Research Article

Underlying Factors Towards the Willingness to Use Functional Drinks in Bangkok, Thailand

ปัจจัยที่มีอิทธิพลต่อความเต็มใจที่จะบริโภคเครื่องดื่มเพื่อสุขภาพของผู้บริโภคในกรุงเทพมหานคร ประเทศไทย

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Dissatat Prasertsakul[1]
ดิสสทัต ประเสริฐสกุล
Thitarat Worawitphinyo[2]
ฐิตารัตน์ วรวิชภิญโญ

Abstract

There has been a greater health concern among people around the world in the past several years. This results in an increasing demand of functional foods and drinks. Despite this demand's growth, there is still a controversy among scholars in such a research stream with regards to the factors affecting consumers' willingness to use functional foods and drinks. The major objective of this research is to examine the factors influencing consumers' willingness to use functional drinks in Bangkok, Thailand. The model of this study was developed from synthesizing the models used in the previous relevant research studies. There were four independent constructs being proposed in the 'Functional Drinks Acceptance' model. A structured questionnaire was used to collect the data from 403 respondents using multi-stage sampling undertaken at major public areas in Bangkok. Structural Equation Modelling (SEM) was employed to test hypotheses in the model through AMOS 23.0. Most hypotheses were statistically significant and supported. Consumers' attitude towards functional drinks, products' health claimed, and credibility of information source had

[1] คณะบริหารธุรกิจ มหาวิทยาลัยมหิดล
Business Administration Division, Mahidol University International College
E-mail: dissatat.pra@mahidol.edu

[2] คณะบริหารธุรกิจ มหาวิทยาลัยมหิดล
Business Administration Division, Mahidol University International College
E-mail: thitarat.wor@maahidol.ac.th

a significant influence on the willingness to use functional drinks; whilst consumers' health concern showed insignificant results. This research benefits both food and beverage companies and nutritionists to help them develop the right functional drinks for Thai consumers.

Keywords: *Functional Drinks, Consumers' Concerns, Willingness to Use, Products' Health Claimed*

บทคัดย่อ

ในช่วงระยะเวลาหลายปีที่ผ่านมา ผู้บริโภคทั่วโลกมีความตระหนักและใส่ใจเรื่องสุขภาพมากยิ่งขึ้น ส่งผลให้ความต้องการด้านอาหารและเครื่องดื่มเพื่อสุขภาพเพิ่มมากขึ้นตามไปด้วย อย่างไรก็ตาม การศึกษาต่างๆ ที่ผ่านมายังไม่สามารถระบุได้แน่ชัดว่า ปัจจัยใดที่มีผลต่อการตัดสินใจบริโภคอาหารและเครื่องดื่มเพื่อสุขภาพ การศึกษาในครั้งนี้จึงมีวัตถุประสงค์หลักเพื่อศึกษาปัจจัยที่มีอิทธิพลต่อการเลือกบริโภคอาหารและเครื่องดื่มเพื่อสุขภาพในกรุงเทพมหานคร ประเทศไทย สำหรับการศึกษาในครั้งนี้ ได้พัฒนารูปแบบการเก็บข้อมูลและวิเคราะห์ผลจากการศึกษาก่อนหน้านี้ ในกรอบแนวคิดที่ใช้ชื่อว่า การยอมรับเครื่องดื่มเพื่อสุขภาพ ประกอบด้วยตัวแปรอิสระจำนวน 4 ตัว โดยเก็บข้อมูลผ่านแบบสอบถามแบบมีโครงสร้างจากกลุ่มตัวอย่างในพื้นที่กรุงเทพมหานคร จำนวน 403 ตัวอย่าง ด้วยวิธีการสุ่มตัวอย่างแบบหลายขั้นตอน และวิเคราะห์ผลผ่านรูปแบบ การสร้างโมเดลสมการโครงสร้าง โดยใช้โปรแกรมเอมอส 23.0 ผลการศึกษาบ่งชี้ว่า ทัศนคติของผู้บริโภค ข้อมูลทางโภชนาการ และความน่าเชื่อถือของแหล่งข้อมูล มีอิทธิพลต่อการเลือกบริโภคอาหารและเครื่องดื่มเพื่อสุขภาพอย่างมีนัยสำคัญทางสถิติ ในขณะที่ความกังวลต่อสุขภาพและโรคภัยไข้เจ็บ ไม่มีผลต่อการเลือกบริโภคอาหารและเครื่องดื่มเพื่อสุขภาพ นอกจากนี้ผลจากการศึกษายังสามารถช่วยให้ผู้ผลิตอาหารและเครื่องดื่มเพื่อสุขภาพ รวมถึงนักโภชนาการ นำไปต่อยอดเพื่อพัฒนาเครื่องดื่มเพื่อสุขภาพที่มีคุณภาพและตรงตามความต้องการของผู้บริโภคในประเทศไทยต่อไป

คำสำคัญ: *เครื่องดื่มเพื่อสุขภาพ ความกังวลเรื่องสุขภาพ ความเต็มใจที่จะบริโภค ข้อมูลทางโภชนาการของอาหารเพื่อสุขภาพ*

Introduction

There has been a greater health concern among people around the world in the past several years. People are aware that food is associated with their well-being. It helps creating better immune systems and strengthening the body. In this regard, functional foods, or food and beverage products fortified with special constituents, that possess advantageous physiological effects, play an outstanding role. An increasing demand of functional food can be caused by the steady rise in life expectancy, the interest in life quality improvement, and growing cost of health care (Kraus, 2015). The consumers' awareness connected with the progress in nutrition sciences gives businesses opportunities to offer a wide range of functional foods. It is widely agreed that functional food is one of the most interesting areas of innovation and research. Hence, more and more companies seek to enter into such a growing market, while existing companies keep differentiating their products (Szwacka-Mokrzycka & Kociszewski, 2019). It thus draws the attention of many researchers to find out what factors are important in consumers' purchase decision of functional foods.

Many people, however, argued that functional food is not necessary; good health is just a product of physical activities and total diet. Moreover, it is generally believed that the health benefits of functional food can only be found after a certain period of usage. These beliefs hinder consumers' acceptance of functional foods. The commercialization and development of functional foods are expensive, complex, and require a great deal of research efforts (Rezai, Teng, Shamsudin, Mohamed, & Stanton, 2017). Most prior similar research focused only on functional foods and was solely conducted in the western countries.

Since 'healthy lifestyle' concept is becoming popular in Thailand, Thai consumers are well aware of the significance of health and wellness. To stay healthy, most Thai consumers prefer healthy food and drinks to exercises. The report showed that nearly 90.00 percent of them consume functional drinks on a regular basis (The Nielsen Company (Thailand) Limited, 2019). Functional drink is a prominent product category under the functional food sector. It is generally non-alcoholic beverages fortified with functional ingredients. A functional drink is generally intended to deliver a health benefit. It contains ingredients like minerals, herbs, vitamins, amino acids, nootropics, or additional vegetables or raw fruit. The definition of each type of functional drinks will be addressed by which ingredients with an additional health value have been added to conventional drinks (Siró, Kápolna, Kápolna, & Lugasi, 2008). Functional beverages include beauty drink, anti-stress drink, smart brain drink, enhanced fruit drinks, and energy drink. Whilst the functional drink market in Thailand is growing, it is worth investigating the factors influencing consumers' willingness to use functional drinks. Given the review of relevant literature, this research proposes and empirically tests the 'Functional Drinks Acceptance' model.

Literature review

The literature review revolves around the factors influencing consumers' willingness to use functional foods and drinks. From an extensive review of the literature, the present study identified general attitudes towards functional foods, consumers' health and disease concern, products' health claim, and trustworthiness of the source of information as key predictors of consumers' willingness to use functional foods.

Attitude towards functional drinks and willingness to use functional drinks

Attitude represents what consumers like and dislike, usually consumers do things that they like to do while avoiding things that are disliked. Holding a favorable attitude toward a product is almost always an essential prerequisite for consumers to hold a favorable purchase or consumption intention. There is a hypothesis that consumers will be more accepting of functional foods if there is a material and solid consumer benefits (Temesi, Bacsó, Grunert, & Lakner, 2019). Many consumers view that functional drinks are unnatural because of the added nutrients used to meet the claim of health benefits; thus, these consumers show a strong unwillingness to accept functional drinks (Phuong & Dat, 2017).

According to a domain of consumer behavior research, consumers' acceptance of the new products is a function of their attitudes towards such products, or what benefits or values they expect from those products. Some consumers may have a more negative attitude than others. Consumers' attitudes can vary with their demographics. For instance, American people are mostly aware of the benefits of functional foods; they accept and incorporate them into their daily diet. European people, on the other hand, consume far less than American people. To elaborate, European people are skeptical towards functional foods because they think that they are impure and unnatural. Consumers' attitudes can vary from country to country as well (Landström, Hursti, & Magnusson, 2009).

An attitude may also be formed as a result of consumer's feeling about the attitude object. Feelings can be defined as an affective state or reaction such as the mood an individual is currently in or the feeling experienced during product consumption. Consumers may feel positive

(e.g., feeling happy) or negative (e.g., feeling disappointed) toward functional drinks. Intentions are subjective judgement about how consumers will behave in the future (Hsu, Yu, & Chang, 2017). There are many types of consumer intentions. Purchase intentions represent what functional drink consumers think they will buy. A special type of purchase intentions is re-purchase intention, which reflects whether they anticipate buying the same functional drinks again. Therefore, the following hypothesis is posited;

H1: Attitude towards functional drinks positively affects the willingness to use functional drinks

Influence of consumers' health and disease concern on willingness to use functional drinks

It is a simple fact that people want to live longer; therefore, they are concerned about nutrition and health. They thus pay special attention to the food and drink they consume. Previous research showed that most people want to prevent themselves from such diseases as arthritic, obesity, and high cholesterol. This can greatly influence the food they choose to take (Sloan, 2000). Siró et al. (2008) also found that people adopt biodefense system, so they will choose to consume food and drink that they believe can cure or even prevent certain diseases.

People are becoming more health conscious. That is, they are concerned about how healthy their lifestyle and diet are. Health conscious consumers do not want only lack of illness, but they also want to achieve health and wellness that their physical, mental and emotional conditions are in sync. Consumers' health concern and their functional foods purchase intention are found to be significantly correlated (Hoque, Alam, & Nahid, 2018). It was reported that people's health awareness can influence their purchase intent of food. It can make changes to the preferences of consumers that in turn affects their purchase decision. They are more willing to pay more for functional foods and drinks that can help improve their health and well-being. Therefore, consumers' health and disease concern is considered to be important factors having major impact on people's consumption of functional drinks. So, these hypotheses are proposed;

H2.1: Health concern positively affects the willingness to use functional drinks

H2.2: Disease concern positively affects the willingness to use functional drinks

Influence of product health claimed on willingness to use functional drinks

Plasek and Temesi (2019) suggested that consumers are expected to consider functional foods only if the products are perceived to be healthier than conventional ones. Unlike other characteristics such as taste or texture, benefits of functional foods cannot be perceived by consumers directly. Consumers need to rely on information regarding health benefits of a product to distinguish functional and conventional products (Temesi et al., 2019). Bower, Saadat, and Whitten (2003) discovered in the cases of their study that perceived benefits and thereby willingness to use a product are influenced by product information. Information such as product name, price, and nutritional benefit was found to significantly affect intention to buy functional products. Nevertheless, product information is not the only crucial component for customers' acceptance of functional foods. Lyly, Roininen, Honkapää, and Poutanen (2007) found the relevance of product information to consumers is also important. It can be determined by individual attitudes and personal motivations. Consistently, Rupprecht, Fujiyoshi, McGreevy, and Tayasu (2020)

proposed that influence of product information on likelihood to purchase a product of a consumer is also determined by the relevance of information. A recent study by Rezai et al. (2017) also pointed out the impact of personal motivation to willingness to use the products.

Urala and Lahteenmaki (2004) argued that the perceived reward and confidence in functional foods seemed to be the most influent criteria determining consumers' willingness to use such products. In other words, consumers' willingness to use functional foods over conventional foods is likely to be high if they believe that the benefits from consuming such product will meet the claimed product information.

Tuorila and Cardello (2002) revealed that information that the claimed benefits of food and drink products can increase consumption of the products. However, level of efficiency may vary between different claimed benefits. Their study found the benefits related to exercise endurance, energy, mental alertness and memory enhancement that can motivate repeatedly consumption of a fruit juice product, whilst mood improvement and well-being emotion were mentioned to be the less attractive ones. Bhaskaran and Hardley (2002) also revealed that a large majority of their focus-group-study participants do believe in benefits of the products claimed by manufactures. By taking everything together, it is thus posited that;

H3.1: Products' health claim of enhancing brain functionality positively affects the willingness to use functional drinks

H3.2: Products' health claim of enhancing physical health positively affects the willingness to use functional drinks

H3.3: Products' health claim of skin brightening positively affects the willingness to use functional drinks

Influence of information sources on willingness to use functional drinks

It is less likely that people consume functional drinks if they have no knowledge about them. Such a knowledge gap appears to be a barrier to the consumption of functional foods and drinks. Growing interest in nutrition and diets may result in more interest in functional foods and drinks. Nevertheless, people may be reluctant to purchase functional foods and drinks even they are aware of their health properties. This is due to the fact that they are not familiar with them (Rupprecht et al., 2020). According to Krystallisa, Maglarasb, and Mamalisc (2008), the main source of information in which most consumers are exposed to is companies' advertising. Furthermore, the trustworthiness of information sources is found to influence the consumers 'willingness to buy functional foods and drinks'. In particular, medical sources were named by consumers as their most trustworthy source of information. Therefore, people are more willing to buy functional drinks if they perceive the source of information is trustworthy. It is postulated that;

H4: Perceived credibility of information positively affects the willingness to use functional drinks.

By taking all above mentioned factors into account, the 'Functional Drinks' Acceptance' Model is proposed to empirically examine what factors affect Thai consumers' decision to purchase functional drinks.

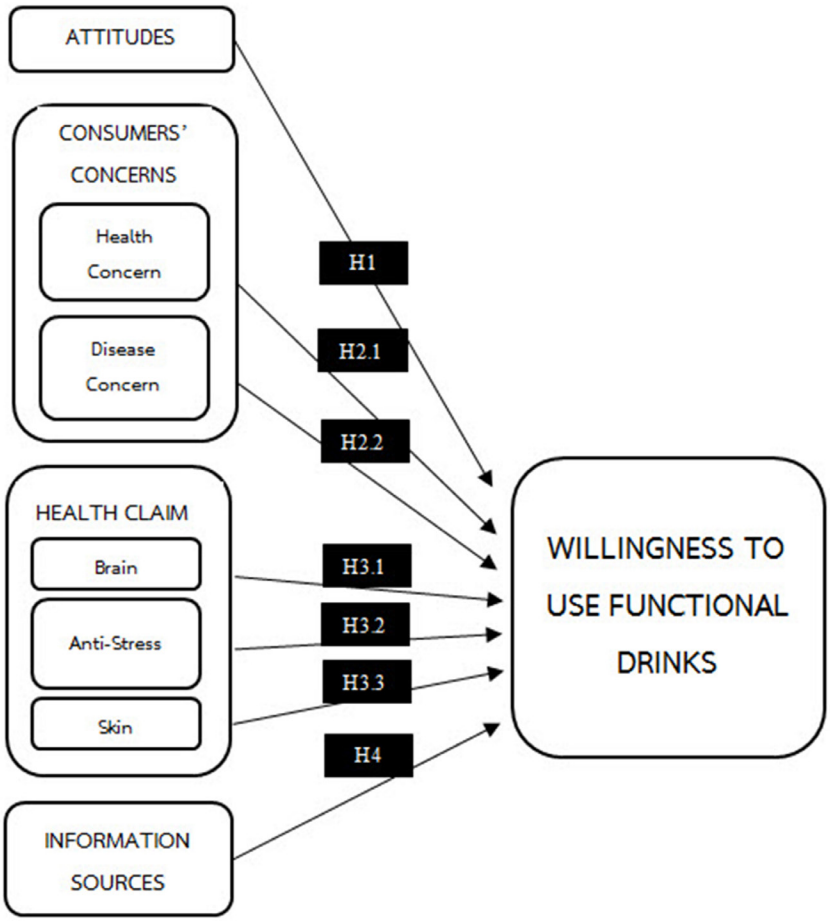


Figure 1 The functional drinks acceptance model

Methods

This study employed multi-stage sampling. Firstly, the purposive sampling was used to select participants who are Thai aged 18 years old and above, and have prior knowledge about functional drinks. Secondly, it utilized convenience sampling in the form of mall intercept whereby participants were intercepted in major shopping malls and public spaces in Bangkok. The sample size of this study was 403 which is considered to be acceptable. Kline (2011) recommended 5 to 10 cases per one parameter or at least 200 cases; whilst Hair, Babin, Anderson, and Black (2018) considered a minimum number of 100 cases or 10 to 20 cases per a parameter to be acceptable for structural equation modelling. This number also deems appropriate when considering the ones used in other similar research (e.g., Bech-Larsen & Grunert, 2003, O'Connor & White, 2010).

Survey instruments

The questionnaire consisted of two sections. The first section asked about the personal information, whilst the second part asked about the key constructs. Information regarding key constructs and their corresponding scales was obtained by searching the relevant literature; therefore, all constructs were measured using existing scales from literature with some adjustments. Three constructs employed in this study were measured as follows:

Table 1 Sources of constructs

Variable	Sources
Attitude towards functional drinks	
4 items of attitude measurement	O'Connor & White (2010) and Wrick (1995)
Consumers' concerns	
2 items of health concern 3 items of disease concern	Benkouider (2005), Poulsen (1999), and Sloan (2000)
Product's health claim	
3 items of Smart Brain beverages 4 items of Anti Stress beverages 3 items of Beauty beverages	Ares, Gimenez, & Gambaro (2008) and Urala & Lähteenmäki (2004)
Information sources	
3 items of information sources	Urala (2005)
Willingness to use functional drinks	
3 items of willingness to use	Ares, Gimenez, & Gambaro (2008)

Results

Initial analysis

Items were primarily checked for kurtosis and skewness, and also the presence of outliers and normality. Histograms and box plots are appropriate in order to get a holistic picture of each variable across a range of scores (1-5) which are visually examined. Furthermore, the skewness and kurtosis of variables were investigated. Skewness is a characteristic of symmetry distribution of about the mean; meanwhile, kurtosis is the level of the highest point in the histogram (Malhotra, Schuler, & Boender, 2002).

Most of the respondents are female, accounting approximately to 62.80%. Fifty-seven percent of the samples are between 23 to 30 years old, 21.50% is aged between 15 to 22 years old, and the rest of 2.50% is aged between 31 to 38 years old. For educational background, over 70.00% completed a bachelor's degree, while 12.00% has a higher educational level than the bachelor's degree, followed by 6.80% and 10.80% for diploma/certificate level and high school level respectively. Nearly 71.00% work in private company, 21.50% are students, and 4.50% have their own business. Eighty-five and eighty hundredths percent of the respondents are single. Sixty-one and twenty hundredths percent of the samples have monthly gross income between THB 15,000 to THB 30,000, while 22.80% have monthly gross income less than THB 15,000 and the rest of 12.20% have monthly gross income between THB 30,001 to THB 45,000. Approximately 93.00% of the respondents are non-smokers and 27.80% of the samples exercise 1 to 3 times a month, 27.50% exercise once a week, and 17.00% exercise 2 to 3 times a week. Forty-six percent of the respondent chose advertisement as their source of information that would convince them the most to buy functional beverages, followed by 25.00% for friends and 10.00% for interview with scientists. Nearly 30.00% of the samples do not consume dietary supplement at all, while 21.20% consume every day and the rest of 18.50% consume 2 to 3 times per week. Thirty-one percent of the respondents drink functional beverages 2 to 3 times per week, followed by 21.50% for not drinking

functional beverages at all; last but not least, 20.00% drink functional beverages once a week.

The measurement model

The measurement of the proposed model was assessed based on reliability, content validity, convergent validity, and discriminant validity of latent constructs. Both Cronbach's α and composite reliability were employed to assess reliability of the constructs in which their threshold levels are 0.70 (Hair, Black, Babin, & Anderson, 2010). This study ensures the content validity by taking all measures directly from previous research which has been tested and used in some previous studies. Thus, this questionnaire was constructed with an acceptable content validity. Convergent validity was assessed by using average variance extracted (AVE), whilst discriminant validity was assessed by using the Fornell–Larker criterion. According to Fornell and Larcker (1981), the levels of square root of the AVE for each construct should be greater than the correlation involving the constructs. The acceptable levels for AVE is 0.50 (Hair et al., 2010). The values for Cronbach's α, composite reliability, and AVE shown in table 2 are greater than the threshold levels indicated before; therefore, reliability and convergent validity of the model are established. Discriminant validity is also confirmed because all the values of square root of the AVEs for each construct are greater than the correlation between constructs (see Table 3).

Table 2 Construct assessment

Constructs	Loading	Means (SD)	α	CR.	AVE.
Attitudes			0.712	0.728	0.505
I think it is good to enrich beverages with healthy ingredients	0.770	4.62(1.382)			
Functional beverages make it easier for me to follow a healthy lifestyle	0.710	4.53(1.371)			
I don't need to take dietary supplements if I drink functional beverages	0.620	4.38(1.264)			
I think that drinking functional beverages would be enjoyable	0.735	4.68(1.281)			
Health Concern			0.722	0.742	0.506
I am afraid of getting stressed	0.697	4.26(1.302)			
I am afraid of getting obesed	0.725	4.28(1.374)			
Disease Concern			0.716	0.772	0.501
How would you estimate your risk of getting diabetes	0.725	4.52(1.261)			
How would you estimate your risk of getting cancer	0.685	4.24(1.335)			
How would you estimate your risk of getting cardiovascular disease	0.702	4.32(1.357)			
Product's Claim:Brain			0.844	0.856	0.667
I think it makes sense to enrich Smart Brain beverages with soy peptide	0.763	4.37(1.272)			
I think it makes sense to enrich Smart Brain beverages with Omega 3	0.928	4.45(1.267)			
I think it makes sense to enrich Smart Brain beverages with DHA	0.747	4.41(1.281)			
Product's Claim:Anti-Stress			0.774	0.778	0.502
I think it makes sense to enrich Anti Stress and relax beverages with Amino acid	0.682	4.43(1.172)			
I think it makes sense to enrich Anti Stress and relax beverages with L-Carnitine	0.646	4.41(1.195)			
I think it makes sense to enrich Anti Stress and relax beverages with fiber	0.768	4.4(1.162)			
I think it makes sense to enrich Anti Stress and relax beverages with magnesium	0.729	4.47(1.264)			

Table 2 Construct assessment (continued)

Constructs	Loading	Means (SD)	α	CR.	AVE.
Product's Claim:Beauty			0.744	0.803	0.577
I think it makes sense to enrich Beauty and Bright beverages with collagen	0.750	4.53(1.272)			
I think it makes sense to enrich Beauty and Bright beverages with Co-enzyme Q10	0.837	4.48(1.243)			
I think it makes sense to enrich Beauty and Bright beverages with L-Glutathione	0.684	4.57(1.277)			
Information Sources			0.740	0.757	0.519
I have talked about the health benefits of functional beverages with someone who is drinking them	0.761	4.44(1.531)			
If my doctor think I should drink functional beverages, I will want to try	0.722	3.99(1.639)			
I look at the nutrition panel on a food & beverage pack to help decide whether to buy a product	0.597	4.64(1.446)			
Willingness to Use			0.721	0.733	0.507
I intend to drink functional beverages in the next few months	0.677	4.63(1.322)			
I feel confident to buy functional beverages	0.734	4.52(1.317)			
I can afford to try new beverage products such as functional beverages	0.723	4.35(1.408)			

Table 3 Square roots of AVEs and correlation matrix (discriminant validity)

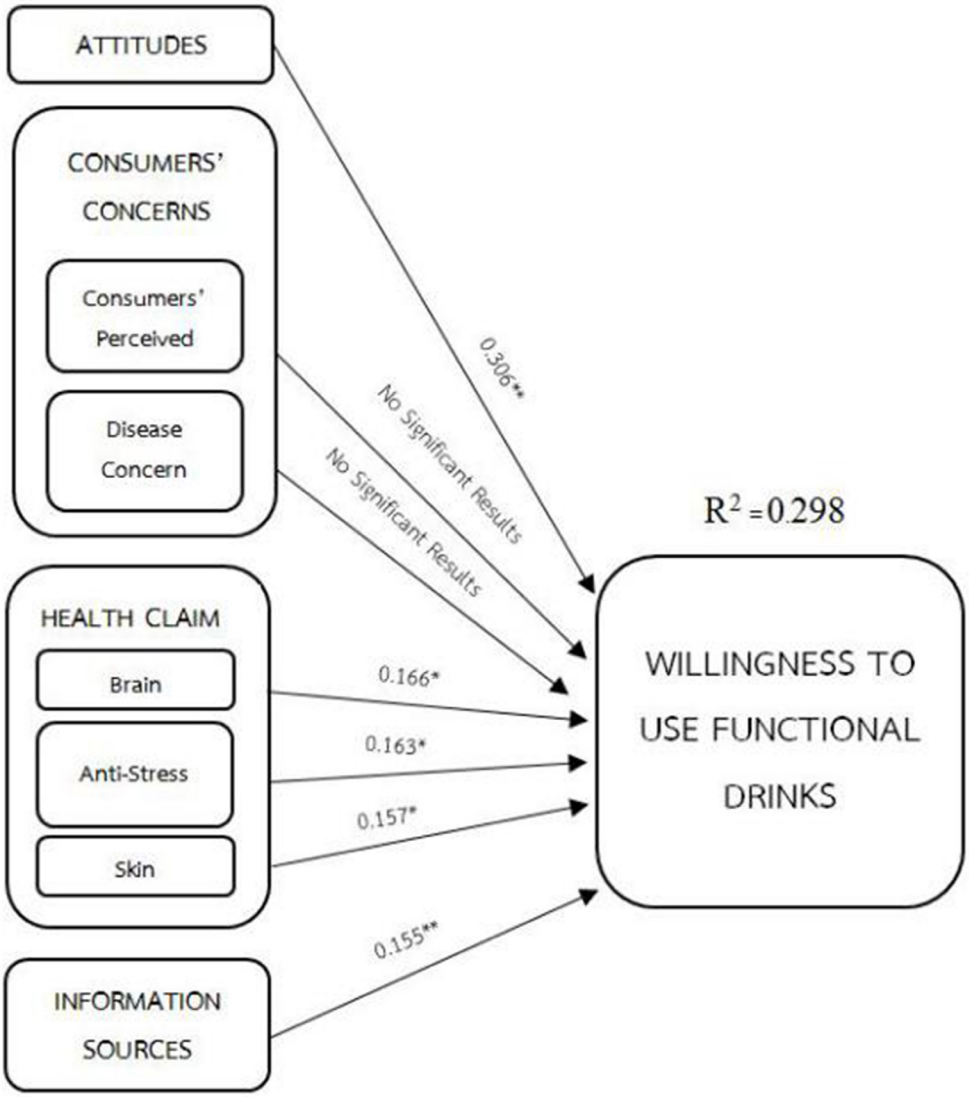
Correlation Matrix							
ATT	PR	DC	PCB	PCAS	PCBT	IF	WILL
0.710							
0.090	**0.711**						
0.036	0.352	**0.707**					
0.170	0.032	0.163	**0.816**				
0.199	0.050	0.132	0.126	**0.709**			
0.203	0.010	0.157	0.426	0.347	**0.759**		
0.066	0.416	0.165	0.065	0.111	0.066	**0.720**	
0.138	0.083	0.313	0.132	0.163	0.138	0.079	**0.712**

Constructs	Correlation Matrix							
	ATT	PR	DC	PCB	PCAS	PCBT	IF	WILL
Attitudes	**0.710**							
Health Concern	0.090	**0.711**						
Disease Concern	0.036	0.352	**0.707**					
Product's Claim:Brain	0.170	0.032	0.163	**0.816**				
Product's Claim:Anti-Stress	0.199	0.050	0.132	0.126	**0.709**			
Product's Claim:Beauty	0.203	0.010	0.157	0.426	0.347	**0.759**		
Information Sources	0.066	0.416	0.165	0.065	0.111	0.066	**0.720**	
Willingness to Use	0.138	0.083	0.313	0.132	0.163	0.138	0.079	**0.712**

Notes: Square roots of average variance extracted (AVEs) shown on diagonal while off-diagonals are inter-construct correlations.

Structural model

The structural equation model was conducted to test the hypotheses in the model. The fit indices of the structural model were acceptable ($\chi 2/df$ = 2.418, CFI = 0.984, TLI = 0.989, RMSEA = 0.052, and SRMR = 0.059) (Hair et al., 2010). According to the path coefficients found from the structural equation model, all constructs were found to significantly influence the willingness to use functional drinks except perceived risk (see Figure 2). A comparison of standardized coefficient for each significant factors shows that attitude had the strongest positive effect (b = 0.306) on respondents' willingness to use functional drink, followed by the impact of respondents' perceived health claim in terms of brain (b = 0.166), anti-stress (b = 0.163), and skin (b = 0.157), whilst the trustworthiness appeared to have the least effect (b = 0.155). Significant constructs as a whole explained 29.80% of variation in the willingness to use functional drinks (R^2 = 0.298).



Note *The results are significant at the 0.05 level.

**The results are highly significant at the 0.001 level.

Figure 2 Structural model results

Conclusion and discussion

It was found that consumers' attitude towards functional drinks, products' health claim, and consumers' perceived credibility of information source have a significant influence on the willingness to use functional drinks, whilst consumers' health and disease concern showed insignificant results. From Thai consumers' point of view, attitude is found to be the most crucial factor that influences consumer' willingness to use functional drinks. This finding was consistent with many previous studies of O'Connor and White (2010), Bech-Larsen and Grunert (2003), and Rezai et al. (2017). The reward feeling explained the attitudes towards consumer's own and personal use of functional drinks. Rewarding feeling can be seen as one aspect of self-efficacy and personal motivation for willingness to use functional drinks (Urala, 2005). Interestingly, consumers' health and disease concern was found to be insignificant factors. These findings were inconsistent with the previous studies of Benkouider (2005), Ares, Gimenez, and Gambaro (2008), Urala and Lahteenmaki (2004), and Rezai et al. (2017). The different findings can be explained by the fact that most respondents are in the young generation who would not take their health as their major concern in life yet.

In addition, the study showed that consumers' perceived credibility of information significantly affects the willingness to use functional drinks. The results were consistent with former studies of Rupprecht et al. (2020). However, the ranking of reliable sources of information was greatly different. From Thai consumers' point of view, the most reliable source of information was advertisement and the least one was seminar/conference. However, the study from Urala (2005) reported that scientists and documentaries were chosen as the most reliable sources of information, whilst advertisements and product manufactures' claims were the least trustworthy. This difference could stem from a large spending on advertising expenditure of functional drink manufacturers in Thailand.

Implication

This study gives a number of research and business implications. In terms of research implications, it contributes to the functional food acceptance research by providing a new knowledge from the research conducted in an Eastern context. That is, the results of the similar research from the Western countries may not be fully applied in the Asian countries. In terms of implications for business, the findings provide marketers detailed information on how to craft strategies for functional foods and drinks as a growing market segment. In particular, they can understand customers' underlying motivation to their consumption of functional drinks. This information is especially useful in their market communication strategies. To elaborate, consumers' attitude towards functional drinks was found to have the greatest influence on consumers' willingness to use functional drinks; therefore, marketers should use their communication strategies to educate people about the health benefits of functional drinks. Furthermore, doctors and health professionals can be the most appropriate spokespersons. This research can also benefit not only food and beverage companies but also nutritionists and medical care staffs to understand how to motivate people to use functional drinks to improve their health conditions and prevent or mitigate risks of illness.

Future research

Future researchers may consider improving explanatory power of the model. They may add or replace some indicators with the new ones; for instance, group norm, risk aversion, perceived integrity, and/or trust or belief. Future research should also be undertaken in other sub-categories of functional drinks for a complete understanding

of functional food and drink market. Furthermore, it is highly recommended to study other groups of people who might be interested in consuming functional foods and drinks. People with different demographic profile will have different attitudes and opinion towards functional foods and drinks. Lastly, it can give a holistic view of this research sphere if future researchers consider adding after-purchase factors such as repurchase intention or product loyalty.

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