drug search behaviour, while the belief has a  $p = 0.035$  value with a table  $r$  of 0.214 which means that the belief has a strong positive influence on health care seeking behaviour. Family support with a value of  $p = 0.001$  with an  $r$  table as large as  $-0.287$  which means that family support tends to have a less strong and negative influence on the health-seeking behaviour of the community, while community support has a value of  $p = 0.015$  with a table value of 0.670 which means that community support has a very strong influence on treatment-seeking behaviour. This means that every increase in the independent variable score has implications for an increase in the dependent variable value score. While health facilities do not influence these behaviours, so do health workers. The income level has a value of  $p = 0.0003$  with a table  $r$  of 0.766 which means that the income level has a strong influence on drug search behaviour, as well as the policy and type of work with respectively -  $p$  values where the policy has a value of  $p = 0.004$  and  $r$  table 0.413 as well as the type of work  $p = 0.005$  and  $r$  table 0.233. The entire independent variable has an influence on the dependent variable with a value of  $p = 0.159$ .

## 5. Multivariate Test

Variable	Unstandardized coefficient (95%) sig 0.05 F table = 1.90	t count (t table = 1,976)	Sig p<0.05
Constant	1.000		
	b		
Education Level	1.941	1.980	0.001
Level of Knowledge	1.951	1.979	0.002
Belief	1.921	1.983	0.001
Family support	1.942	1.977	0.002
Community Support	1.915	1.978	0.008
Health facilities	1.918	1.977	0.033
Health Workers	1.921	1.983	0.450
Income	1.953	1.977	0.027
Policy	1.933	1.985	0.018

Type of Work	1.947	1.986	0.398
F count = 1,989			
R <sup>2</sup> =0.705			
Adjusted R=0.720			

Table 5 explains that the variable levels of Education, knowledge, beliefs, family support, community support, health facilities, income and policies have a significant influence on treatment search behaviour with a p< value of 0.05 while with variables of health workers and income have no effect. Overall, the independent variables together influenced treatment-seeking behaviour by 0.705 with an adjusted R of 0.720 which means that the independent variable affects the dependent variables together by 72% while 18% is influenced by other factors that were not studied by researchers

## 6. Modelling

### *Mahalanobis Distance*

Based on the results of SEM analysis, there is data that has been an outlier so the data is eliminated with a value of p1 or p2 < 0.05 which means that there is no significant difference between days and data groups

Table 6 observation farthest from the centroid (Mahalanobis Distance)

Observation number	Mahalanobis d- squared	p1	p2
15	108,483	,000	,000
8	108,483	,000	,000
21	108,483	,000	,000
9	85,921	,000	,000
16	85,921	,000	,000
38	72,499	,000	,000
22	69,473	,000	,000
17	50,830	,000	,000
36	47,897	,000	,000
142	42,921	,000	,000
27	42,761	,000	,000

Table 6.2 explains that 11 data were an outlier, so they were eliminated with p1 and p2 values < 0.05

## 7. Normality test results

After the data is declared a free outlier, a normality test is carried out. The results of the assumption of normality with SEM showed the result of a c.r value (*critical ratio*) of -3986 (- 0.228 < c,r < 2.58), so that the data qualified for model conformity tests, namely goodness of fit with the criteria of chi-square, Probability, CMIN / DF, GFI, RMSEA, AGFI, TLI and CFI

## 8. Goodness of fit

Table 7  
Criteria for the goodness of fit

Goodness of fit	Cut of value	Result	Model evaluation
Chi-Square ( x2 )	0.001	1.39	good
Probability	≥ 0.05	0.278	Good
CMIN/DF	≤ 2.00	1,189	Good
RMSEA	≤ 0.08	0.041	Good

GFI	$\geq 0.90$	0.921	Good
AGFI	$\geq 0.90$	0.934	Good

## 9. Graphical Model Analysis

Table 9  
Results of *loading factor* values

Variable	Loading factor value (>0.5)
X1	0.01
X2	0.03
X3	1.00
X4	0.06
X5	1.34
X6	1.25
X7	0.20
X8	0.25
X9	1.00
X10	1.33
Y1	1.00
Y2	1.02
Y3	1.00
Y4	0.98
Y5	0.98

Table 9 explains that the factor loading values of x1 and x2 is less than 0.5 which means that indicators x1 and x2 are not part of socioeconomic variables. Thus, the loading factor values of x4, x7 and x8 are less than 0.05 which means that x4, x7 and x8 are not part of the variable support system.

## 10. Standardized direct, indirect and total effect results

Table of 10 standardized results

No	Variable	standardized direct effect	standardized indirect effect	standardized total effect
1	Support system with health seeking model	0.221	0.192	0.413
2	Socio-Economic with Health Seeking Behaviour	0.163	0.331	0.494

Table 10 describes that variable support systems and socioeconomics influence health-seeking behaviour. The support system variable has an influence of 0.413 and the socio-economic variable of 0.494

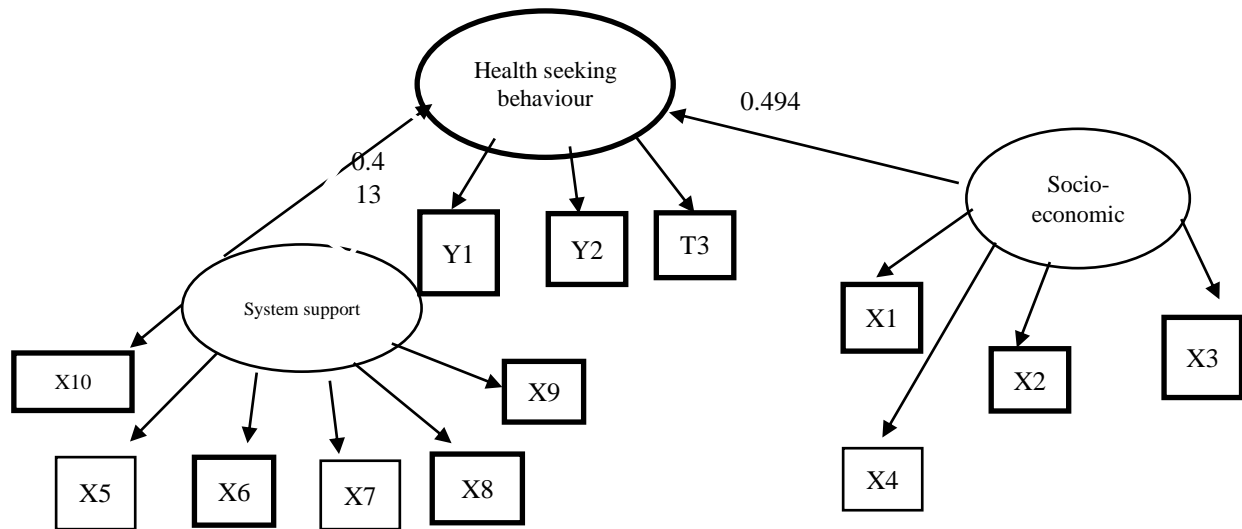


Figure 1. Modelling Healthseeking Behaviour

Figure 1 illustrates the modelling of factors that affect post-pandemic health-seeking behaviour in parents who have children aged 3-5 years with impaired nutritional status. The support system factor affects health-seeking behaviour by 0.413 while the socio-economic influences by 0.494

#### Discuss

Based on the results of the analysis, it was found that the influence of the support system influences health-seeking behaviour. This study, which is included the support system, including confidence, family support, community support, policies, health facilities, health workers, and policies. Meanwhile, the socioeconomic in this study includes the level of knowledge, level of education, type of work and income.

The results of the univariate analysis found that beliefs correlate with health-seeking behaviour. Most people have related assumptions that the spread of covid can occur through crowds, this assumption shapes people's behaviour (Suryasa et al., 2021; Herliyah et al., 2022). The behaviour that is formed is based on the information received, then sees the experiences of others and does not cause harm, so that the behaviour caused becomes the basis for the formation of a new culture or norm in the community thus parents who have children aged 3-5 years with stunting and obesity trust the opinions of community leaders and someone who has experience in detecting signs of symptoms, the management of stunting and obesity in children and tends to follow the behaviour of the community where they live and is carried out for generations. For example, giving a massage to increase appetite and a massage to lower the appetite. This opinion is supported by research (Huang et al., 2019; Kayame et al., 2014; Widayanti et al., 2020) that beliefs and beliefs influence the process of forming behavioural elements of thoughts and feelings that can be seen from attitudes and perceptions when seeking health help. The stages of thought and feeling described by Huang M, Zhang H, Gu Y, et al (Huang et al., 2019) are behaviours based on knowledge, attitudes, perceptions of beliefs and experiences that come from oneself and others that are carried out by considering all the risks. This stage is closely related to the knowledge and experience gained from community leaders who influence the community system (Kusumo et al., 2022).

Education level has a strong positive influence on health-seeking behaviour. A high level of education affects a person's motivation in the search for information when compared to a low level of education. In addition, a person who has a high level of education tends to have more experience, good coping of stress mechanisms and active resilience so that they can make behavioural priorities, determine behaviours and decisions in determining behaviour and choose a place of treatment. In this study, most respondents had an education level equivalent to high school. In general, this level of education affects the knowledge, and understanding of parents towards the recognition of the symptoms of stunting and obesity, the risk of

stunting and obesity, as well as the management of stunting and obesity based on the experience of people who have the same case and managed to get out of the problem of stunting and obesity. This opinion is in line with the research that has been carried out by (Anchang et al., 2021; Haileamlak, 2018; Kitazawa et al., 2021; Saah et al., 2021) who explained that a high level of education has an impact on resilience, knowledge, experience and having the ability to make decisions effectively. Low levels of knowledge limit individuals to literacy, lack of experience and lack of reference options in the process of determining health-seeking behaviour. Therefore, a person who has a low level of education tends to have limitations in choosing various research problem-solving models (Aldousari & Al-Sejari, 2021; Kitazawa et al., 2021; Bourne et al., 2022; Suanda et al., 2021), explained that a low level of education has an impact on lack of experience, lack of literacy so that it tends to maladaptive behaviour.

Family and community support have a positive influence on health-seeking behaviour. Family and community support in the form of emotions can foster self-confidence in the process of making behavioural decisions, comfort in behaviour and increase motivation. Family support forms a pattern of concepts of values, concepts of perception, and access to information to determine the model of health-seeking behaviour. Meanwhile, support in the form of instrumental provides convenience in fulfilling facilities, finances and transportation can take care of the effects of individual psychology. In this study, most respondents had a health-seeking behaviour model in the form of recognition of signs of stunting and obesity This opinion has been carried out previously by (Irwan et al., 2016; Peppia et al., 2017; Widayanti et al., 2020) who concluded that family and community support can provide comfort, confidence, concepts of values, mindsets, information and motivation to provide characteristics to every treatment-seeking behaviour.

The results of this study explained that there was no significant influence between health facilities and health workers. This is due to the implementation of policies to visit health facilities and workers so that the presence of health workers and the availability of health facilities do not affect health search behaviour. This opinion contradicts the results of the research of Huang et al., (2020); Suanda et al., 2021), who fear that health-seeking behaviour is strongly influenced by regional policies, the existence of health workers, and access to health facilities, access to information and knowledge levels.

Income levels and types of work have a strong influence on health-seeking behaviour. most of the people have income levels above the regional minimum wage and have a type of work as traders. A decent level of income can help the individual in search of health information, thus information about the initial symptoms of the disease, therapy models, and first aid models. Attention to the fulfilment of economic needs becomes something that is not a priority for family problems but turns to pay more attention to other needs, for example choosing a health place and health workers that are more complete with medical personnel who have special skills (specialist). This study illustrates that respondents chose non-medical personnel to maintain health related to the management of stunting and obesity by choosing massage therapy to increase appetite and reduce appetite as well as the use of herbal medicine as a treatment for stunting and obesity in children aged 3-5 years. This opinion follows the results of the research of Meisha et al. (2021); Saah et al. (2021); Tan et al. (2021); Widayanti et al. (2020), who stated that the type of work and income level have an effect on the behaviour of meeting information needs, decisions on determining the place of help, and have a tendency to choose medical personnel who have special skills so that they better recognize the initial symptoms of the disease, comply with the rules of treatment and tend to carry out comprehensive considerations, are effective in determining treatment search behaviour. While the research of Aldousari & Al-Sejari (2021); Oberoi et al. (2016); Onchonga et al. (2021); Bourne et al. (2022); Suanda et al. (2021); Yakut et al. (2021), explained that a decent income level facilitates in making decisions with a perspective of knowledge, family cultural values and community system policies while the type of work is closely related to the psychological conditions of the person and with whom they gather to influence the process of understanding information, points of view and models of health-seeking behaviour. This type of trading worker is a type of work that more often meets and gathers with a group of people who have heterogeneous characteristics to allow the formation of perspectives, perceptions and values, which are taken from the various characteristics of that group of people and are not detrimental to themselves, especially in the introduction of symptoms of diseases, determination of medical personnel and health facilities and obedience in undergoing therapy (Aldousari & Al-Sejari, 2021; Anchang et al., 2021; Mudenda et al., 2020; Oberoi et al., 2016; Silver et al., 2020; Suanda et al., 2021)

The results of this study explain that there is an influence of policies on health-seeking behaviour. A policy is a rule issued by decision makers that function to regulate the behaviour of society according to conditions.

Government policy during the pandemic stipulates that there are restrictions on community visits to health workers and health facilities to break the chain of COVID-19 transmission. This policy affects the formation of the mindset, perceptions and values, and decision-making of a community. This perception and mindset stimulate the direction of people's behaviour. In this study, respondents thought that government policies did not harm the condition of their children who experienced symptoms of stunting and obesity and did not give benefits to their nutritional status conditions, but had a psychological impact caused by lack of information on handling and risk of diseases due to stunting and obesity. This opinion has been conducted in previous research by [Gholampour et al. \(2020\)](#); [Vaivada et al. \(2020\)](#); [Hailegebriel, \(2020\)](#); [Zhu et al. \(2021\)](#) who explained that government policies in an area affect the model of community behaviour in the realm of early detection, choice of place and decision to go for treatment. Likewise, the research by [Ayelign & Zerfu \(2021\)](#); [Ngwira \(2020\)](#); [Oumer et al. \(2022\)](#), stated that the nutritional status of children is strongly influenced by government policies.

Beliefs influence health-seeking behaviour. Beliefs are the result of cognitive processes, stimulating assumptions and opening up positive expectations of a person towards a system or towards others so that these assumptions and expectations can build a person's behaviour patterns. In this study, respondents believed that children who had symptoms of stunting and obesity had no impact on their children's health and growth and development. This perception is formed through cognitive processes obtained from the environment of the community where they live and see the experiences of the surrounding community where children with stunting and obesity never suffer from pain. This opinion is in line with [Hailegebriel \(2020\)](#); [Rakotomanana et al. \(2017\)](#); [Zhu et al. \(2021\)](#), which state that the concerns of parents who have children with nutritional disorders including stunting and obesity are focused on susceptibility to a certain disease, while diseases that will occur during the next period of growth and development or in adolescents and adults do not need to be worried, because they believe that diseases in adolescence and adulthood are not caused by stunting and obesity conditions but due to other diseases and the presence of behaviour which is unnatural.

The results of the multivariate test found that the entire range of variable support systems and socioeconomics affects the entire domain of health-seeking behaviour. Likewise, socioeconomic factors consisting of education level, type of work and income influence the formation of health-seeking behaviour in parents who have children aged 3-5 years with stunting and obesity. The tendency to choose massage is because there is a policy of limiting visits to health facilities so that the information received does not come from professionals, but comes from people who have the same experience, is cheap, easy to reach, easy to implement independently and does not cause side effects. This opinion is in line with the research results of [Evalin Karijo, Sylvia Wamugi, Samueal Lemanyishoe, Jenny Njuki, Faith Bolth, vania Kibui, Sarah karanja, n.d.; \(Kitazawa et al., 2021; Retnaningsih et al., 2020; Silver et al., 2020; Dhimi et al., 2019; Hailegebriel, 2020; Ponum et al., 2020\)](#)

The results of the modelling test found that the overall modelling value indicators obtained values following the reference and met the requirements for the goodness of fit which means that modelling factors that affect health-seeking behaviour in parents who have children aged 3-5 years with stunting and obesity during the pandemic are acceptable ([Haileamlak, 2018](#); [Irwan et al., 2016](#); [Meisha et al., 2021](#); [Saah et al., 2021](#); [Tan et al., 2021](#); [Widayanti et al., 2020](#))

## 4 Conclusion

The results of the univariate test obtained there is a relationship between each domain support system and the socioeconomic domain affecting each domain of health-seeking behaviour and the results of the multivariate test of the entire variable support system and socioeconomics together affect the entire realm of health-seeking behaviour stages and the results of model modifications that the model presented can be accepted as a model of factors that affect health-seeking behaviour in parents who have children with obesity and stunting during the pandemic

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## References

- (TNP2K), T. N. P. P. K. (2018). National Strategy for Accelerating Stunting Prevention 2018-2024. National Team for the Acceleration of Poverty Reduction (TNP2K) secretariat of the Vice President of the Republic of Indonesia, November, 1–32. [http://tnp2k.go.id/filemanager/files/Rakornis\\_2018/Session\\_1\\_01\\_RakorStuntingTNP2K\\_Stranas\\_22Nov2018.pdf](http://tnp2k.go.id/filemanager/files/Rakornis_2018/Session_1_01_RakorStuntingTNP2K_Stranas_22Nov2018.pdf)
- Ahmed, S. M., Petzold, M., Kabir, Z. N., & Tomson, G. (2006). Targeted intervention for the ultra poor in rural Bangladesh: Does it make any difference in their health-seeking behaviour?. *Social science & medicine*, 63(11), 2899-2911. <https://doi.org/10.1016/j.socscimed.2006.07.024>
- Aldousari, E. A., & Al-Sejari, M. (2021). Health information seeking behaviour among the Kuwaiti population during the COVID-19 pandemic. *Malaysian Journal of Library & Information Science*, 26(3), 105-122.
- Anchang, K. Y., Chinedu, U. P., Ateghang, B., & Chidera, O. (2021). General Perception of Illness and Gender Differences in Health Seeking Behaviour amongst Kom People of Boyo Division in Cameroon during the COVID 19 Pandemic. *American Journal of Public Health Research*, 9(5), 189-200.
- Anwar, M., Green, J., & Norris, P. (2012). Health-seeking behaviour in Pakistan: A narrative review of the existing literature. *Public health*, 126(6), 507-517. <https://doi.org/10.1016/j.puhe.2012.02.006>
- Ayalign, A., & Zerfu, T. (2021). Household, dietary and healthcare factors predicting childhood stunting in Ethiopia. *Heliyon*, 7(4), e06733. <https://doi.org/10.1016/j.heliyon.2021.e06733>
- Bourne, P. A., Smith, S., & Peterson, J. (2022). Fear and its Influence on the Healthcare Seeking Behaviour of Jamaicans during the Coronavirus Disease 2019 (COVID-19) Pandemic. *Insights Anthropol*, 6(1), 366-375.
- Dhami, M. V., Ogbo, F. A., Osuagwu, U. L., Ugboma, Z., & Agho, K. E. (2019). Stunting and severe stunting among infants in India: the role of delayed introduction of complementary foods and community and household factors. *Global health action*, 12(1), 1638020.
- Evalin Karijo, Sylvia Wamugi, Samueal Lemanyishoe, Jenny Njuki, Faith Bolth, vania Kibui, Sarah karanja, T. A. (n.d.). Knowledge\_attitudes\_practices\_effects\_of\_COVID\_19.pdf. Amref Health Africa.
- Gholampour, T., Noroozi, M., Zavoshy, R., Mohammadpoorasl, A., & Ezzeddin, N. (2020). Relationship Between Household Food Insecurity and Growth Disorders in Children Aged 3 to 6 in Qazvin City, Iran. *Pediatric gastroenterology, hepatology & nutrition*, 23(5), 447.
- Haileamlak, A. (2018). What factors affect health seeking behavior?. *Ethiopian journal of health sciences*, 28(2), 110-110.
- Hailegebriel, T. (2020). Prevalence and determinants of stunting and thinness/wasting among schoolchildren of Ethiopia: a systematic review and meta-analysis. *Food and Nutrition Bulletin*, 41(4), 474-493.
- Health Research and Development Agency health Center for Humanities and Health Management, K. R. (2018). Main Results of Riskesdas 2018 East Java Province. 1–82.
- Herliah, A., Baso, Y. S., Hidayanty, H., Syarif, S., Aminuddin, A., & Bahar, B. (2022). Effect of web-based she smart education models on adolescent girl's knowledge, attitudes, and practice about obesity. *International Journal of Health & Medical Sciences*, 5(1), 50-55. <https://doi.org/10.21744/ijhms.v5n1.1832>
- Hernández-Garduño, E. (2020). Obesity is the comorbidity more strongly associated for Covid-19 in Mexico. A case-control study. *Obesity research & clinical practice*, 14(4), 375-379. <https://doi.org/10.1016/j.orcp.2020.06.001>
- Huang, M., Zhang, H., Gu, Y., Wei, J., Gu, S., Zhen, X., ... & Dong, H. (2019). Outpatient health-seeking behavior of residents in Zhejiang and Qinghai Province, China. *BMC Public Health*, 19(1), 1-8.
- Huang, X., Dai, S., & Xu, H. (2020). Predicting tourists' health risk preventative behaviour and travelling satisfaction in Tibet: Combining the theory of planned behaviour and health belief model. *Tourism Management Perspectives*, 33, 100589. <https://doi.org/10.1016/j.tmp.2019.100589>
- Irwan, A. M., Kato, M., Kitaoka, K., Kido, T., Taniguchi, Y., & Shogenji, M. (2016). Self-care practices and health-seeking behavior among older persons in a developing country: Theories-based research. *International Journal of Nursing Sciences*, 3(1), 11-23. <https://doi.org/10.1016/j.ijnss.2016.02.010>
- Kayame, R., Maidin, A., Thaha, R., & Zulkifli, A. (2014). Proactive Health Seeking Behavior in HIV/AIDS on Local Culture of Mee Tribe in Paniai Central Mountain of Papua Indonesia. *International journal of current research and Academic Review*, 2(8), 17-26.
- Kitazawa, K., Tokuda, Y., & Koizumi, S. (2021). Health-care-seeking behaviours of the Japanese lay public during the COVID-19 pandemic: a cross-sectional study. *Journal of Primary Health Care*, 13(4), 351-358.

- Kusumo, B. A., Wijaksana, M. M. S., Najicha, F. U., Fujiastuti, A., & Jaelani, A. K. (2022). COVID-19 vaccination service: Legal issues and health workers protection in Indonesia. *International Journal of Health Sciences*, 6(1), 50–60. <https://doi.org/10.53730/ijhs.v6n1.2954>
- Mechanick, J. I., Carbone, S., Dickerson, R. N., Hernandez, B. J., Hurt, R. T., Irving, S. Y., ... & ASPEN COVID-19 Task Force on Nutrition Research. (2021). Clinical nutrition research and the COVID-19 pandemic: a scoping review of the ASPEN COVID-19 task force on nutrition research. *Journal of Parenteral and Enteral Nutrition*, 45(1), 13-31.
- Meisha, D. E., Alsolami, A. M., & Alharbi, G. M. (2021). Social determinants of seeking emergency and routine dental care in Saudi Arabia during the COVID-19 pandemic. *BMC Oral Health*, 21(1), 1-12.
- Ministry of Health of the Republic of Indonesia. (2020). Toddler Health Guidelines During the Covid-19 Pandemic. Ministry of Health of the Republic of Indonesia, 1–60.
- Ministry of Health of the Republic of Indonesia. (2021). Pocket Book of the Results of the National Level Indonesian Nutritional Status Study.
- Ministry of National Development Planning/Bappenas. (2018). Guidelines for the Implementation of Integrated Stunting Reduction Interventions in Districts/Cities. National Action Plan for Stunting Reduction: Stunting, November, 1–51. <https://www.bappenas.go.id>
- Mudenda, S., Witika, B. A., Sadiq, M. J., Banda, M., Mfunne, R. L., Daka, V., ... & Mufwambi, W. (2020). Self-medication and its consequences during & after the Coronavirus Disease 2019 (COVID-19) pandemic: a global health problem. *European Journal of Environment and Public Health*, 5(1), em0066.
- Ngwira, A. (2020). Climate and location as determinants of childhood stunting, wasting, and overweight: An application of semiparametric multivariate probit model. *Nutrition*, 70, 100010. <https://doi.org/10.1016/j.nutx.2020.100010>
- Nisa, L. S. (2018). Kebijakan penanggulangan stunting di Indonesia. *Jurnal Kebijakan Pembangunan*, 13(2), 173-179.
- Oberoi, S., Chaudhary, N., Patnaik, S., & Singh, A. (2016). Understanding health seeking behavior. *Journal of family medicine and primary care*, 5(2), 463.
- Onchonga, D., Alfatafta, H., Ngetich, E., & Makunda, W. (2021). Health-seeking behaviour among pregnant women during the COVID-19 pandemic: A qualitative study. *Heliyon*, 7(9), e07972. <https://doi.org/10.1016/j.heliyon.2021.e07972>
- Oumer, A., Fikre, Z., Girum, T., Bedewi, J., Nuriye, K., & Assefa, K. (2022). Stunting and underweight, but not wasting are associated with delay in child development in southwest Ethiopia. *Pediatric Health, Medicine and Therapeutics*, 13, 1.
- Peppia, M., John Edmunds, W., & Funk, S. (2017). Disease severity determines health-seeking behaviour amongst individuals with influenza-like illness in an internet-based cohort. *BMC infectious diseases*, 17(1), 1-13.
- Perkins, J. M., Kim, R., Krishna, A., McGovern, M., Aguayo, V. M., & Subramanian, S. V. (2017). Understanding the association between stunting and child development in low-and middle-income countries: Next steps for research and intervention. *Social Science & Medicine*, 193, 101-109. <https://doi.org/10.1016/j.socscimed.2017.09.039>
- Ponum, M., Khan, S., Hasan, O., Mahmood, M. T., Abbas, A., Iftikhar, M., & Arshad, R. (2020). Stunting diagnostic and awareness: impact assessment study of sociodemographic factors of stunting among school-going children of Pakistan. *Bmc Pediatrics*, 20(1), 1-9.
- Rakotomanana, H., Gates, G. E., Hildebrand, D., & Stoecker, B. J. (2017). Determinants of stunting in children under 5 years in Madagascar. *Maternal and Child Nutrition*, 13(4).
- Retnaningsih, E., Nuryanto, N., Oktarina, R., Komalasari, O., & Maryani, S. (2020). The effect of knowledge and attitude toward coronavirus disease-19 transmission prevention practice in south sumatera province, indonesia. *Open Access Macedonian Journal of Medical Sciences*, 8(T1), 198-202.
- Saah, F. I., Amu, H., Seidu, A. A., & Bain, L. E. (2021). Health knowledge and care seeking behaviour in resource-limited settings amidst the COVID-19 pandemic: A qualitative study in Ghana. *PLoS One*, 16(5), e0250940.
- Saran, S., Gopalan, S., & Krishna, T. P. (2002). Use of fermented foods to combat stunting and failure to thrive. *Nutrition*, 18(5), 393-396. [https://doi.org/10.1016/S0899-9007\(01\)00790-0](https://doi.org/10.1016/S0899-9007(01)00790-0)
- Silver, R. A., Subramaniam, C., & Stylianou, A. (2020). The impact of portal satisfaction on portal use and health-seeking behavior: structural equation analysis. *Journal of Medical Internet Research*, 22(3), e16260.

- Suanda, J., Hamzah, M. R., Mulud, Z. A., Ayub, S. H., & Yusoff, H. A. M. (2021). The effects of health literacy and information seeking behaviour towards health marketing activity in pandemic time. In *AIP Conference Proceedings* (Vol. 2339, No. 1, p. 020104). AIP Publishing LLC.
- Suryasa, I. W., Rodríguez-Gámez, M., & Koldoris, T. (2021). The COVID-19 pandemic. *International Journal of Health Sciences*, 5(2), vi-ix. <https://doi.org/10.53730/ijhs.v5n2.2937>
- Tan, H. M. J., Tan, M. S., Chang, Z. Y., Tan, K. T., Ee, G. L. A., Ng, C. C. D., ... & Tan, N. C. (2021). The impact of COVID-19 pandemic on the health-seeking behaviour of an Asian population with acute respiratory infections in a densely populated community. *BMC Public Health*, 21(1), 1-10.
- Unicef. (2015). Stop Stunting in South Asia: A Common Narrative on Maternal and Child Nutrition. UNICEF South Asia Strategy 2014-2017.
- Vaivada, T., Akseer, N., Akseer, S., Somaskandan, A., Stefopoulos, M., & Bhutta, Z. A. (2020). Stunting in childhood: an overview of global burden, trends, determinants, and drivers of decline. *The American journal of clinical nutrition*, 112(Supplement\_2), 777S-791S.
- Widayanti, A. W., Green, J. A., Heydon, S., & Norris, P. (2020). Health-seeking behavior of people in Indonesia: A narrative review. *Journal of epidemiology and global health*, 10(1), 6.
- Yakut, S., Karagülle, B., Atçalı, T., Öztürk, Y., Açık, M. N., & Çetinkaya, B. (2021). Knowledge, attitudes, practices and some characteristic features of people recovered from COVID-19 in Turkey. *Medicina*, 57(5), 431.
- Zhu, W., Zhu, S., Sunguya, B. F., & Huang, J. (2021). Urban–Rural Disparities in the Magnitude and Determinants of Stunting among Children under Five in Tanzania: Based on Tanzania Demographic and Health Surveys 1991–2016. *International journal of environmental research and public health*, 18(10), 5184.

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