

## The Customers' Consumption Trends on Healthy Ice Cream

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### ABSTRACT

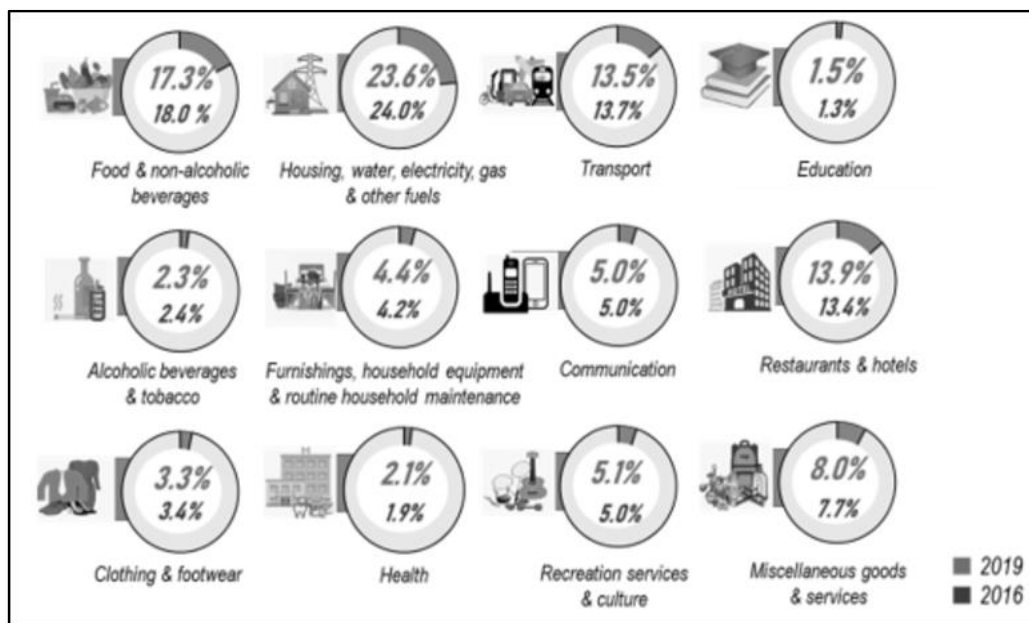
*Ice cream is a favorite dessert for many societies around the world. Eating ice can increase the feeling of fun, enjoyment as well as happiness to individuals. As such, not only it is loved by the youngsters, it is also loved by the elders. A good average calorie for ice cream is approximately 200 kcal/100g. However, adding more sugar into the ice cream for consumption beyond the limit may cause several health diseases such as obesity, diabetes, and even organ failures. In Malaysia, its ice cream market had increased from RM 795.9 million in 2017 to 3.43 per cent in 2018. Putting the increasing trend and health risks into the equation, to ensure that ice cream remains enjoyable by people of all age groups and health backgrounds, the creation of a healthy ice cream formula is necessary. This empirical study investigated customer consumption trends on healthy ice cream, assessed customer perception and proposed a marketing strategy to promote the consumption of healthy ice cream. This study had successfully developed a customer consumption trends profile on healthy ice cream and assisted local marketers to design marketing strategies on healthy ice cream "brands" in Malaysia.*

**Keywords:** Ice Cream, Healthy, Trend of Consumption, Calorie, Perception of Health

### INTRODUCTION

Ice cream has become a favorite of the community of all age groups. Traditionally, ice cream is made from dairy milk or cream and sugar. However, the sweet taste in ice cream may cause health problems not only to people who are already having a disease but also to healthy individuals. Too high content of sugar in the ice cream can weaken the immune system capacity in stress management. In addition, it also increases blood sugar levels which can lead to diabetes and obesity. In Malaysia, the sugar consumption or intake among the population can be linked with chronic diseases such as high blood pressure, triglycerides, insulin, insulin resistance and leptin. It is also inversely associated with HDL, adiponectin, LDL, and total cholesterol. Higher leptin and lower adiponectin levels indicate increased risk for cardiovascular disease, renal disease and type 2 diabetes. According to Amarra et al. (2016), some of the sources of health problems associated with added sugar intake came from ice cream, a local

favorite “Air Batu Campur (ABC)” (shaved ice cream topped with syrup, nuts and beans), biscuits, “The Tarik” (sweetened tea), cocoa, condensed milk, preserved fruit and even jam. A local study also indicated that the Malay ethnic group was the highest consumers of added sugar, followed by Indians and Chinese (Nik Shanita et al., 2012). A World Health Organization (WHO) statistic also indicated that the intake of added sugar of Malaysian adults and children exceeded the 2015 sugar intake recommendation of WHO (WHO, 2015). Based on Figure 1 below, the Malaysian Household Expenditure Survey in 2019 shows the food consumption patterns of the household food budget for various food products. The composition of expenditure groups shows differences in expenditure preferences by the level of urbanization. Necessities usually dominate household expenditure. Food & non-alcoholic beverages contribute 17.3% of total household consumption expenditure.



**Figure 1: Composition of Consumption Expenditure by 12 Main Groups, Malaysia, 2019**  
 Sources: Department of Statistics, Malaysia

Based on the report above, foods with added sugar contribute to the highest level of household expenditure, followed by non-alcoholic beverages including soft drinks, mineral water, fruit and vegetable juices. Within a month, a customer on average paid around RM12.17 for a group of chocolate, sweets and ice cream. According to Vidigal et al. (2011), the major factor in the acceptance of some functional foods was consumer’s attitudes towards health. In addition, Hoefkens et al. (2011), found that the “high quality” nutrients influenced consumers decision the most and the perception of nutritional value was important in the selection of foods by consumers. These are some of the most important determinants for those concerned about their health, people who are on diets as well as the elderly.

The several factors that contributed to a significant increase in organic food consumption were various food safety incidents, environmental issues, public emergencies, and changes in people’s attitudes toward life (Prentice et al., 2019). Consumers were even motivated to buy organic food to save ecological and environmental concerns (Yadav, 2016). A previous study showed that women were mostly positively inclined towards healthy eating, and income did not differentiate women’s preferences (Antonella Samoggia et al., 2106). In addition to economic concerns, women were influenced by environmental factors such as family habits. Income status, too, had an indirect effect on healthy eating intention. Meanwhile, Soukoulis and Tzia (2010) found that the awareness for healthier

and functional foods of consumers had led to the development of new technologies for the manufacture of such products. Stoon (2002) stated that around the world, the demand for functional foods was growing rapidly because the levels of consumers' awareness of healthy food had increased. Functional foods, design foods, pharma foods nutraceuticals were alternative expressions for foods with ingredients that could prevent and treat diseases (Scheinbach, 1998). Now, according to the latest study done by Bullock et al. (2020), the information regarding ingredients of healthy ice cream can providing evidence of a health halo. According to that, consumers' perception of health about products, processes and enhancements involved in the production of functional foods was vital in determining consumer acceptance of certain products (Bech-Larsen et al., 2001; Bullock et al., 2020).

Therefore, this study investigated customer consumption trends and profiles, to explore the perception among respondents towards healthy ice cream and to propose a marketing strategy for healthy ice cream. In doing so, this study addressed the study questions of "what is their perception on the healthy ice cream" and "what is a suitable marketing strategy for introducing healthy ice cream in Malaysia?" To that end, under the grant of *Majlis Amanah Rakyat* (MARA), this study collaborated with the ice cream manufacturers to propose a new healthy ice cream for customer consumption.

## **METHODOLOGY**

### **Participants and Data Collection**

This study was conducted using an electronic survey for each region in Malaysia. A convenience sampling technique was used. The target respondents and sample frame was open to all group according to age, race, gender, etc. (Sekaran & Bougie, 2016). This study also focusing on an individual as a unit analysis (Cavana et al., 2001). Respondents were given survey questions (Google Form) to ensure that results obtained from the samples approximate what would have been obtained if the entire population had been measured (Shadish et al., 2002). The survey took two weeks based on one-shot times frame study. Based on a nonprobability sampling design, this study used descriptive statistics as results are presented in tables, pie charts, and graphs. All the data are reported in percentages.

## **RESULTS ANALYSIS**

### **Respondent's Profile**

In total, 172 respondents answered all the questions. About 77 per cent of the respondents were female while 23 per cent were male. Meanwhile, about 60 per cent of respondents aged between 18 to 22 years old. The result showed that only 19 per cent of respondents had a permanent income of more than RM4,000 monthly while 15 per cent among them received a steady income of less than RM1,000. The result also showed that almost all respondents received higher education (attended college or university). 74 per cent of respondents represented those who were either unemployed, student or housewife. Meanwhile, 21 per cent of them worked for the government. The rest worked in the private sector and were self-employed. 54 per cent of the respondents were from Terengganu, 13 per cent from Kelantan, 12 per cent from Selangor, 5 per cent from Pahang and Kuala Lumpur with 4 per cent were from Perak and Kedah. The rest came from Putrajaya, Malaysia. Table 1 below shows the demographic details of the sample.

**Table 1: Demographic details of the Sample.**

Gender	Percentage	Salary (per month)	Percentage
Male	23.3	Below RM1,000	15.1
Female	76.7	RM1,001 – RM2,000	3
<b>Race</b>		RM2,001 – RM3,000	2.7
Malay	100	RM3,001 – RM4,000	2.5
Others	-	Above RM4,000	18.6
<b>Age Group</b>		Not relevant	58.1
Below 17	2.5	<b>State</b>	
18 – 22	61.6	Perlis	-
23 – 30	15.1	Kedah	4
31 – 39	15.1	Kelantan	13
40 and above	5.8	Terengganu	54
<b>Education</b>		Perak	4
Schooling	1.7	Selangor	12
College / University	98.3	Kuala Lumpur	5
Professional Education	-	Negeri Sembilan	-
<b>Occupation</b>		Johor	3
Unemployed	73.8	Pahang	5
Government Sector	20.9	Melaka	-
Private Sector	2.7	Sabah	-
Own business	2.6	Sarawak	-

Only 32 per cent of respondents enjoyed having ice cream several times per month. Meanwhile, 23 per cent of respondents consumed ice cream one time per week. About 15 per cent of them enjoyed having ice cream one time per month. In the meantime, some respondents had ice cream as a dessert once a week. Besides that, 9 per cent of the respondents had ice cream once every two months. The results of this study also indicated that 47 per cent of them enjoyed having ice cream in the evening as opposed to at noon or night as shown in Figure 2.



**Figure 2: Frequency and time of eating ice cream**

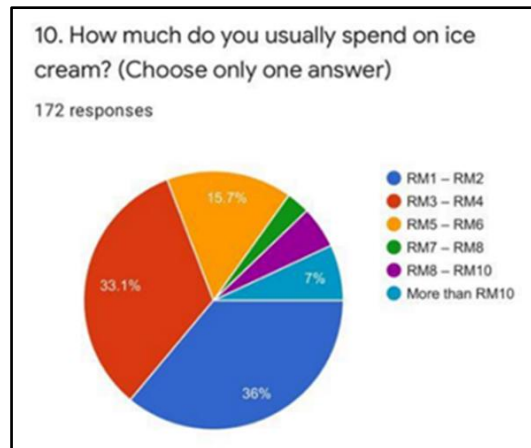


Figure 3: The willingness of ice cream pricing among respondents

Figure 3 shows that more to 70 per cent of respondents were willing to pay between RM4 and below to buy ice cream. Only 16 per cent were willing to pay between RM5 to RM6 to buy ice cream with only a small percentage (14 per cent) respondents indicated that they were willing to pay more than RM7 for ice cream. Furthermore, the results indicated that most respondents (70 per cent) were able to access ice cream at the convenience store and supermarket. Besides that, 13 per cent of respondents mentioned they were able to have ice cream at the coffee house and restaurant, followed by at night market.

### Perception of Respondents toward Ice Cream in General

In regards to the objectives of this study, most respondents were interested in chocolate and vanilla flavored ice cream, followed by strawberry and blueberry flavors. In addition to that, most respondents preferred ice cream that had two flavors as opposed to just one flavor. Meanwhile, more than 66 per cent did not like ice cream with nuts or chocolate chips. As far as the texture of the ice cream was concerned, the respondents preferred ice cream which was light in nature i.e. fine (40 per cent), followed by half fine (30 per cent). In terms of taste, 46 per cent chose to buy less sweet ice cream and 27 per cent chose sweet ice cream. Only 13 per cent chose ice cream that was full of cream. The rest of the respondents (14 per cent) chose to buy ice cream that had a salty and sour taste.

In relation to the ice cream brand, most respondents were exposed to local and international brands such as Nestle, Wall, and Magnum (78 per cent). Only a small percentage knew about the other or new ice cream brands (22 per cent). Moreover, more than 70 per cent chose ice cream that had an interesting color combination. In terms of price strategies, 70 per cent of respondents preferred to have ice cream with a pricing strategy in the range between RM1 to RM3. Meanwhile, 23 per cent were willing to spend money to buy healthy ice cream in the range between RM4 to RM6. In terms of decoration, almost all the respondents agreed that ice cream with attractive decoration influenced their perception of the ice cream quality (90 per cent). In terms of the combination of shape, color, and texture, overall agreed that could increase customer's level of satisfaction (97 per cent).

### Respondent Perception on Size and Packaging of Ice Cream

Most of the respondents agreed with the use of plastic material as part of the packaging (43 per cent), followed by containers (26 per cent). The results also indicated that in terms of shape, most respondents (57 per cent) chose containers that came in the form of cones and wood shape, followed by a cup holder and container around 33 per cent. Only 10 per cent chose the form of "Aiskrim Potong"

(cylinder-shaped ice cream). Most respondents agreed that the shape and the size of the ice cream could influence their desire to buy or enjoy ice cream with extra cutlery like small spoons (65 per cent).

### Perception Respondents toward Healthy Ice Cream

In terms of knowledge about healthy ice cream, only 48 per cent of respondents knew about healthy ice cream. As Figure 4 shows, about 60 per cent of respondents thought healthy ice cream was “less sweet” and 47 per cent of respondents thought that healthy ice cream had something to do with low-calorie. In the meantime, 44 per cent of respondents were aware that healthy ice cream was also associated with low-fat ice cream. Although 91 per cent of respondents chose healthy ice cream, more than 80 per cent thought that it was hard to get healthy ice cream in their current areas of residence and work (Figure 5). More than 90 per cent were unsure or thought they would not be able to get healthy ice cream in the market. Yet, the respondents were willing to spend RM2.50 to RM5 for 50gm of the healthy ice cream. Finally, most of them did not know about any new brand (local product) as it was not that widespread in Malaysia (83 per cent).

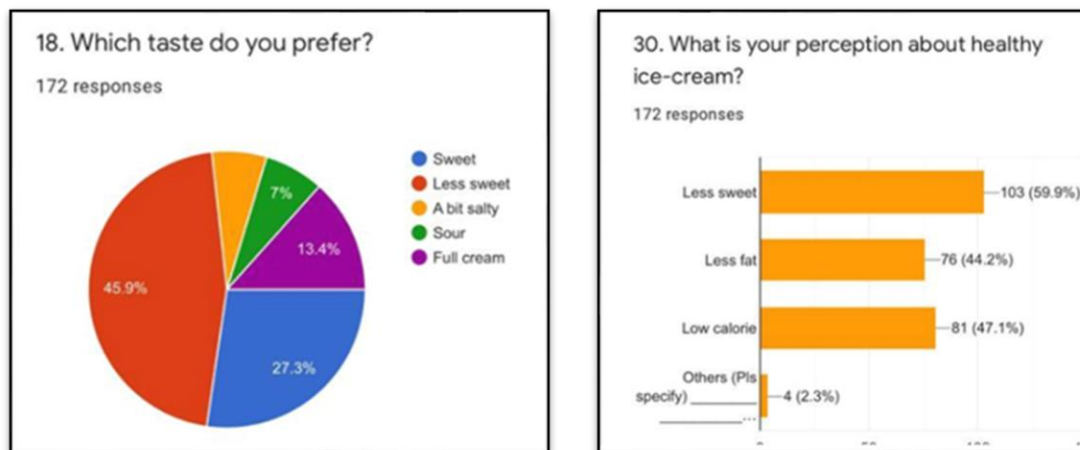


Figure 4: Results from descriptive analysis on healthy ice cream (Customer perception and taste preference)

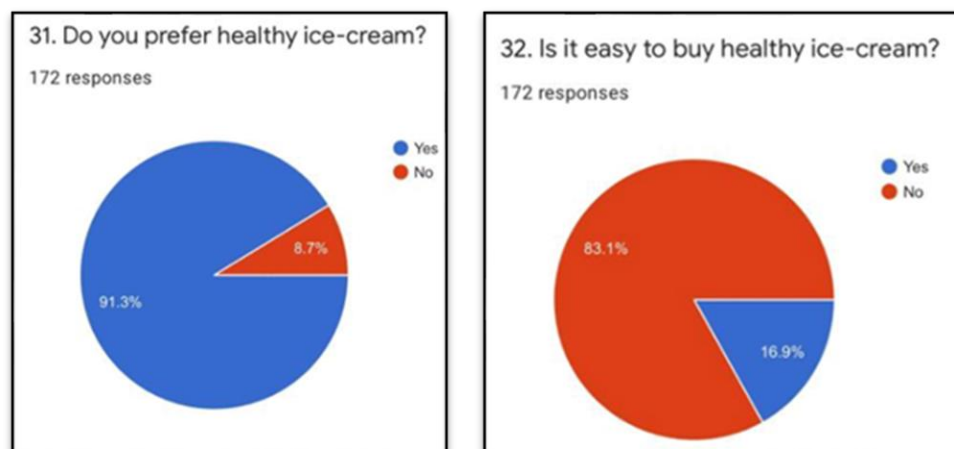


Figure 5: Results from descriptive analysis on healthy ice cream (customer perception)

## Marketing Mix Strategy “Product, Price, Place and Promotion” (4Ps) For Healthy Ice Cream

In terms of the strategy of marketing healthy ice cream, the following descriptive analysis highlights the results of a marketing strategy based on 4Ps (Table 2).

**Table 2: Marketing strategy based on 4Ps**

<b>Product Strategy</b>		
<b>Flavor</b>	Mixed flavors e.g. chocolate and vanilla flavored ice cream, strawberry and blueberry flavors	Quality and Product Differentiation
<b>Texture and shape</b>	Fine (light - nature) and half fine, no mixed content like nuts or chocolate chip, followed by size and interesting shape	Quality and Design
<b>Taste</b>	Less sweet, salty and sour taste	Product Differentiation
<b>Color</b>	The product has an interesting color combination	Quality and Design
<b>Decoration</b>	Attract potential customer	Design
<b>Container</b>	Plastic containers and the types are cones, cups with extra support cutlery like small spoons	Packaging
<b>Pricing Strategy</b>		
<b>Cost-based pricing</b>		RM1 to RM3
<b>Value-based pricing</b>		RM4 to RM6
<b>Place / Distribution</b>		
<b>Direct selling to a potential customer</b>		To overcome difficulty to access the product
<b>Selling through retailers and wholesalers</b>		
<b>Agents</b>		
<b>Promotion Strategy</b>		
<b>Advertising – non-personal e.g. Prating media, social media and outdoor advertisements</b>		To overcome lack of information about healthy ice cream and nutrition information e.g. low fat, low calorie and less sweet
<b>Sale promotion</b>		
<b>Public relation and publicity</b>		

## DISCUSSION

The descriptive analysis drawn from the results of this study indicated that new products like healthy ice cream needed to implement an intensive marketing strategy to penetrate the current market led by other local and international brands like Nestle, Wall, and Magnum by focusing on quality, design and packaging as well as product differentiation under the product strategy (Çakır & Balagtas, 2014). Besides, the awareness among potential customers towards healthy ice cream and functional foods had led to the development of new technologies for the manufacture of such products (Pinto & Dharaiya, 2014). While, nutritional enrichment of ice cream can increase the awareness (da Silva et al., 2014) and health halo effect toward healthy ice cream (Bullock et al., 2020).

For pricing strategy, healthy ice cream must implement cost-based pricing and value-based pricing. The distribution strategy should focus more on direct selling to potential customers i.e., through retailers and wholesalers to increase the presence of the products in food stores (UiTM Entrepreneurship Study Group, 2005). A previous study found that the presence of food stores, and the availability of health products in those stores, were important contributors to healthy eating (Story et al., 2014). Currently, these results were aligned with the inputs provided by respondents’ profiles of this study. In other words, convenience stores and supermarkets were the common places where the respondents were able to access the product (Research and Markets, 2020). Another suitable strategy was using user-agents to distribute new goods like healthy ice cream.

Lastly, concerning promotional strategy to share information regarding healthy ice cream and nutrition information to the customers, the use of multiple techniques and channels like social media and traditional promotional strategies like advertising, sale promotion, public relations and publicity was important (Story et al., 2008). The promotional strategy, therefore, needs to focus on health message on the ice cream packaging because it could increase health information that would subsequently help improve the acceptance level of the products (Lähteenmäki, 2013). The implementation of 4Ps strategies needs to stress potential customer profiles such as females between the age group of 18 to 22-year-old as it serves as the niche market as opposed to mass-market strategy. All the promotional strategies can incorporate a female point of view with the female participating as the role model or representative brands.

As far as the respondent's profiles are concerned, this study suggests that the pricing strategy needs to consider the income group of the potential customers. The proposal to penetrate the pricing strategy between RM1 to RM3 can be considered with the suitable pricing strategy to cater for a new market and its need for alternative prices. By focusing on healthy ice cream, implementing value-based pricing is a practice that suits the pricing strategy for this type of product. With regard to the higher level of education among potential customers (attended university or college), this study found that the promotions related to nutrition e.g., free sugar, low fat, calorie and less sweet or healthy content would be able to attract potential customers especially female with higher purchase power (34 per cent of respondents received steady income between RM1,000 to RM4,000). Additionally, this result was aligned with current sugar-free ice cream awareness and consumption patterns among potential customers (Gnanamkonda & Prasad, 2014). Meanwhile, the different ingredients on the texture of ice cream influenced the demands (Syed et al., 2018). Healthy ice cream potential customer profiles of this study indicated that ice cream added with nuts or chocolate chips were not preferable. In contrast, ice cream which was light in nature and the half fine was more preferred. Likewise, ice cream with two flavors as opposed to just one flavor (chocolate and vanilla flavored ice cream, followed by strawberry and blueberry flavors). The profiles also indicated that a preference for ice cream contains full cream and one with a salty and sour taste.

For those involved in this business, they need to focus on those trigger points i.e., main factors determining the market success of a product like healthy ice cream (Syed et al., 2018). Besides, this study also found that the potential customers usually consumed ice cream in the evening. This profile can be used as inputs or content in marketing activities, especially in promotional strategy. Another factor that should be considered regarding packaging strategy is suitable containers e.g. box for taking home segmentation (Allied Market Research, 2021). Although, the outcome of this study highlighted more on the plastic container by focusing on cones, cups with extra support cutlery.

## **CONCLUSION AND RECOMMENDATION**

The customer consumption trends profile on healthy ice cream will be able to assist local marketers to design marketing strategies on healthy ice cream "brands" in Malaysia. This study suggests that quality, design and packaging as well as product differentiation under the product strategy are vital elements in designing healthy ice cream, followed by pricing strategy, promotional and distributional strategies.

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