

PERCEPTION OF THE MILLENNIAL GENERATION TOWARD FUNCTIONAL FOOD IN INDONESIA

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ABSTRACT

Currently, the functional food trend is growing and developing in Indonesia. Consumers' perceptions are one important factor to picture consumer knowledge and attitude in the future. The aim of this study is to determine the perception of the millennial generation toward functional food in Indonesia. An online cross-sectional survey was carried out among 1982 respondents (aged between 18–38 years) and distributed through the social media platforms during two weeks in April 2018. The questionnaire measured demographic characteristics, awareness, knowledge, the priority to purchase, and future buying motivation for functional food. The result showed that 55% of the respondents claimed that they were aware of functional food. However, the knowledge of respondents regarding health component was still insufficient. The most important reasons for purchasing functional food were health benefits, availability, affordability, tasty, easy to consume, and clear label information. Most of the millennial generation was interested in purchasing functional food in the future. In conclusion, this study provided information regarding the millennial generation's perception toward functional food in Indonesia and how it might contribute to increase the development of functional food in Indonesia.

Keywords: *Cross-sectional survey; functional food; millennial generation's; perception.*

ABSTRAK

Saat ini, tren makanan fungsional tumbuh dan berkembang di Indonesia. Persepsi konsumen adalah salah satu faktor penting untuk menggambarkan pengetahuan dan sikap konsumen di masa depan. Tujuan dari penelitian ini adalah untuk mengetahui persepsi generasi milenial terhadap pangan fungsional di Indonesia. Survei *cross sectional* online dilakukan dengan jumlah 1982 orang responden (usia 18-38 tahun) dan didistribusikan melalui media sosial selama dua minggu pada bulan April 2018. Pada kuesioner ini mengukur karakteristik demografi, kesadaran dan pengetahuan, prioritas untuk membeli, dan motivasi membeli pangan fungsional di masa yang akan datang. Sebanyak 55% responden menyatakan bahwa mereka telah mengetahui pangan fungsional (memiliki kesadaran terhadap pangan fungsional). Pengetahuan responden tentang komponen kesehatan pada pangan fungsional masih kurang. Alasan paling penting untuk membeli pangan fungsional menurut generasi milenial adalah manfaat kesehatan, ketersediaan, harga yang terjangkau, enak, mudah dikonsumsi, dan informasi pada label. Sebagian besar generasi milenial tertarik untuk membeli pangan fungsional di masa yang akan datang. Studi ini memberikan informasi tentang bagaimana persepsi generasi milenial terhadap pangan fungsional di Indonesia dan diharapkan dapat berkontribusi untuk meningkatkan pengembangan pangan fungsional di Indonesia.

Kata kunci: *Cross sectional survey; pangan fungsional; generasi milenial; persepsi.*

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INTRODUCTION

Food is one of the main human needs used to eliminate hunger and obtain nutritional value for the body. At present, changes in the lifestyle of people and the desire for a healthier life have transformed the philosophy of food, where food is not just limited to eliminating hunger and obtaining nutritional value, but has a function to prevent diseases and improve human health. This food is commonly referred to as functional food. According to Martirosyan & Singh (2015), functional food is food either naturally or certain processes that have bioactive components in quantities clear and safe for consumption, and have been scientifically proven to be beneficial for health in terms of prevention of diseases. Recently, the Indonesian Society for Functional Food and Nutraceutical conducted a focus group discussion with other stake holders, such as the government (Indonesian Institute of Science-LIPI, National Standardization Agency of Indonesia-BSN, and Indonesia National Agency of Drug and Food Control-BPOM), industries, and researchers of functional food in Yogyakarta, Indonesia; the forum defined the term functional food in Indonesia. Functional food is food (fresh/processed) that contains components, useful for improving certain physiological functions and/or reduce the risk of diseases, proven by scientific studies; it must have a beneficial function as normally consumed as part of the daily diet (P3FNI, 2019).

The current health costs incurred by Indonesia are increasing; therefore, one of the solutions is using food for medicinal effect. Functional food trends have begun to grow and develop along the increasing research, publications and consumer awareness about the relationship between food, nutrition and health. Data from the WHO (2017) shows that in 2015, the health costs incurred by Indonesia were USD 1737.21 per capita; this cost was greater than that of the previous year 2014 amounting to USD 1205.20 per capita.

At present, Indonesia is beginning to try to develop functional foods known to have functional effects on body health by increasing various research, publications, and consumer awareness (Rahardjo,

2018). The increasing development of functional food in Indonesia will indirectly impact the health costs incurred. The progress of the functional food industry can be attributed to numerous factors, such as innovations in food, science and technology, increasing aging population, the regulatory environment to allow health claims on foods, and increased awareness of consumers regarding food products that claim health function (Arvanitoyannis et al., 2005).

Japan is well-known as a pioneer and successful country in developing and marketing various functional food products. This is due to the situation in which Japanese consumers began to realize the relationship between food and health and the importance of maintaining health, which motivated them to live healthier by consuming certain foods that had health functions. Kotilainen et al. (2006) explained that the increasing demand for functional food is in line with the increasing attention and awareness among consumers to consume healthy products that can improve their quality of life. In Indonesia, even though the development of functional food has been getting much attention, knowledge about consumers' perceptions in choosing and receiving functional food products is still relatively rare. Granqvist & Ritvala (2016) state that some consumers do not know how to classify products appropriately; hence, they do not understand the function of a product more specifically. This is one of the problems that can cause delays in the development and marketing of functional food in Indonesia.

Some studies indicate that the millennial generation comprising individuals born in the early 1980's to 2000 can be one of the important target consumers because of the large population in the near future (Meier & Crocker, 2010). Badan Pusat Statistik (2016) states that one fourth of Indonesia's population belongs to the millennial generation. Recently, the population of Indonesia was around 257.89 million, while Indonesia's millennial generation was around 62.06 million (24.07%) of the total population in Indonesia (Susenas, 2016). In addition to the sizeable population, the millennial generation also represents consumers in the future who can greatly influence the

development of the food industry (Kljusurić & Čačić, 2014).

The young generation is known as the millennial generation. This generation tends to have characteristics, such as motivation, hope and high curiosity about anything. Based on their characteristics, it is interesting to understand how their behavior in choosing products can assist in developing innovation and marketing strategies for functional food products. To date, there has been no investigation into the perception of information related to functional food consumers in Indonesia. The millineals are a consumer segment, poised to benefit from the incorporation of functional foods in their diets due to health concerns in recent years.

MATERIALS AND METHOD

Sample and procedure

The cross-sectional survey was conducted among 1982 respondents 18 to 38 years old from almost all regions in Indonesia (Meier & Crocker, 2010). The survey was conducted by using Google forms, propagated in all regions in Indonesia during two weeks in April 2018. A link to the questionnaire list was distributed through the social media channels, such as Line, Instagram, WhatsApp, Facebook, and Twitter in the current study. The social media is an effective way to attract the millennial generation. They easily completed the survey and gave feedback voluntarily.

Questionnaire

The questionnaire started with a brief introduction. The respondents were informed about the purpose of the survey. At the beginning of the questionnaire, to make sure that the term “functional food” is well understood, the definition of functional food was given to the respondent. The questionnaire contained the definition so that each of the respondents was able to get freely acquainted with it.

Awareness of functional food was asked by inquiring if the respondents had ever heard or known about functional food before receiving the

questionnaire (“Yes” or “No”). The knowledge about functional food was asked by inquiring if respondents know about food components that have health effects like probiotic, catechins as antioxidants, peptide, dietary fiber, resistant starch, and isoflavone (“Yes” or “No”). Their priorities to purchase functional foods and future buying motivation of functional food were also inquired. The respondents were also asked about gender, age, income, and education.

Statistical analysis

Quantitative data was analyzed through the calculation of summary statistics including frequencies and percentages. Data were analyzed using descriptive statistics and cross tabs using the program *SPSS v.22*. Chi-square which was a non-parametric test was used for testing the relationships between categorical variables at 95% significance level.

RESULTS AND DISCUSSION

Characteristics of respondents

The respondents ($n = 1982$) consisted of 304 males (15.3%) and 1678 females (84.7%). The characteristics of respondents are shown in Table 1. Majority of the respondents were females, between 20 to 23 years old. In terms of income distribution, this study found that 52.5% of the respondents earned no income. Regarding education level, most of the respondents (51.5%) had graduated from senior high school and 45.9% of the respondents had completed their bachelor/diploma levels.

Functional Food Awareness

Awareness is the most critical factor that can affect functional food consumption (Vella et al., 2014). After reading the definition, most of the respondents (55.5%) stated that they had heard about functional food before the survey (aware respondents) and 44.5% stated that they had not heard about functional foods (unaware respondents). It can be seen that most of the millennial generation knows about functional food. Millennial generation tends to be more aware of

functional food; this study is confirmed by the research conducted by Kljusurić & Čačić (2014).

Table 1. Characteristics of Respondents

Characteristics	Category	N	%
Gender	Male	304	15.3
	Female	1678	84.7
	Total	1982	100
Age	18	99	5.0
	19	135	6.8
	20	208	10.5
	21	372	18.8
	22	321	16.2
	23	231	11.7
	24	147	7.4
	25	139	7.0
	26	90	4.5
	27	88	4.4
	28	42	2.1
	29	29	1.5
	30	24	1.2
	31	16	0.8
	32	14	0.7
	33	9	0.5
	34	6	0.3
	35	3	0.2
	36	5	0.3
37	2	0.1	
38	2	0.1	
	Total	1982	100
Income	0	1041	52.5
	< 1.500.000	236	11.9
	1.500.000 - 2.500.000	247	12.5
	2.500.001 - 3.500.000	148	7.5
	> 3.500.000	310	15.6
	Total	1982	100
Education	Junior high school	6	0.3
	Senior high school	1020	51.5
	Bachelor/Diploma	909	45.9
	Master/Doctor	47	2.4
	Total	1982	100

Another study conducted in Spain showed that youth aged between 18 to 34 years (millennial generation) knew more about functional food compared to non-millennial generation aged between 35–76 years (Carrillo et al., 2013). This data also corresponded with the survey of The Centre for Strategic and International Studies (CSIS) (2017); they mentioned that the millennial

generation aged between 17–29 years realized that health is the key factor to be happy. Further, to be happy they have to maintain a healthy lifestyle and intake healthy food.

The share of aware and unaware respondents did not differ between gender, age, and education (Table 2). Meanwhile, the income level had a

significant effect on aware and unaware respondents (Chi-square $p < 0.05$). It might have occurred as based on the opinion of Kotilainen et al. (2006). Functional food products are relatively expensive compared to ordinary food products,

especially in developing countries, as the market sector of these products is still relatively smaller.

Table 2. Functional Food and Demographic Characteristics Awareness

Characteristic		Awareness about Functional Food*				Sig.
		Aware Respondent		Unaware Respondent		
		n	%	n	%	
Gender	Man	159	14.44	145	16.48	0.240**
	Woman	942	85.56	736	83.52	
Income (Rp)	0	613	55.68	428	48.58	0.033*
	> 1.500.000	126	11.44	110	12.49	
	1.500.000-2.500.000	128	11.63	119	13.51	
	2.500.001-3.500.000	73	6.63	75	8.51	
	> 3.500.000	161	14.62	149	16.91	
Education Level	Junior High School	2	0.18	4	0.45	0.423♦
	Senior High School	576	52.31	444	50.40	
	Bachelor/Diploma	494	44.87	415	47.11	
	Master/Doctor	29	2.64	18	2.04	

*Eligible respondent for Awareness Respondent (n=1101) and Unaware Respondent (n=881).

**Chi-square 1.38 df: 1; *Chi-square 10.49 df: 4; ♦Chi-square 2.80 df: 3

Additionally, there are no specific regulations governing and supervising functional food labeled products in Indonesia, based on Perka BPOM No. 13 (2016) about Claims on Labels and Processed Food Ads. Functional food has been defined in Perka BPOM RI No. HK.03.1.23.11.11.09909. In 2011, it was redefined and was better known as food with claims. The requirement to fulfill claimed food is also still relatively difficult and requires considerable costs, especially research costs in terms of proving the effectiveness of the expected function in food products. Therefore, food products that have health effects and functions to prevent certain diseases are still rare and relatively expensive in the market.

Food Components on Functional Foods Knowledge

After awareness, it is also necessary to know how respondents understand the components of food products that have health effects as functional foods. The second factor that can influence functional food consumption, besides awareness, is knowledge (Vela et al., 2014). Respondents'

knowledge regarding the components of food that have health effects are shown in Figure 1.

The knowledge about food components was insufficient; most of the respondents did not know that the components of food have health effects or could reduce the risk of diseases in the body. Six food components were presented in the questionnaire. However, most of the respondents claimed that they only knew about probiotics and dietary fiber for digestive health compared to other components, like catechins, peptides, resistant starch, and isoflavones (Figure 1). Respondents tended to know more about the components of probiotics and dietary fiber because in the markets, food containing probiotic and food fiber were available around them.

Priority Attribute to Purchase Functional Foods

The respondents were free to choose more than one of their priorities in purchasing functional food. The priority in purchasing functional food based on the preference of respondents is shown in Figure 2. The availability and displaying of products can

potentially increase priority to purchase the product (Soon and Wallace, 2018).

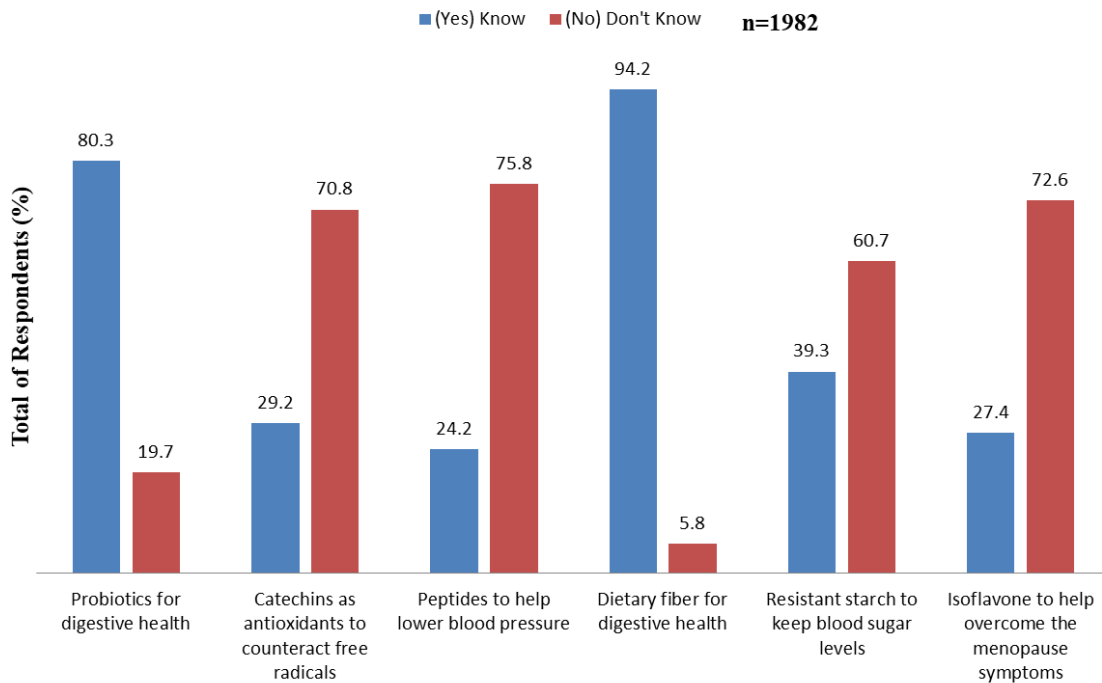


Figure 1. Knowledge about Food Component that Have Health Effect

The respondents expressed the important factors in terms of motivating to buy functional food in the future. The respondents were free to choose more than one of the priority factors to express their opinion. This information is very important to understand what consumers need in an effort to improve functional food development. Based on Figure 2, the most chosen attributes as the priority of respondents from the total respondents (1982) in purchasing functional foods are health benefits, availability, affordability, tasty, easy to consume and label information. Health benefits were the most important factor for respondents (1751

respondents comprising 88.3% of the total respondents), followed by 1422 (71.7%) respondents who considered the availability of products as important, then 1383 (69.7%) respondents rated affordable prices, and 1376 (69.4%) respondents chose good taste in the decision to buy functional food. Nutrition and health information has the potential to influence acceptance of functional food products by communicating the health benefits of such products. Several other factors, also a priority in purchasing functional food, are shown in Figure 2.

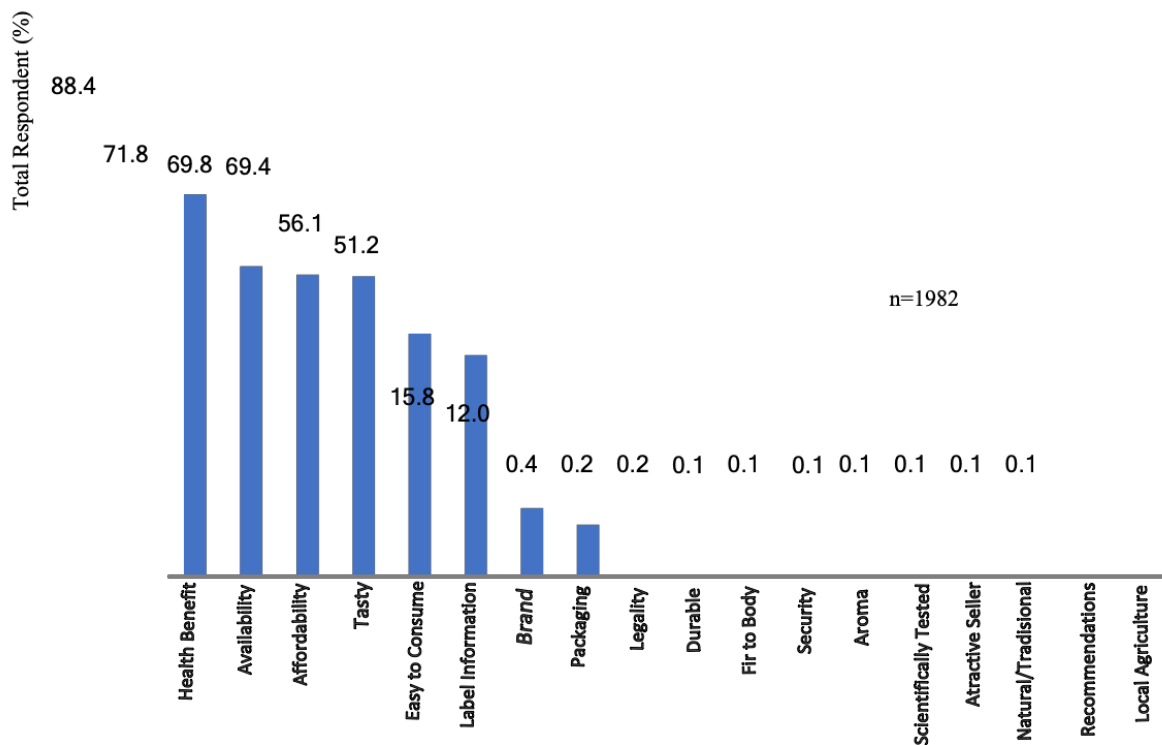


Figure 2. Priority to Purchase of Functional Food

These studies generate information about potential consumer wants and needs. Thus, strategic plans to target consumers effectively can be formulated for functional food development. Functional food has huge potential to be developed, but it is important to understand the target market that would bring together what consumers want in terms of product development by producers. This is in line with the research of Van der Zanden et al. (2015); the functional food market still has not reached the target in marketing because it still fails to meet consumer expectations. Most functional food industries still cannot find effective strategies to meet what consumers expect. This corresponds to what Del Giudice & Pascucci (2010) stated that in the marketing strategy the functional food market segment is still difficult to identify specifically. Functional food products still need to be promoted and clear information needs to be given to consumers to make them more recognizable among consumers.

Future Buying Motivation

The motivation of respondents to buy functional food in the future is shown by looking at the decision of respondents when buying functional

food related to disease symptoms. Respondents were asked about their future buying motivation related to affordability and suffering symptoms of a disease; this information has been summarized in Table 3. Food choices stated in different sources, such as direct messages through articles, advertisements, images and editorials can influence future buying motivation (Hamadeh and Maruis, 2008).

Most of the respondents stated that they would be willing to buy functional foods if they had more money or if they had symptoms of a disease in the future. Price is one of the factors that influence respondents' consumption in choosing and consuming functional food. Expensive prices of functional food products can be an obstacle for respondents to not consume them. From the total respondents (n = 1982), 97.7% or 1937 wanted to consume functional food if they had more money, while only 2.3% or 45 did not want to eat functional food even though they had more money. This illustrates that most of the millennial generation is interested in consuming functional food if they had more money in the future. There is a large pretension of millennial generation respondents to consume functional food, if they

had more money in the future. The respondents want to pay higher price to get the health benefits.

Table 3. Future Buying Motivations

Statements	Category	n	%
<i>If respondents have more money, would they like to buy functional foods</i>	Yes	1937	97.7
	No	45	2.3
<i>If respondents have symptoms a disease, would they like to buy functional food</i>	Yes	1827	92.2
	No	155	7.8

One of the most important factors related to consuming functional food are health factors. The awareness of healthy living in the millennial generation is quite high. Respondents' decision regarding whether they want to consume functional food as an alternative prevention, when they have symptoms of a disease are shown in Table 3. Among the total respondents (n = 1982), 92.2% or 1827 stated that they wanted to consume functional food as an option of risk reduction of a disease; only 7.8% or 155 decided to not consume functional food for risk reduction of disease. According to Jain et al. (2014), in India, awareness about health and changes in lifestyle affect consumers to choose functional food products in India. This also illustrates that most of the millennial generation in Indonesia is interested in consuming functional food as an alternative measure for risk reduction if they had symptoms of a disease; awareness about health is one of the important things and can influence respondents in their decision to choose functional food.

To increase the literacy of the millennial generation about functional food, regulating food labels may contribute positively and motivate them to not just decide to buy based on the price, but also based on health properties. Furthermore, functional food must have quality and effects in accordance with the price and added value they can provide to consumers (Lyly et al., 2007).

Study's limitations and strengths

The current study, which explored the information sources for functional foods, and the awareness and perceptions of health claims of functional foods on the millennial generation among Indonesia, is not without limitations. All data collected was self-

reported and therefore there may be discrepancies between the reported information and participants' actual understanding and perceptions related to functional foods. There are still contrary opinions regarding the term functional food, since there is no specific regulation on functional food in Indonesia. These could also affect the perception of the respondents. Furthermore, another limiting factor is that the participants were predominantly students who earned no income and all their income was subsidized by their parents.

Despite these limitations, the current study has strength in that it utilized a researcher-administered questionnaire and examined the completeness of the data. Since there is no study related to the perception on functional food in Indonesia, this is the first study on the perception on functional food in a specific age called the millennial generation. In addition, the study questionnaire consisted of a variety of open and close-ended questions, which enabled the collection of a wide breadth of data.

CONCLUSION

Almost 55% or 1101 millennial generation respondents in Indonesia claimed that they had heard about functional food or had been aware of functional food. Respondents' knowledge regarding food components that have health effects is still insufficient. This knowledge is important to be able to improve functional food marketing. Consumer literacy related to knowledge of food components has a positive impact on increasing market and products development. Health benefits, availability, affordability, tasty, easy to consume and label information need to be considered in

functional food products. Consumer expectations of the millennial generation can enhance the development of the functional food market.

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