

**The Impact of Information Quality, Trust, Anxiety, and Health Consciousness on Intention to Buy Health Supplements in The Post Pandemic Era****Purnama Dewi Pata, Bernard Alfa E. Manurung, Edwin Hari Wardhana,  
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Email: kinaracalista@gmail.com**Abstract**

The purpose of this study is to analyze the factors affecting consumer's intention to buy health supplements using the expanding theory of planned behavior model. The variables of perceived information quality, trust, anxiety, health consciousness are integrated in the model of this study. A total of 333 valid questionnaire responses were collected via an online survey, from respondents living in Jakarta and suburb (Jabodetabek) area, Indonesia. The findings indicate that perceived information quality influences trust, anxiety, and health consciousness. Moreover, both of trust and health consciousness influence customer's attitude. Eventually, the customer's attitude and subjective norms influence the intentions to buy health supplements. The authors used a sample based on Jabodetabek area that assume they have similar access to perceived information quality. The present study also has not considered educational and economic status of the respondents.

**Keywords:** Attitude, Intention, Indonesia, Theory of planned behavior, Health supplements**INTRODUCTION**

In May 2023, The World Health Organization (WHO) announced the end of the emergency phase of COVID-19. WHO emphasized positive trends in the COVID-19 situation, such as declining deaths, hospitalizations, and ICU admissions, alongside high population immunity. However, the organization continues to coordinate the global response. Temporary recommendations include sustaining national capacities, integrating COVID-19 vaccination into routine programs, enhancing surveillance, preparing medical countermeasures, strengthening risk communication, easing travel restrictions, and supporting research on vaccines and post-COVID conditions.

As this disease declines, concerns or anxiety about its transmission also decrease. The Indonesian society, particularly in the Jabodetabek (Jakarta, Bogor, Depok, Tangerang, Bekasi) area, has resumed their daily activities without the restrictions imposed during the Covid-19 pandemic era. This change in situation has also affected their consumption behavior. The post-Covid era has led to significant disruptions in consumer spending, particularly in health-related products. The Indonesian Health Supplement Entrepreneurs Association (Sabrina Rhamadanty, 2023) has reported a decrease in the purchase of health supplements, influenced by changes in public behavior towards health maintenance.

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The Ministry of Health Republic of Indonesia (2024) encourages a Health Promotion Movement, aimed at fostering a culture of healthy living in society by their own volition for a healthier life. This is stipulated in Health Law No. 17 of 2023, where supplementation is one of the efforts to fulfill the nutritional needs of the community, prioritizing specific groups. As defined by National Agency for Drug and Food Control (NADFC) Republic of Indonesia (2023), health supplements are products intended to supplement nutritional needs, maintain, enhance, and/or improve health functions, have nutritional value and/or physiological effects, contain one or more substances such as vitamins, minerals, amino acids, and/or other non-plant substances that can be combined with plants (Mamahit et al., 2022).

Building upon the Theory of Planned Behavior (Ajzen, 1991), which posits that behavioral intentions are driven by attitudes, subjective norms, and perceived behavioral control, this study introduces information quality, trust, anxiety, and health consciousness as additional determinants of purchase intentions (Conner, 2020). (Najib et al., 2022) conducted a study on the role of information quality, trust, and anxiety on intention to buy food supplements at the time of Covid-19 outbreak. This study proves that the extended TPB model by including information quality, anxiety and trust variables has a greater power to explain consumer's intention in the time of a pandemic. (Ünver, 2023) proved that attitude and behavioral control were significant determinants of purchase intention.

This research aims to fill a gap *tunjukkan gap*, misalnya penelitian terdahulu blm ada. Research gap, research question? in the literature by examining the combined impact of information quality, trust, anxiety, and health consciousness on the intention to buy food supplements within an extended TPB framework. Despite the abundance of studies on consumer behavior in the health sector, the unique contribution of this study lies in its comprehensive examination of these four factors simultaneously, providing valuable insights for marketers, policymakers, and health practitioners aiming to promote healthful behaviors among the public

## RESEARCH METHOD

The empirical study was carried out on the basis of a questionnaire during March to April 2024. The questionnaire was distributed online to respondents who stay in Jabodetabek (Jakarta, Bogor, Depok, Tangerang & Bekasi). The location was chosen because Jabodetabek is the most populated and assume flooded with information about health in Indonesia. The sample in this research has been chosen based on purposive sampling technique because the study requires specific criteria so that the samples taken follow the research objectives, namely being able to solve research problems and provide a representative sample. Many studies (Mishra et al., 2019; Najib et al., 2022; Nguyen et al., 2019; Suhartanto et al., 2021) also use purposive sampling to analyze consumer's purchasing intentions. Therefore, in this context, the use of purposive sampling is the most appropriate. The respondent criteria in this study were those who already received information regarding health and have consumed health supplements before. The reason is that there is a lot of information regarding health. From the research, we want to know whether the quality of health information influences trust, anxiety, and health consciousness (Bensley & Brookins-Fisher, 2009). Moreover, both trust and health consciousness influence customers' attitudes (Sugiyono, 2013). Eventually, the intentions to buy health supplements are determined by the customers' attitudes and subjective norms (Figure 1: Research Model). We collected 338 questionnaires from

respondents who lived in Jabodetabek, but after eliminating invalid responses, there were only 333 valid data that were finally used to test the hypotheses.

To measure the variables, this study used 8 hypotheses as explained earlier in literature review. Questionnaire items proposed in previous research (Najib et al., 2022) and theories have been adopted and adapted to the research context of the present study. To test the reliability of the instrument, we calculated Cronbach's alpha and for validity using the loading factors. The questionnaire consists of 30 questions, most of the questions were structured. All variables were measured with a five-point Likert scale, which as a psychometric scale frequently used in consumer behavior literature, allows respondents to easily rate the extent to which they agree or disagree with a given statement (Kumar & Lim, 2008).

**Table 1. construct & measurement present the variables, measurement and sources used in this study**

Variable Name	No of item	Scale	Source
Perceived Information	3	all using 5-point Likert Scale	Najib et al, 2022
Trust	3		Najib et al, 2022
Anxiety	6		Najib et al, 2022
Health Consciousness	8		Unver and Sezgin, 2023
Attitude toward food supplement	3		Najib et al, 2022
Subjective norm	3		Najib et al, 2022
Intention to buy food supplement	3		Najib et al, 2022

In this study, author using a statistical package for the social sciences (SPSS) multiple regression analysis is used to examine the cause & effect among variables, the reliability & validity of the model. SPSS is a powerful software widely used for statistical analysis and modeling in various fields such as social sciences, business, and research. SPSS can read various types of data or enter data directly into its data editor (SPSS, 2015).

In research that uses quantitative methods, the quality of data collection is largely determined by the quality of the instruments or data collection tools used. Research instruments are said to be good quality and can be accounted for if they are proven valid and reliable. Testing validity & reliability of the questionnaire is needed to ensure that the questionnaire used in research can measure research variables well. Meanwhile testing using Cronbach's alpha statistic is considered to be reliable when its alpha value greater than 0.70, under 0.70 considered to be unreliable.

## RESULT AND DISCUSSION

### Respondent profile

The characteristics of the sample are as follows from the 333 respondents. The number of female respondents is 148 (44.4%), and male respondents are 185 (55.6%). The respondents' age demographics are as follows; 38 (11.4%) respondents are between 19s and

24s; 85 (25.5%) participants are between 25s and 29s, 115 (34.6%) participants are between 30s and 39s, 68 (20.4%) participants are between 40s and 49s, a total of 27 (8.1%) participants are over 50s. The respondents' education demographics are as follows; 121 (36.3%) respondents have senior high school certificates, 32 (9.6%) respondents have diploma certificates, 150 (45.1%) respondents have bachelor degrees, and 30 (9.0%) respondents have postgraduate degrees. In terms of marital status, 204 (61.3%) respondents are married, and 129 (38.7%) respondents are single. In terms of monthly income; 12 (3.6%) respondents have no income (students and housewives), 55 (16.5%) respondents earn less than IDR 5m monthly, 156 (46.9%) respondents receive between IDR 5m and IDR 10m monthly, 53 (15.9%) respondents receive between IDR 10m and IDR 20m monthly, and 57 (17.1%) respondents have over IDR 20m rupiah monthly. Regarding the consumption pattern of health supplements, a majority 225 (67.6%) respondents consume health supplements when they feel unhealthy, 70 (21.0%) respondents consume health supplements every day, and 38 (11.4%) respondents do not consume health supplements.

### **Hypotheses testing**

We used IBM SPSS 27 statistical software to evaluate the validity, reliability and hypotheses. Table 2 shows the results in which the loading factors were 0.522-0.932, and the Cronbach's Alpha were 0.746-0.912. Both are greater than the prerequisite values. It means the indicator items evaluated in this study reach satisfactory validity and reliability.

Table 3 shows the results of the present study in which indicate 'perceived information' has significant influence on 'customer's trust' ( $b = 0.564$ ,  $t = 12.413$ ,  $p < 0.001$ ), 'customer's anxiety' ( $b = 0.285$ ,  $t = 5.404$ ,  $p < 0.001$ ), and 'customer's health consciousness' ( $b = 0.448$ ,  $t = 9.110$ ,  $p < 0.001$ ); thus, H1, H2 and H3 are accepted. Moreover, both factors 'trust' and 'health consciousness' have significant effects on 'attitude toward health supplement' in which 'trust' has a significant 'influence on attitude' ( $b = 0.413$ ,  $t = 7.879$ ,  $p < 0.001$ ), and 'health consciousness' factor has a significant influence on 'attitude' ( $b = 0.209$ ,  $t = 3.556$ ,  $p < 0.001$ ); thus, H4 and H6 are accepted. Meanwhile variable 'anxiety' ( $b = 0.086$ ,  $t = 1.569$ ,  $p > 0.05$ ) has no direct effect on 'attitude toward health supplement'. It means H5 is rejected. 'Intention to buy health supplements' is affected significantly by 'attitude toward health supplements' ( $b = 0.476$ ,  $t = 10.610$ ,  $p < 0.001$ ), and 'subjective norms' ( $b = 0.373$ ,  $t = 8.319$ ,  $p < 0.001$ ); so that H7 and H8 are accepted.

Table 4 shows the Durbin Watson and  $R^2$  value in which indicate the most significant relationship between the dependent variable 'intention to buy health supplements' and the independent variable 'attitude towards health supplement', and the independent variable 'subjective norms' ( $R^2=0.583$ , Durbin Watson=1.918); therefore based on the linear regression analysis can be concluded that the dependent variable is influenced by the independent variables.

The Impact of Information Quality, Trust, Anxiety, and Health Consciousness on Intention to Buy Health Supplements in The Post Pandemic Era

**Table 2. Validity And Reliability Construct**

Latent and observed variables	Loading factor	Mean	SD	Cronbach's Alpha
<i>Perceived information</i>		3.690 7	0.6535 5	0.798
● Always receive information related to healthiness	0.842			
● Well informed how government handles health issues	0.846			
● Following health information related to illness prevention from doctors and health experts	0.845			
Latent and observed variables	Loading factor	Mean	SD	Cronbach's Alpha
<i>Trust to health information</i>		3.882 9	0.5364 5	0.746
● Trust to health tips advised by doctors and health experts in media	0.812			
● Believe that illness can be prevented by a healthy body as informed by government, doctor and health experts	0.833			
● Belief in the benefit of health supplements advised by doctors and health experts	0.798			
<i>Anxiety</i>		3.438 9	0.6274 4	0.806
● Worry about my health as health issue	0.759			
● The news of the spread of health problems makes me feel uneasy	0.837			
● The number of sick and dying because of health problem makes me worry	0.838			
● Not been able to stop or control worrying about my health	0.733			
● Searched online for information about symptoms I experienced	0.522			
● Canceled plans, stayed off work, or avoided physical activity because of a perceived illness	0.571			
<i>Health consciousness</i>		3.760 5	0.5438 1	0.878
● Reflect about my health a lot	0.778			
● Very self-conscious about my health	0.787			
● Generally attentive to my inner feeling about my health	0.731			
● Constantly examining my health	0.588			
● Alert to changes in my health	0.800			
● Usually aware of my health	0.801			
● Aware of the state of my health as I go through the day	0.737			
● Very involved with my health	0.687			
<i>Attitude towards health supplement</i>		3.728 7	0.6826 5	0.900
● Believe that taking health supplements will maintain stamina	0.909			
● Believe that consuming health supplements is a good preventive action	0.932			
● Believe that taking health supplements will reduce the risk of contracting the disease	0.900			
Latent and observed variables	Loading factor	Mean	SD	Cronbach's Alpha

Latent and observed variables	Loading factor	Mean	SD	Cronbach's Alpha
<i>Subjective norms</i>		3.353	0.7152	0.878
		4	9	
• My family and friends think I should take health supplements	0.907			
• Doctors and health experts think I should consume health supplement	0.916			
• The media that I follow makes me conclude consuming health supplements is important	0.866			
<i>Intention to buy health supplements</i>		3.497	0.7246	0.912
		5	9	
• I want to buy health supplements to increase stamina	0.924			
• I will make an effort to buy health supplements in the near future	0.918			
• I intend to buy health supplements because of believing with its benefits	0.926			

**Table 3. Hypotheses testing**

Hypotheses	Path coefficient	t-value	p-value	Collinearity Tolerance	Statistics VIF	Decision
H1: perceived information → customer's trust	0.564	12.413	<0.001	1.000	1.000	Support
H2: perceived information → customer's anxiety	0.285 Kalau ga ada minus maka tidak terbukti hipotesisnya	5.404	<0.001	1.000	1.000	Support
H3: perceived information → customer's health Consciousness	0.448	9.110	<0.001	1.000	1.000	Support
H4: customer's trust → attitude towards health Supplement	0.413	7.879	<0.001	0.704	1.421	Support
H5: customer's anxiety → attitude towards health Supplement	0.086	1.569	0.118	0.650	1.539	Not support
H6: customer's health consciousness → attitude towards health supplement	0.209	3.556	<0.001	0.559	1.789	Support
H7: attitude towards food supplement → intention to buy health supplements	0.476	10.610	<0.001	0.628	1.593	Support
H8: subjective norms → intention to buy health Supplements	0.373	8.319	<0.001	0.628	1.593	Support

**Table 4. Durbin Watson and R<sup>2</sup> value**

Independent variable	Dependent variable	R <sup>2</sup>	Durbin-Watson
H1 : perceived information →	customer's trust	0.318	1.885
H2 : perceived information →	customer's anxiety	0.081	1.848
H3 : perceived information →	customer's health	0.200	2.012

Independent variable	Dependent variable	R <sup>2</sup>	Durbin-Watson
	consciousness		
H4 : customer's trust →	attitude towards health supplement	0.363	2.267
H5 : customer's anxiety →			
H6 : customer's health consciousness →			
H7 : attitude towards health supplement →	intention to buy health supplements	0.583	1.918
H8 : subjective norms →			

### Discussion & implication

#### Compared To The Emphasis Between During Covid & Post Covid

The research tests latent constructs used in empirical models to analyze the factors affecting consumer's intention to buy health supplements using the expanding theory of planned behavior model (Szymkowiak et al., 2022). The variables of perceived information quality, trust, anxiety, health consciousness are integrated in the model of this study. The findings indicate that perceived information quality influences trust, anxiety, and health consciousness. Moreover, both trust and health consciousness influence customer's attitude. Eventually, the intentions to buy health supplements are determined by the customer's attitude and subjective norms (Raman et al., 2022; Wang et al., 2022).

From this study, it was found that perceived information quality influences trust, anxiety, and health consciousness, explaining that the information obtained by respondents is quality health information. Furthermore, trust and health consciousness drive attitude toward health supplements, which ultimately explains the positive influence of trust and health consciousness on the intention to buy health supplements as the level of consumer desire to consume health supplements in the post-pandemic era. Most participants believe that health supplements can help maintain health, especially when consumers feel unwell (Carletti et al., 2020).

A new finding is that anxiety does not influence attitude toward health supplements, which is reinforced by the new normal condition where society is aware of the ongoing health risks but does not take action, for example, not wearing masks and not consuming health supplements. Based on this, using the customers' anxiety approach may not be suitable for generating the intention to buy health supplements

### CONCLUSION

The present study has several academic contributions as follows. First, the TPB is established by linking the TPB model with perceived information quality, trust and health consciousness, in which perceived information quality, trust and health consciousness become important to predict attitudes in the time of post pandemic. Next, the variable of trust and

health consciousness influence intention via attitudes. Furthermore, we analyzed the effect of subjective norms on the consumer's intention to buy health supplements after the COVID-19 pandemic. The findings of this study are expected to lead to a better understanding of the impact of subjective norms on buying intention toward health supplements in the time of post pandemic era. Last, the value of this study is offers empirical insight from the perspective that buying intentions toward health supplements post pandemic COVID-19, indicating that there is no influence between anxiety and the attitudes toward health supplements..

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The Impact of Information Quality, Trust, Anxiety, and Health Consciousness on Intention to Buy Health Supplements in The Post Pandemic Era

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