

# Strategy Planning Based on Factors Affecting Behavior of Healthy Food Consumption

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**Abstract.** Healthy food is a basic human need that needs to be fulfilled every day. Eating healthy food is an effort to maintain a healthy body. In fact, many people still have a poor eating diet, this can cause a non-contagious disease. The high number of patients that suffer with diseases will be a burden for both the community and the state. This is because a non-contagious disease is a disease that is not contagious but has a high risk of death. The patients will take a long time to be healed and the medication cost a lot of money. To maintain a healthy body consumption of healthy food is important, especially for people of Jakarta that have a poor eating diet. This study was conducted to identify the factors that influence the habit of eating healthy foods using an extended model of Theory of Planned behavior (TPB) by adding the factors of Health Consciousness and Knowledge of Healthy Food. Analysis of the mediation and moderation effect of the factors was carried out using Structural Equation Modeling (SEM). After gaining the result from the analysis, this study will create a strategy based on it and prioritized them using the Relationship Matrix.

**Keyword:** Consumption of Healthy Food, Health Consciousness, Healthy Food, Knowledge of Healthy Food, Mediating and Moderating Effect, Relationship Matrix, Structural Equation Modeling, Theory of Planned Behavior

**Abstrak.** Makanan sehat merupakan kebutuhan dasar manusia yang perlu dipenuhi setiap hari. Mengonsumsi makanan sehat merupakan salah satu upaya dalam menjaga kesehatan tubuh. Kenyataan nya banyak masyarakat Jakarta yang masih rendah dalam mengonsumsi makan sehat. Hal ini menyebabkan tingginya jumlah penderita Penyakit Tidak Menular (PTM) di Indonesia. Tingginya angka penderita PTM merupakan beban baik bagi masyarakat maupun negara. Hal ini dikarenakan PTM merupakan penyakit yang tidak menular tapi dapat menyebabkan kematian, proses penyembuhan membutuhkan waktu yang lama dan biaya yang besar. Untuk itu menjaga kesehatan tubuh dengan memastikan konsumsi makanan yang sehat penting untuk ditingkatkan khususnya bagi masyarakat Jakarta. Kebiasaan mengonsumsi makanan kekinian yang tidak sehat adalah salah satu kebiasaan buruk yang dimiliki oleh kebanyakan orang Jakarta. Penelitian ini dilakukan untuk mengidentifikasi faktor yang mempengaruhi kebiasaan mengonsumsi makanan sehat menggunakan model perluasan dari Theory of Planned Behavior dengan menambahkan faktor Health Conciousness dan Knowledge of Heathy Food. Analisis terhadap mediating and moderating effect dari faktor-faktor yang dapat mempengaruhi consumption of healthy food dilakukan menggunakan Structural Equation Modeling (SEM). Setelah itu rekomendasi

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Copyright © Jurnal Sistem Teknik Industri (JSTI) [2023] Published by Talenta Publisher

p-ISSN: 1411-5247 | e-ISSN: 2527-9408 | DOI 10.32734/jsti.v25i1.9433

Journal Homepage: <https://talenta.usu.ac.id/jsti>

*strategi berdasarkan hasil analisa disusun dan diprioritaskan menggunakan Relationship Matrix.*

*Kata Kunci: Konsumsi Makanan Sehat, Kesadaran Kesehatan, Pengetahuan tentang Makanan Sehat, Efek Mediasi dan Moderasi, Matriks Hubungan, Structural Equation Modeling, Teori Perilaku Terencana*

Received 09 August 2022 | Revised 12 January 2023 | Accepted 20 January 2023

## 1. Introduction

Today, health problems among the world's population are increasing due to lack of healthy eating behavior and awareness. This leads to obesity, malnutrition and eating disorders among the world's adults. Approximately 2.8 million people die yearly from being overweight or obese. This problem causes an increase in the socio-economic burden on middle-income households. Previous scientific research has shown that eating unhealthy foods can increase the risk of hypertension, cardiovascular disease, and diabetes.

Indonesia itself is currently experiencing a double burden of disease. Where there are problems with communicable diseases and non-communicable diseases (PTM) in Indonesia, it was recorded in the 2015-2019 RPJMN that almost all cases of PTM had an increasing number of sufferers, for example, cases of people with high blood pressure increased from 25.8% to 34.1%. Not only that, based on data from Basic Health Research (Riskesdas) in 2018, 21.8% were obese and 13.6% were overweight. This number has increased compared to 2007 and 2013. The increase in PTM cases will eventually become a burden for the community and government, this can be seen from the greater money the government has spent to pay for the burden of health insurance through BPJS Kesehatan [1].

Recently, the popularity of healthy food in Indonesia has increased, and the public has begun to pay more attention to healthy food because the number of obesity and non-communicable diseases related to nutrition continues to increase yearly. Also, the strong encouragement of eating healthy food to prevent sickness, remembering that Indonesia has recently just revoked its social distancing policy due to COVID-19. Increasing one's awareness of healthy food and encouraging interest in consuming healthy foods is one way of controlling the factors that can cause the risk of PTM. With the increasing attention of the population to healthy food, food industry players and policymakers are also paying more attention to healthy food. Food industry players are competing to improve their diets while policymakers focus on developing specific guidelines to provide information related to healthy food [2]. Nutrition labeling of food and food menus by food vendors is one effort that can be made to increase awareness.

The habit of consuming unhealthy foods is strongly influenced by psychological factors such as attitudes [3], perceived barriers and benefits [2], social factors such as received support, habits, and social influences [4]. Environmental factors such as access to and prices of healthy food can also influence a person's eating habits [5]. Unhealthy eating habits can result in insufficient

nutrient intake needed by the body so that which can increase the risk of disease. The answer to this problem is to adopt a healthy and balanced diet by increasing the habit of eating healthy foods.

Jakarta as the capital of the State of Indonesia is one of the regions in Indonesia which has a society with diverse consumption habits. The majority of Jakarta people are migrants from various regions in Indonesia who come with different eating habits from their respective regions. The differences in attitudes, perceptions of benefits, habits, and barriers that the people of Jakarta feel are also different. This affects the intentions and habits of the people of Jakarta in consuming healthy foods, ultimately leading to differences in the level of nutritional intake consumed by each person. This research will explore the intention of consuming healthy food among adults in Jakarta using the Theory of Planned Behavior (TPB). In order to find more specific factors that influence the intention of people in Jakarta to eat healthy food, which is then used as the basis for designing a strategy to increase the consumption of healthy food in the Jakarta community. Hoping it will help to encourage more people of Jakarta to eat healthy food.

## **2. Related Works**

### **2.1. Definition of Healthy Food**

Food is a basic human need that needs to be met every day. By eating healthy food, humans get energy and nutritional intake that is needed by the body. The food consumed daily by us humans will provide energy, a feeling of fullness, and satisfaction, repair damaged cells, and support the growth of the body. Research conducted in 2009 proved that the human body needs adequate nutritional intake to maintain a healthy body [6]. The basic needs of humans include food consumption must be fulfilled every day. Healthy food is food that is hygienic and filled with nutrition. Food that does not contain germs and toxins that can be harmful to people who eat it is call hygienic food. For a healthy diet, not just hygienic food that needs to be considered but also the balance of nutrition inside the meal, the balanced amounts of carbohydrates, fats, protein, vitamins, and minerals according to the body's needs, this is what is meant by nutritious food [7]. Eating foods such as whole grains, fruits, vegetables, and nuts is a way to get vitamins, minerals, and fiber that are good for the body.

Not just consuming healthy food, a good diet is also important to avoid disease risk. A good diet is a habit of consuming food and beverages of the right quality and quantity to maintain a balanced nutritional intake. Eating a healthy diet with a good diet can reduce the risk of obesity and nutrition-related non-communicable diseases. In Indonesia, the habit of consuming healthy foods has been supported through several programs and regulations made by the government. One of them is the Indonesian Ministry of Health's program entitled "Fill My Plate"

### **2.2. Theory of Planned Behavior (TPB)**

The theory of Planned Behavior (TPB) is a theory that explores human behavior [8]. TPB has been shown to be useful for detailing the psychological processes underlying various health behaviors [9]. So that TPB is often used to study health-related decision-making behavior [10].

TPB is the result of the development of the Theory of Reasoned Action (TRA). Initially, TRA only explained the behavior of a person's will. TRA provides an explanation of how attitudes, subjective norms, and behavioral intentions combine to predict behavior. Then the TRA was revised to include an analysis of non-intentional behavior. This revised version is called the Theory of Planned Behavior (TPB), where attitudes, perceptions of behavioral control, and subjective norms are the factors that influence a person's intention and behavior in doing something.

Theory of Planned Behavior (TPB) has been successfully applied to various behavioral studies, including research related to health behavior [9]. Regarding behavior related to healthy food, several TPB-based studies have shown the predictive ability of perceived behavioral control for healthy food consumption intentions in Norwegian adolescents [8], Malaysian adults [11], and American youth [10]. In addition, TPB is also proven to be able to predict the behavior of vegetable and fruit consumption, consumption of liquid milk, and consumption of organic products. Most of these studies have found that attitude is more important than the subjective norm in predicting intention. This confirms weak support for subjective norms compared to attitudes in predicting behavioral intentions [12] and health behavior [13].

### **2.3. Factors Affecting Healthy Food Consumption**

The following is an explanation of the factors affecting healthy food consumption that will be considered in this study:

#### *A. Health Consciousness*

Health Consciousness is the extent to which a person will take health measures [3]. And to what extent the importance of health is applied to the routine of a person's daily life [11]. Goud (1988) divides health awareness into four dimensions, namely, someone with more attention to health, someone who cares about health, someone who is involved in seeking information related to health, and someone who values health. Someone level of health awareness is reflected in their willingness to implement healthy routines, food consumption habits, and healthy lifestyles [4].

#### *B. Knowledge about Healthy Food*

Knowledge is an important factor that can directly influence one's habits. The different levels of knowledge will affect the purchase intentions of consumers [14]. Previous research has proven that decisions in choosing food are influenced by knowledge about food, the better a person's understanding of healthy food, the better the food selection decisions taken will be [15]. And conversely, if someone's knowledge of healthy food is low, this will encourage unhealthy eating patterns in young adults [5].

#### *C. Attitude*

Attitude is a person's behavioral decision on whether to do something. In the theory of Planned Behavior (TPB) attitude is one of the factors that influence a person's intention and behavior. The attitude itself refers to the extent to which the person can evaluate good or unpleasant behavior

towards a behavior in doing something. A positive (good) attitude towards a behavior can lead to positive behavior towards certain activities. In this case, a positive attitude that a person has can lead to positive intentions and behavior toward healthy food consumption.

#### *D. Perceptions of Behavior Control*

Apart from attitudes, perceptions of behavior control are also factors that can influence a person's intention and behavior in doing something based on the theory of planned behavior (TPB). Perception of behavioral control refers to the perceived ease and difficulty in performing a behavior. Perception of behavioral control that a person feels can influence the intention and behavior in doing something. In this case, perceptions of behavior control can affect a person's attitude and behavior in eating healthy foods.

#### *E. Subjective Norms*

The final factor in the theory of planned behavior (TPB) which can influence one's intention and behavior, is subjective norms. Subjective norms refer to the social pressure a person feels about whether they should perform certain behaviors. The impulse of the surrounding environment to a certain behavior can affect a person's intention and behavior depending on the person's positive perception. In this case, the influence of opinion from the environment will be important and not eating healthy food can affect a person's intention and behavior in consuming healthy food if it is received positively by that person.

#### *F. Intention to Consume Healthy Food*

Intention to consume healthy food is a factor that directly influences the behavior of consuming healthy food. Based on the theory of planned behavior (TPB) a person's intention in doing a behavior affects the person's behavior in doing that behavior. In this case, a person's intention to consume can influence the person's behavior in consuming healthy food.

#### *G. Mediating Effects of Intention to Consume Healthy Food*

Health consciousness, knowledge of healthy food, attitudes, subjective norms and perceptions of behavioral control are factors that directly influence the intention to consume healthy food. Meanwhile, the intention to consume healthy food is a factor that affects healthy food behavior. This factor measures the mediating effect of intention to consume healthy food among the five factors that are directly related to consumption intention on healthy food consumption behavior. The intention to consume healthy food is able to mediate the relationship between the five factors and a person's healthy food consumption behavior.

#### *H. Perceived Barriers*

Eating healthy food for some people is a challenging thing to do. Some people find that eating healthy foods has its own difficulties which become a barrier to eating healthy foods. Perceived barriers can affect a person's behavior [16]. Barriers that can be felt in eating food are difficulty finding healthy food, difficulty cooking healthy food, and difficulty eating healthy food because

of the unpleasant taste or smell [17]. This barrier indicates a person's belief that healthy food is expensive, healthy food is hard to come by, and healthy food requires a long preparation time [2]. PBS in research on healthy food consumption has an effect that does not support the intention to consume healthy food [18].

## **2.4. Relationship Matrix**

The relationship matrix is one part of the House of Quality which aims to determine the relationship between customer requirements (What) and functional requirements (How). This matrix is filled with a scale of 0 (no relationship), 1 (weak), 3 (moderation), and 9 (strong). In relational Matrix, the following scale will be denoted by different symbols. In filling in the relations shop matrix, it is necessary to assist in the assessment of experts (experts) who have more understanding of the field being researched. The relationship matrix can identify functional requirements that most influence satisfaction on each indicator of the customer requirements. The functional indicator requirements with the highest value will be the main priority in designing strategies that will be carried out to meet consumer expectations properly.

Today, health problems among the world's population are increasing due to poor eating behavior and lack of awareness of healthy food. This leads to obesity, malnutrition and eating disorders among the world's adults. Approximately 2.8 million people die worldwide each year due to being overweight or obese. This problem causes an increase in the socio-economic burden on middle-income households. Previous scientific research has shown that eating unhealthy foods can increase the risk of hypertension, cardiovascular disease, and diabetes.

## **3. Methodology**

In conducting this research, Structural Equation Modeling (SEM) was used. Structural Modeling (SEM) itself is a statistical method used to test the relationship between variables, such as between manifest and latent variables, the relationship between latent variables, and measuring the measurement error variable on several independent and dependent variables in a model. Structural Modeling (SEM) is used in confirming the theory with five steps, namely, model specification, model identification, estimation, fit test, and model re-specification. Structural Modeling (SEM) is chosen for this research because SEM is one of the usual statistical modeling techniques used to measure people's behavior. Different from the other multivariate analysis, SEM considers more than one connection at the same time, this will give a more complex testing to the hypothesis. The following is an explanation of each stage carried out in this study.

### **3.1. Research Hypothesis**

This research will use 8 latent variables and 43 observable variables. The eight latent variables are Health Consciousness, Knowledge about Healthy Food, Attitude, Perceptions of Behavior Control, Subjective Norms, Intention to Consume Healthy Food, Mediating Effects of Intention to Consume Healthy Food, and Perceived Barriers. These 8 latent variables which then become

the eight main hypothesis that will be measured in this research. The 8 latent variable which are mentioned below:

- Hypothesis 1 (H1)** : Health Consciousness positively influences the intention to consume healthy food.
- Hypothesis 2 (H2)** : Knowledge about healthy food positively affects the intention to consume healthy food.
- Hypothesis 3 (H3)** : Attitude positively affects intention to consume healthy food.
- Hypothesis 4 (H4)** : Perception of behavior control positively affects intention to consume healthy food.
- Hypothesis 5 (H5)** : Subjective norms positively influence intention to consume healthy food.
- Hypothesis 6 (H6)** : Intention to consume healthy food positively influences healthy food consumption behavior.
- Hypothesis 7 (H7)** : Intention of healthy food consumption has a mediating effect on health consciousness, knowledge of healthy food, attitudes, subjective norms, and perceptions of behavior control with healthy food consumption behavior.
- Hypothesis 8 (H8)** : Perceived barriers positively affect healthy food consumption.

### 3.2. Data Collection

The number of respondents needed for this research is calculated based on the five respondents for each observable variable [19]. This study receives responses from 420 respondents, between 25 to 55 years old, and uses AMOS applications to help describe models and process data. The data collected for this research was gathered via *Google Form* which was shared from October 26<sup>th</sup> to November 7<sup>th</sup>, 2020.

### 3.3. Model Specification Stage

The model specification stage begins by determining the study's observed variables, which will be described as the model's latent variable. Then, the relationships between latent variables were determined. The existing relationship can be in the form of a direct relationship (direct) or an indirect one (indirect). After the relationship is established, the model specification stage is continued by determining the estimated model parameters' status. There are two types of parameters, free parameter, and fixed parameter. Free parameters are estimated by the model based on data, while experts determine fixed parameters.

### **3.4. Model Identification Stage**

Model identification is needed to see whether there is enough information to identify a solution to a series of structural equations. Models and constructs can be differentiated based on the level of identification determined by the degree of freedom (df) value of a model, after all the parameters to be estimated have been determined [19].

### **3.5. Estimation Stage**

There are several choices of approaches that can be used to find SEM solutions, one of which is the Maximum Likelihood Estimation (MLE) which is the approach most often used as a standard in most SEM programs. Maximum Likelihood Estimation (MLE) is a flexible approach used for parameter estimation, where parameter values are more likely to achieve model success. This research successfully reaches the MLE target by collecting 420 data.

### **3.6. Fit Test Stage**

Testing the suitability of the measurement model is carried out for each latent construct in the model. Tests carried out on latent constructs are carried out to measure the suitability of the latent construct measurements by unobserved variables. The evaluation carried out in this test is an evaluation of the validity of the measurement model and an evaluation of the reliability of the measurement model. Test matches to whole models (overall model fit) using the SEM cannot be done directly. SEM cannot perform statistical tests that can explain the power of the model in predicting the model. Therefore, a model fit test is conducted using several indicators of measure of fit or Goodness of Fit Indices (GOFI) which can help measure the level of model strength in predicting results.

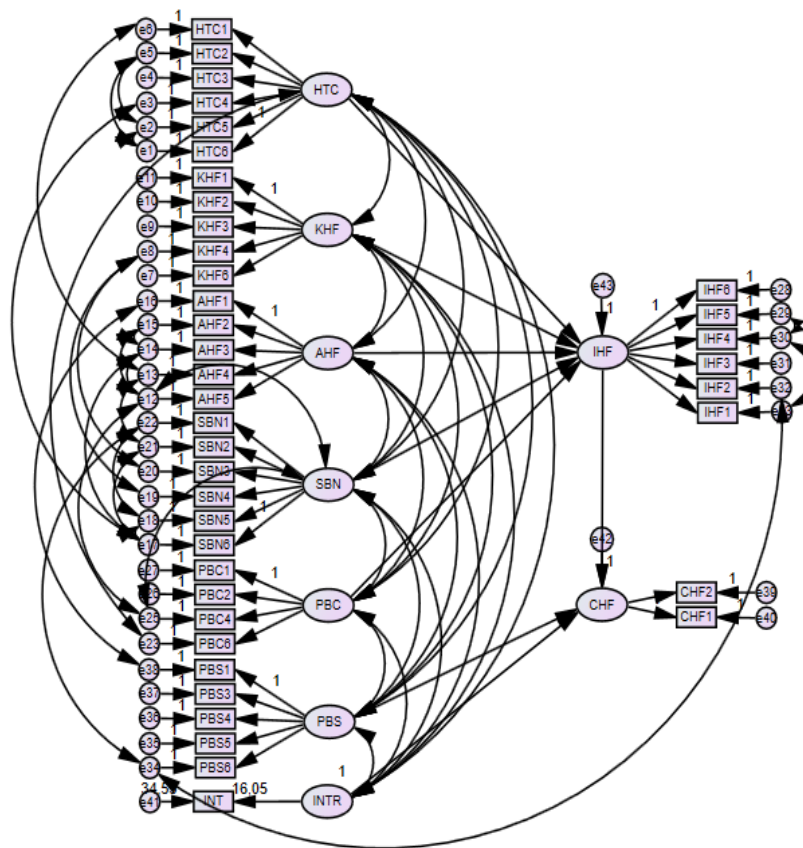
### **3.7. Model Re-Specification Stage**

The final step after carrying out the fit test is to respecify the model. Re-specification of the model is needed when the results of the Goodness of Fit (GoF) test show the results are not fit. Re-specification of the model must be done based on theory because the purpose of SEM calculations is to confirm the theory. In re-specification, it is necessary to reconsider the identification, estimation and evaluation of suitability. If the model has been verified, the new model must be cross validated with new data.

## **4. Results and Discussion**

After processing the data in accordance with the stages described previously, the model results of re-specification were obtained with a model fit test value that was better than before. The model is respecified based on the model indices suggested by the AMOS application. The following is the model of the results of the re-specification obtained by this study:





**Figure 1** Model of the Re-specification Results

After getting the model of the results of the re-specification the model is tested again according to the research steps described. The results of the model fit test using the 14 criteria Goodness of Fit show better results than before the prescription was carried out. The following is a comparison of the results of the model fit test obtained in this study:

**Table 1** Model Test Results

Criteria for Match	Requirements Match	Results Before Re-specification	Results After Re-specification
CMIN / DF	$\leq 2$	Bad fit	Bad fit
Goodness of Fit Index (GFI)	$GFI \geq 0.9$	Bad fit	Marginal Fit
Adjusted Goodness of Fit (AGFI)	$AGFI \geq 0.9$	Bad fit	Marginal Fit
Normed Fit Index (NFI)	$NFI \geq 0.9$	Marginal fit	Marginal fit
Relative Fit Index (RFI)	$RFI \geq 0.9$	Bad fit	Marginal Fit
Incremental Fit Index (IFI)	$IFI \geq 0.9$	Marginal fit	Marginal fit
Tucker Lewis Index (TLI)	$TLI \geq 0.9$	Marginal fit	Marginal fit
Comparative Fit Index (CFI)	$CFI \geq 0.9$	Marginal fit	Marginal fit
Root Mean Square Error of Approximation (RMSEA)	$RMSEA \leq 0.08$	Bad fit	Good Fit
AIC	Default < Saturated; Independence	Bad fit	Bad fit
ECVI	Default < Saturated; Independence	Bad fit	Bad fit
Parsimony Goodness of Fit Index (PGFI)	$PGFI > 0.5$	Good fit	Good fit
Parsimony Normal of Fit Index (PNFI)	$PNFI > 0.5$	Good fit	Good fit
Parsimony Comparative of Fit Index (PCFI)	$PCFI > 0.5$	Good fit	Good fit

#### 4.1. Causal Relationship Analysis

Using the Structural Equation Modeling (SEM) method allows examiners to test the effect that happened between the observed variables (indicators) with latent variables and between latent variables [19]. This research analyzes 420 data using the help of AMOS software.

##### A. *P-value Analysis*

In this analysis p-value is being considered with the aim of seeing the relationship between the two latent variables. The p-value  $<0.05$  indicates that a latent variable has a significant influence on other latent variables so that the hypothesis concerning these two variables can be accepted. In this study, eight hypotheses were analyzed using the software AMOS 24.

**Table 2** Analysis Results P-Value

Hypothesis	Description	p-value	Effect
<b>Factors affecting intention to consume healthy food (IHF)</b>			
H1	Health consciousness has a significant positive effect on the intention of healthy food consumption	0.001	Significant
H2	Knowledge of healthy food has a significant positive effect on intention to consume healthy food	0.008	Significant
H3	Attitudes towards healthy food have a significant positive effect on intention to consume healthy food	***	Significant
H4	Subjective norms have a significant positive effect on intention to consume healthy food	0.645	Not Significant
H5	Perception of behavior control has a significant positive effect on intention to consume healthy food	0.033	Significant
H6	Intention to consume healthy food has a significant positive effect on healthy food consumption behavior	0.004	Significant
<b>Perceived barriers (PBS) moderating effect</b>			
H8	Perceived barriers moderate the relationship between IHF and CHF	***	Significant

Based on the table above, it is known that not all hypotheses in this study are accepted. There are 12 hypotheses, with 5 hypotheses including measuring the IHF to CHF mediation factor in this study. The hypothesis which is declared insignificant is the hypothesis of the effect of subjective norms on the intention to eat healthy foods. This hypothesis has a p-value  $>0.05$ , so it is concluded that it does not significantly affect the model. While the remaining hypotheses H1, H2, H3, H4, and H6 are proven to have a p-value  $<0.05$ , so it is concluded that they have a significant effect. In addition, H8 which is a hypothesis related to the moderation effect, shows a significant result.

The above results indicate that there is no significant effect between the subjective norms to the behavior of healthy food consumption in Jakarta. This indicates that a person's perception of the opinion of others who say that the consumption of healthy food is important has less effect on the emergence of healthy food consumption behavior in that person. This result is likely influenced by the age of the majority of more mature respondents, so that the level of knowledge about healthy food and health awareness is a factor that more influences a person's attitude and behavior towards healthy food consumption than subjective norms. Meanwhile, this finding is also in line with findings from previous research where attitudes and perceptions of behavioral control were

found to be more influential on the emergence of healthy food consumption behavior than subjective norms.

#### B. Mediation Effects Analysis

In this study, the measurement of mediation is only to the extent of proving that a mediating effect occurs on these variables. Therefore, analysis of the effect of the relationship between variables is used to determine the presence of the mediating effect of the intention to consume healthy food (IHF). IHF can be said to mediate the relationship if the indirect effect has a greater value than the direct effect [20]. Here are the results obtained by the analysis of direct effects and the indirect effect on any relationship that exists in the model,

**Table 3** Mediation Analysis

Hypothesis	Description	Effect
H7a	IHF mediates HTC to healthy food consumption behavior	Mediating
H7b	IHF mediates KHF to healthy food consumption behavior	Mediating
H7c	IHF mediates AHF to healthy food consumption behavior	Mediating
H7d	IHF mediates SBN to healthy food consumption behavior	Not Mediating
H7e	IHF mediates PBC to healthy food consumption behavior	Mediating

This analysis shows that the intention to consume healthy food (IHF) has been shown to mediate the relationship between health consciousness (HTC), knowledge of healthy food (KHF), attitude (AHF) and perceived behavior control (PBC) with consumption of healthy food (CHF). However, the intention to consume healthy food has yet to be proven to mediate the relationship between subjective norms (SBN) and the consumption of healthy food (CHF).

#### 4.2. Analysis Based on Respondents' Age

Apart from hypothesis analysis, this study also analyzed the age of the respondents. This analysis was carried out to see the differences in the influence relationship that occurred in the two data groups analyzed using the same model. In this study, a multigroup analysis will be carried out on different age groups. There are two age groups, namely, the age group 24 to 39 years and 40 to 55 years. This group division is based on generational differences. The age group 24 to 39 years represents generation Y, and those aged 40 to 55 years represent generation X.

Based on the results obtained, the age difference between respondents causes a significant relationship in H3, H5, and H6. The significance of H3 in this analysis indicates that the relationship between AHF and IHF is not the same for both ages and will be better if analyzed independently. Meanwhile, the age of respondents caused an insignificant relationship in H1 or on the relationship between HTC and IHF. This shows that there is no significant difference in results in this pathway, so the two age groups have no different parameter values. The following is a table of results from the analysis based on the age of the respondents.

**Table 4** Hypothesis Analysis Results Based on the Age of Respondents

Hypothesis	Relationship	p-value	Remarks
H1	HTC → IHF	0,251	Not Significant
H2	KHF → IHF	0,564	Not Significant
H3	AHF → IHF	0,011	Significant
H4	SBN → IHF	0,226	Not Significant
H5	PBC → IHF	0,002	Significant
H6	IHF → CHF	0,017	Significant
H8	PBS → CHF	0,761	Not Significant

### 4.3. Strategy Planning

At this stage, the strategy begins to be designed using the help of a relationship matrix, which is part of the House of Quality (HOQ). Filling in the value of priority and the weight of the relationship between customer importance and function requirements is filled by experts who better understand the conditions of healthy food consumption in Jakarta. There are six steps taken in designing a strategy to increase healthy food consumption in Jakarta in this research, namely, identification of customer wants, identification of strategies to meet customer wants, linking customer wants with function requirements, providing importance rating, and validation of strategies.

In this study, six customer wants to be obtained from the results of hypothesis analysis were found. Every customer wants that is found comes from a model indicator that can represent a relationship that is proven significant on the hypothesis testing and is able to be translated into customer wants. The following are the six customer wants to be found from the results of this research: (a) Availability of complete information about healthy food and its benefits → HTC and KHF; (b) Ease of obtaining information related to healthy food → HTC and KHF; (c) Ease of getting (buying) healthy food → IHF; (d) Enjoyment of healthy food taste → PBS 3; (e) Affordable price of healthy food → PBS 4, (f) Ease of differentiating healthy food when shopping → PBS 5

The next step is to determine strategies that can be used to achieve these customer wants 9 strategies are obtained from the results of brainstorming and literacy studies that can be carried out to achieve the customer wants. Considering the heat of the health topic is rising lately, these strategies was chosen. Not only that looking at the behavior and lifestyle of the Jakarta's people lately. Here are the 9 strategies: (a) Increase the publication of information related to healthy food through social media; (b) Provide information on the nutritional content of food sold in restaurants (on the menu); (c) Provide complete and easy-to-read information related to healthy food ; (d) Increase the amount of available healthy food in the market; (e) Provides cost assistance for healthy food ingredients; (f) Provides information on the steps for processing healthy foods (in the form of recipes); (g) Presenting healthier variants of a food product; (h) Labeling healthy foods sold in the market; (i) Providing information related to healthier and more affordable.

Furthermore, the importance rating and the relationship between customer wants, and function requirements is done by filling in the relationship matrix. This stage is also used simultaneously

to validate the strategic recommendations that will be produced by the experts to ensure that the strategy recommendations given are possible to be implemented. Therefore, the provision of importance rating and the relationship between customer wants and function requirements is carried out by filling in the relationship matrix and considering the expert's opinion. The following is a relationship matrix used to validate strategic recommendations.

		Direction of Improvement	Functional Requirements								
Relative Weight	Customer Importance	Customer Requirements	Increase the publication of information related to healthy food through social media	Provide information on the nutritional content of food sold in restaurants (on the menu)	Provide complete and easy-to-read information related to healthy food	Increase the amount of availability healthy food in the market	Provides cost assistance for healthy food ingredients	Provides information on the steps for processing healthy foods (in the form of recipes)	Presenting healthier variants of a food product	Labeling healthy foods sold in the market	Providing information related to healthier and more affordable.
18%	5	Availability of information about healthy food and their benefits	●	●	●	△	△	△	△	●	0
18%	5	Easiness of obtaining information about healthy food	●	●	●	△	△	●	△	●	0
14%	4	Easiness of getting (buying) healthy food	●	△	0	●	△		●	●	●
14%	4	Good taste of healthy food	△	△	△	△	△	●	●	△	△
18%	5	Affordability price of healthy food	△	△	△	△	●	△	△	△	●
18%	5	Ability to differentiate healthy food while shopping	0	●	●	△	△	△	0	●	●
Importance Rating Sum (Importance x Relations)			535,71	528,57	557,14	214,29	242,857	385,71	364,29	642,86	571,43
Relative Weight			15%	15%	16%	6%	7%	11%	10%	19%	16%
Our Product											
Technical Competitive Assessment											

**Figure 2** Relationship Matrix

Based on the relationship matrix above, five strategic recommendations with the relative weight largest will be recommended, namely, labeling food sold in the market, providing information related to healthier and more affordable substitute foods, and providing complete and easy information. Read about healthy food, increase the publication of information related to healthy food through social media and provide information on the nutritional content of food sold in restaurants (on the menu). Labeling of food sold in the market is done to make it easier for people to find healthy food in the market. With the consumptive habits of the Jakarta people, this strategy is recommended to encourage the people of Jakarta to know the types of food to be purchased and to make it easier for the people of Jakarta to find healthy food in the market.

Strategic recommendations related to information procurement and increasing publicity need to be made by utilizing social media so that the information to be conveyed can arrive precisely to the people of Jakarta. Packaging forms of information are also suggested to make it clearer and easier to read so that people who read can easily and quickly understand and get the information they want to convey. The last strategy recommendation is to provide information related to the nutrients contained in food sold in restaurants; this is recommended to see the development of the food and beverage business, that is increasingly numerous and varied in Jakarta. Consumptive Jakarta's people need to know the nutritional content of the food they are consuming in order to make better choices before consuming these popular foods. The finding through this research may be applicable for another city with a similar lifestyle and eating behavior to Jakarta, different research may be needed to get a more accurate answer for a different city.

## 5. Conclusion and Future Research

This study succeeded in finding that health consciousness (HTC), knowledge about healthy food (KHF), attitudes (AHF) and perceived behavioral control (PBC) influenced the intention of the people of Jakarta to consume healthy food. Meanwhile, intention to consume healthy food (IHF) and perceived barriers (PBS) are factors that directly influence healthy food consumption behavior. Furthermore, age differences in respondents affect differences in attitudes (AHF), perceived behavioral control (PBC) and intention to consume healthy food (IHF) people of Jakarta. Finally, based on this research, five recommended strategies can be recommended, namely, labeling foods sold in the market, providing information related to healthier and more affordable substitutes, providing complete and easy-to-read information related to healthy foods, and increasing information publication and related to healthy food through social media and providing information on the nutritional content of food sold in restaurants (on the menu). Remembering that this finding is found based on the current situation of people in Jakarta, which is currently in the middle of Covid-19, another research will be necessary, for a different situation that may change in the future and affect the behavior of the people in Jakarta. Suggestions for further research are to conduct research with different respondents and consider other factors that can affect the consumption of healthy foods in a different city with different eating behavior than Jakarta. This study may apply to other cities with similar lifestyles and eating behaviors with Jakarta. But further research for different cities is needed to find more accurate results that can have a bigger impact.

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