

CONSUMER ATTITUDES AND PREFERENCES | RESEARCH ARTICLE

Evaluating The Consumer Preference of UHT Ultra Milk Flavor: Evidence from Generation Z Consumers

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**Abstract:** The existence of different characteristics in each generation encourage producers to stay updated on consumer preferences. This study aimed to analyze the characteristics and preferences of Generation Z consumers for UHT Ultra Milk Flavor. The research was conducted in August - November 2022 using a case study. The sampling method was a purposive sampling of 150 respondents, aged 18-22 years who had consumed Ultra Milk Flavor and purchased at least once in the last week, with pocket money. Data was collected online using Google Forms and then analyzed by descriptive analysis and conjoint analysis. The results showed that Generation Z consumers were dominated by women and the majority of students aged 20 years, with income levels ranging from >IDR 500.000 to IDR 1.000.000, and aware of drinking milk. The type of milk consumed the most is UHT milk with a frequency of purchase of once a week at a minimarket, and is familiar with the use of social media. Overall, the preference for UHT Ultra Milk Flavor is chocolate with 250 ml packaging, price of ≤IDR 5.000 with the most prioritized taste attribute. These findings suggest that milk producers can maintain, improve, and innovate flavors.

**Keywords:** conjoint analysis, consumer preference, generation Z, packaging, taste

**JEL Classification:** D24, E21, L66



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PUBLIC INTEREST STATEMENT

The low level of consumption of milk in Indonesian society as well as competitive competition between milk producers, differences in preferences between generations of consumers encourages companies to innovate and care about consumer preferences. Our research focuses on the preferences of UHT Ultra Milk Flavor milk in generation Z consumers who are undergraduate students at Diponegoro University. We face the challenge of collecting data that fits the criteria and interpreting the respondents' answers. The results of this study can be useful guidelines for business practitioners as consideration in an effort to understand consumer behavior and preferences in the future. In addition, this research can also be a reference for further research that discusses the consumption behavior of Generation Z.



## 1. Introduction

Cow's milk includes animal-based foodstuffs that are rich in nutrients. During the past year, milk production in Indonesia has increased. Based on BPS (2021), dairy companies produce 107.48 million liters of milk, with 2 percent higher than in 2020. The increase in production was influenced by several factors, one of which is the level of consumption of milk in Indonesia. There is an increase in the awareness of Indonesian about the importance of milk for health, encouraging an increase in the level of milk consumption in Indonesia.

The level of milk consumption in Indonesia is still classified as low although there is an increase. FAO (2022) stated that the level of milk consumption below 30 kg/capita/year is in the middle class and more than 150 kg/capita/year is in the high sort. In response to this, one of the efforts that can be made to increase milk consumption is by innovating liquid milk products in UHT-type packaging. This situation becomes a potential market that is quite large and encourages dairy companies to compete competitively. One of the dairy companies in Indonesia is PT Ultrajaya Milk Industry Tbk. PT Ultrajaya Milk Industry Tbk is one of Indonesia's leading producers of aseptic milk and healthy drink products using UHT technology and aseptic packaging. One of Ultra Jaya's products is UHT Ultra Milk Flavor. Ultrajaya's UHT liquid milk market share is 39.3 percent (Ultrajaya Public Presentation, 2020). This figure shows that Ultrajaya is one of the largest milk producers in Indonesia.

Ultrajaya which is the producer of Ultra Milk (pioneer of packaged liquid milk) has been around for 50 years. Even though it is already 50 years old, Ultra Milk is still top of mind in society. It is proven by Ultra Milk occupied the top three positions in the Top Brand Index for the period 2020 to 2022. The Top Brand Index (2022) explains that Ultra Milk ranks first for 3 consecutive years in the category of ready-to-drink liquid milk with a rate of 31.8 percent in 2020, 2021 it will be 32.9 percent, and in 2022 it will be 36,0 percent. This percentage value shows that Ultra Milk still dominates the market and also be able to compete amid many competitors both old competitors and newcomers. The top 3 competitors of Ultra Milk are Bear Brand, Frisian Flag, and Indomilk (Top Brand, 2022). Even though Ultra Milk is still top of mind and able to compete with competitors, Ultra Milk also needs to know consumer preferences as well as consumer behavior so that it can develop even more and be more adaptive.

Consumer preferences can be influenced by several things, one of which is product characteristics. According to Pertiwi, Harisudin, and Setyowati (2017), the product attribute that is most chosen when buying Ultra Milk is the flavor variant. Product attributes are defined as product elements that are considered important for consumers that influence consumer preferences (Tian, Chu, Chang, & Zhen, 2022). Assessing previous research, preferences for packaged liquid milk are still rare. Generally, research on dairy commodities examines more perceptions, interests, and behavior of milk consumption. In addition, the preference of Generation Z consumers for packaged liquid milk (UHT) has not been found. Previous research examined preferences for packaged liquid milk but focused on household consumers, the research found that the preference for milk packaging of household consumers in the District of Jaten is Mocca flavor, the price is ≤IDR 5.000 per pack, brand well-known, box/box packaging, and has clear expiration information, the most prioritized attribute by consumers in a row is information expiration, price, taste, brand, and packaging (Nugroho, Mukson, & Setiawan, 2021). Ramadhani, Yulistiani, Priyanto, Estiasih, and Putranto (2022) also studied milk preferences but for pasteurized types of milk, in this study, it was found that consumers like PEF "Milkaya" pasteurized milk with chocolate flavor, sold at Milkaya outlets for IDR 4.000, the most considered attribute sequentially is taste, location of purchase, selling price, and packaging. Pertiwi, Harisudin, and Setyowati (2017), this study also used Ultramilk products as research objects but this study focused on Ultra Milk as a whole not focusing on Ultra Milk Flavor (flavor variants studied are UHT Full Cream Milk, Mocca flavored milk, Strawberries, UHT Low Fat High Calcium Chocolate, UHT Low Fat High Calcium Milk), consumer preferences in the modern market in Surakarta City are the condition of the

milk when purchased is not cold, Ultra Milk with the chocolate flavored, promotions through television advertisements, and 1000 ml packaging sizes, the attributes that are most considered by consumers are taste attributes, furthermore the analysis used Fishbein Multi attribute not using Conjoint Analysis.

Meanwhile, consumers consist of several generations starting from "The Silent Generation", Baby Boomers, "Generation X", "Millennials", and "Generation Z". Each generation has different preferences in buying products, especially milk. Researchers found that as many as 40 percent of Generation Z eat and drink when they travel (Fromm & Read, 2018). Generation Z is the generation born between 1996-2009 (Babelová & Stareček, 2021). Generation Z was born at the same time as the rapid development of the internet and tends to like things that are practical and instant. Generation Z carries out activities quickly, practically, and efficiently (Fromm & Read, 2018). This situation requires entrepreneurs to be increasingly triggering because in the future they will continue to be involved with Generation Z, who are potential consumers (Putri & Deliana, 2020).

Diponegoro University students with range of 1998-2002 are included in Generation Z. Diponegoro University is ranked 4<sup>th</sup> in the tertiary institution with the largest number of students in Indonesia (Kemendikbudristek, 2020). There are five faculties with the largest student population at Diponegoro University, namely the Faculties of Engineering, Economics and Business, Science and Mathematics, Cultural Studies, and Social and Political Sciences. Based on the description above, there are new insights to study the preference of Generation Z consumers for packaged liquid milk (UHT). Therefore, the purpose of this study is to analyze the characteristics and the preferences of Generation Z consumers in Diponegoro University students who buy UHT Ultra Milk Flavor.

## **2. Literature Review**

### **2.1 Milk**

Indonesian milk consumption level is still relatively low, although there is an increase. Based on (BPS, 2020), public milk consumption in Indonesia increased by 0.25 percent to 16.27 kg/capita/year. Indonesia's low consumption rate also can be seen from the data of the Ministry of Agriculture (2020) which shows that Vietnam has a milk consumption rate of 20 kg/per capita/year, Malaysia of 50 kg/capita/year. According to FAO (2022), the level of milk consumption below 30 kg/capita/year is in a low category, 30-150 kg/capita/year is in the middle category and more than 150 kg/capita/year is in the high category. One of the efforts that can be made to increase milk consumption is by varying processed milk into pasteurized and UHT milk. Ultra High Temperature (UHT) milk is processed product milk by applying preservation technology. UHT milk treated with

Use high temperature with a temperature of 135-145 °C for 2-3 seconds and sterilized to extend shelf life up to 6-10 months at room temperature (Lestari, Mulyati, & Puspitasari, 2016). According to Purnasari and Taufik (2021), UHT milk comes from fresh milk and is processed using an ultra-high-temperature process, packaged aseptically, and has a color, aroma, and taste that is relatively the same as fresh milk. UHT milk is generally packaged using a tetra pack so it tends to be practical. There are several brands of UHT milk on the market that are assessed by Top Brand. Top Brand is an award for the best brand chosen by consumers, the data is taken using the omnibus survey method and then processed into the results of the Top Brand survey which contains customer demographics, Top Brand Index (TBI), Mind Share, Commitment Share, Market Share, Brand Diagnostic and Competition Landscape (Top Brand Index, 2022). Top Brand Index is a piece of brand information that can be seen by category and subcategory. Based on data from Top Brand (2022), the packaged liquid milk brands of choice for consumers are in first place, namely Ultra Milk, Frisian Flag in second place, Indomilk in third place, and Bear Brand in last place. Ultra Milk has been in first place for 3 consecutive years in the ready-to-drink liquid milk category with 31.8 percent in 2020, 32.9 percent in 2021, and 36.0 percent in 2022.

## 2.2 Generation Z Consumers

According to Babelová and Stareček (2021), Generation Z is the generation born in 1996-2009. Generation Z was born at the same time as the rapid development of the internet. This situation requires entrepreneurs to be increasingly triggering because in the future they will continue to be involved with Generation Z who are potential consumers (Putri & Deliana, 2020). According to Koch, Frommeyer, and Schewe, (2020), generation Z is seen as a very competitive generation. Generation Z is referred to as a generation that is fluent in using technology, especially social media, in their daily lives, Generation Z often involves technology. Generation Z consumers tend to be consumers who like to seek information as well as study and consider options before making a decision to buy a product. The general characteristics of Generation Z are highly educated, tech-savvy, and future-oriented (Su, Tsai, Chen, & Lv, 2019). According to the Global Web Index (2023), generation Z is quite familiar with social media. The social media most frequently used by Generation Z are Instagram and Tiktok, Snapchat is in third place, Facebook is in fourth place and last is Twitter. Gen Z uses social media to keep in touch with family, fill their free time, look for opportunities, see what's trending, follow a brand, and share brand recommendations on social networks (Global Web Index, 2023).

There are several characteristic differences between Generation Z consumers, Generation X, and Generation Y. Generation X prefer to buy products both through traditional and also digital media, and got more attracted to coupon, the company needs to build brand trust with this generation (Goldring & Azab, 2021). Generation Y is a thoughtful purchaser, cares about brand value, ready pay more for unique or popular products, companies need to know Generation Y's needs (Eger, Komárková, Egerová, & Mičík, 2021). Generation Z is very knowledgeable, do a lot of research before deciding to buy the products, and prefers to shop through social media (Duffett, 2020).

Ministry of Industry (2022), concluded that an increase in the population of young people, especially Generation Z, which is active, dynamic, and has high mobility in urban areas, can be expected to drive demand for ready-to-drink (RTD) dairy products. The Indonesian population that belongs to Generation Z is 27.94 percent of 270.20 million people (BPS, 2020). Generation Z is spread across several provinces in Indonesia. One of the provinces dominated by Generation Z is Central Java. According to BPS (2021), the number of Generation Z in Central Java is 25.31 percent of 36.52 million people.

## 2.3 Consumer Preference

Consumer preferences are needed to know the desires of consumers. According to Kotler and Armstrong (2017), consumer preferences are defined as consumers' preferences for various products. Consumer preferences are also interpreted as consumer choices or preferences for something (Priyambodo, Sastryawanto, & Hermawati, 2019). According to Utami and Tamami (2020) consumer preference is a person's choice of likes or dislikes for a product to be consumed. Consumer preferences have power in determining the product to be purchased both in the form of goods and services. Consumer preferences can be seen through product attributes, prices, and packaging.

Product attributes are the characteristics or elements of the product produced by the company so that it is different from the others (Susanti, Barkah, Tresna, & Chan, 2021). Product attributes are defined as product elements that are considered important for consumers and are described through taste, price, and product packaging (Harsita & Amam, 2019). Product attributes can be interpreted as differentiating a product consisting of quality, price, and brand that is considered important by consumers so that it can be used as material for consumer consideration in making. Taste attributes assist consumers in identifying purchased food and beverage products (Beacom, Bogue, & Repar, 2021).

Taste is one of the factors that can determine consumers deciding to reject or accept food products. According to Safitri and Harti (2022), the taste is the attribute that is most in demand by consumers. Price is the amount of money that must be paid by consumers to get products in the form of goods or services (Nurzam, Fauziah, & Susena, 2020). The price attribute is the price level or method of consumer payment (Saefudin, Deanier, & Rasmikayati 2020). Price is still used as an indicator of product quality for consumers (Kumrotin & Susanti, 2021). Price is one of the attributes that consumers consider when buying a product. According to Dedeh and Hasibuan (2021), price is a crucial factor because it is used as an evaluation material.

Packaging is the process of creating a container for the product and also contains information about the product. Packaging is defined as an activity in producing or designing a container for a product (Kotler & Armstrong, 2017). Food packaging is one thing that needs attention. According to Petkoska, Daniloski, D'Cunha, Naumovski, and Broach (2021) food packaging is a material for packaging food both in direct and indirect contact.

### 3. Conceptual Framework

The study observed the characteristics and preferences of consumers that can be measured using the attributes of UHT Ultra Milk Flavor. Figure 1 shows that the product attributes that Generation Z consumers pay attention to are taste, price, and packaging with the most important attribute being taste.

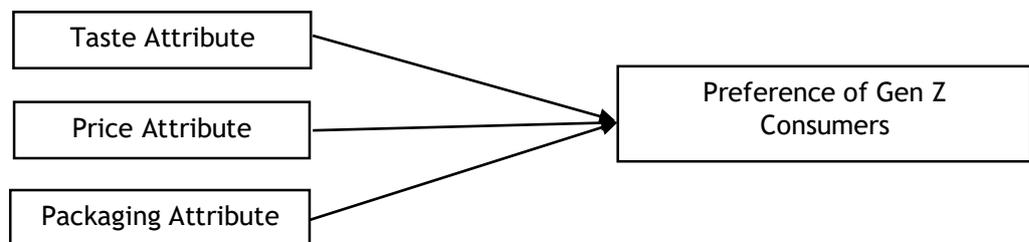


Figure 1. Conceptual framework

### 4. Methods

#### 4.1 Participants

The research was conducted in August - November 2022. This period of time was used for the preparation of research proposals and sampling which was carried out online using Google Forms and distributed via WhatsApp, Line, and LinkedIn both in personal chat and in groups, based on the data collection, the results obtained were 188 respondents, but in this study the respondents used were 150 people according to the attached criteria. The time period in this study is also used to process data. The sampling method in this study was purposive sampling method which includes non-probability sampling. Purposive sampling is selecting a sample based on certain characteristics or characteristics which are seen as having a relationship with the characteristics of the previous population (Dewi, Mustika, Antari, & Ariawan, 2022). The purposive sampling technique was carried out by selecting respondents who were Diponegoro University students from 3 batches of 2019-2021 in five faculties with the largest population at Diponegoro University.

The five faculties with the largest student population at Diponegoro University are the Faculties of Engineering, Economics and Business, Science and Mathematics, Humanities, and Social and Political Sciences. Respondents from Diponegoro University were selected with the criteria of students aged 18-22 years who had consumed Ultra Milk Flavored with a purchase frequency of at least once in the past week, bought products with personal allowances (which could show that consumers are not homogeneous only consisting of the upper class but heterogeneous

in all circles). The sampling technique used was proportional stratified random sampling. The number of samples used is stratified because the population is also stratified based on the year of generation. The sample used is proportional to the population and is calculated using the formula (Anshori, 2020). The number of samples in each class is determined equally (quota), 50 per batch (2019-2021) with a total sample of 150.

#### 4.2 Measurement

Data were taken in the form of primary data and secondary data. Primary data was obtained using a prepared questionnaire (Mawuntu, Porajauw, & Manginsela 2023). The primary data in this study were obtained using an online questionnaire, namely the Google form. The questionnaire was used to see the product attributes that were preferred and most approved by consumers in buying UHT Ultra Milk Flavor. The questionnaire consists of two parts, the first part was the identity of the respondent and the second part was a statement regarding the preference of Generation Z consumers for UHT Ultra Milk Flavor. This research did not use X and Y variables but examined product attributes that were considered by consumers. Product attributes are defined as product elements that are considered essential for consumers that influence consumer preferences (Rohmah & Subari, 2021). The product attributes examined in this study were taste, price, and packaging. The product attribute measuring tool was adapted from Nugroho, Mukson, and Setiawan (2021) which has 16 statements of product attribute combinations obtained from designing attribute level combinations with the SPSS orthogonal array design procedure using Likert scale.

This study used 18 indicators of combinations of product attributes. Respondents' assessment of the combination of attributes for dairy products was also carried out by giving a score based on a Likert scale. According to Embe Nafu, and Herdhians (2019), the Likert scale is used to measure attitudes and individual and group perceptions of social phenomena. Respondents' answers ranged from negative to positive with the scores given. Question regarding the preference statement of Generation Z consumers for UHT Ultra Milk Flavor in a questionnaire using a Likert scale with 5 alternatives, 1: "Strongly Disagree" (STS), 2: "Disagree" (TS), 3: "Neutral" (N), 4: "Agree" (S), 5: "Strongly Agree" (SS).

#### 4.3 Analysis

Data were analyzed using descriptive analysis and Conjoint analysis. Descriptive analysis was used to answer objective 1, namely the characteristics of Generation Z consumers on Ultra Milk flavor. Descriptive analysis is used to describe events or incidents accurately and systematically (Cantika, Prasetyo, & Setiadi, 2021). Conjoint analysis is used to answer objective two, namely the preference of Generation Z consumers for Ultra Milk flavor. Conjoint analysis is a multivariate analysis used to assess consumer preferences in choosing products (Rohmah & Subari, 2021). The selected product attributes, namely taste, price, and packaging. There were five levels of taste stimulus, namely chocolate, strawberry, caramel, mocca, and taro. The price stimulus had two levels, namely  $\leq$ IDR 5.000 and  $>$ IDR 5.000 stimuli while the packaged stimuli had three levels namely 125 ml, 200 ml, and 250 ml, the stimuli will be reduced by using an orthogonal array design. There were 18 stimuli in this study after reduction (Table 1).

Table 1. Product stimuli

Stimuli	Description of stimuli
1	Mocca, 200 ml, $\leq$ IDR 5,000
2	Chocolate, 125 ml, $>$ IDR 5,000
3	Taro, 125 ml, $\leq$ IDR 5,000
4	Mocca, 200 ml, $>$ IDR 5,000
5	Taro, 200 ml, $>$ IDR 5,000,
6	Chocolate, 200 ml, $>$ IDR 5,000
7	Taro, 250 ml, $>$ IDR 5,000

Stimuli	Description of stimuli
8	Chocolate, 125 ml, ≤IDR 5,000
9	Caramel, 250 ml, ≤IDR 5,000
10	Caramel, 125 ml, ≤IDR 5,000
11	Caramel, 200 ml, >IDR 5,000
12	Strawberry, 200 ml, ≤IDR 5,000
13	Mocca, 125 ml, >IDR 5,000
14	Caramel, 125 ml, >IDR 5,000
15	Strawberry, 125 ml, >IDR 5,000
16	Mocca, 250 ml, ≤IDR 5,000
17	Strawberry, 250 ml, >IDR 5,000
18	Chocolate, 250 ml, >IDR 5,000

## 5. Findings

### 5.1 Characteristics of UHT Ultra Milk Flavor’s Respondents

Respondents in this study were 150 Diponegoro University undergraduate students from the Faculties of Engineering, Economics and Business, Science and Mathematics, Cultural Studies, and Political and Social Sciences class of 2019 up to 2021 who have purchased UHT Ultra Milk Flavor with a purchase frequency of at least once in the past week, with effort and pocket money and aged 18 to 22 years. The characteristics of the respondents observed in this study are demographic characteristics and characteristics of the respondents as Generation Z. Table 2 shows the distribution of the characteristics of the UHT Ultra Milk Flavor respondents.

Table 2. Respondent’s characteristics of UHT ultra milk flavor

Category	Total	Percentage (%)
Gender		
Male	50	33
Female	100	67
Age (year)		
18	3	2
19	32	21
20	60	40
21	38	25
22	17	11
Income level		
> IDR 500,000 - IDR 1,000,000	68	45.33
> IDR 1,000,000 - IDR 1,500,000	38	25.33
> IDR 1,500,000 - IDR 2,000,000	30	20
> IDR 2,000,000 - IDR 2,500,000	9	6
> IDR 2,500,000	5	3.33

Based on Table 2 it can be seen that out of 150 respondents, 100 respondents are female and 50 are male. This figure showed that there are more females than males. This is because food consumers are generally female. Women tend to have shopping habits, especially food shopping. Females also have a habit of maintaining a healthy body, one of which is by drinking milk. In addition, it can also be assumed that Diponegoro University students who are female drink more milk meet and the criteria. The female population in Semarang City is more than the male population, therefore there are also more female respondents (Figure 2).

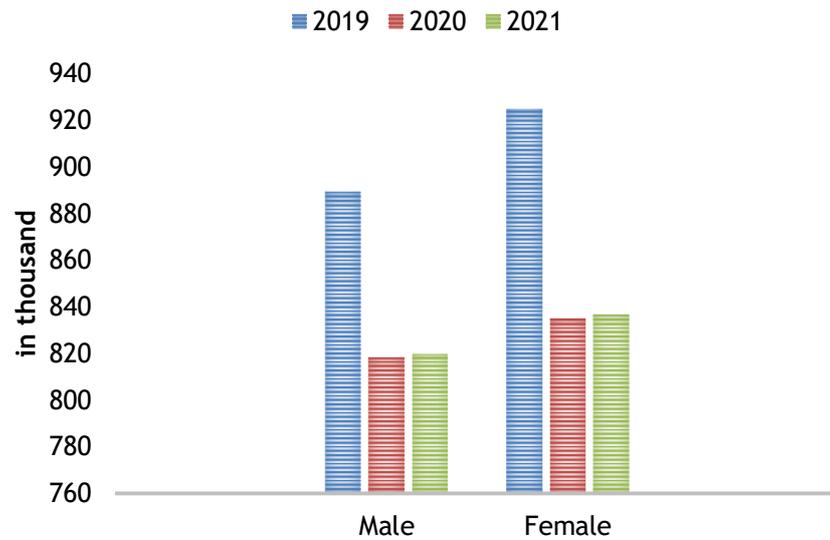


Figure 1. Total population of Semarang City by gender

Age is an important demographic element because age differences will affect consumption patterns. Table 2 explained that the ages are grouped into 18 to 22 years of age. Respondents were dominated by students aged 20 years (40%), this age is included in the productive age. The age range of 20 years to 40 years is included in the productive age category. Productive age requires more nutrition because of the dense activities undertaken. The results of this study also showed that the UHT Ultra Milk Flavor milk product was consumed by various income levels, starting from the middle class and up. Respondent's income was pocket money per month and some were the results of part-time or freelance students. Table 2 explained that the majority of respondents are in the income range >IDR 500,000-1,000,000, which is 45.33 percent. This showed that the majority of respondents' income was included in the middle category.

The characteristics of Generation Z consumers observed in this study are familiar with digital technology. This indicator focuses on social media as the preferred source of digital information for Generation Z. Based on interview results, it is known that 98 percent of respondents use social media, especially Instagram as a source of information. It was proven that the respondents also followed Instagram social media Ultra Milk Flavor (@ultra\_mym). Respondents said they preferred the use of technology compared to distributing brochures, the use of technology, in this case, social media, was considered effective and efficient.

## 5.2 Generation Z Consumer Behavior of Respondents

The purchasing behavior of UHT Ultra Milk Flavor milk for generation z respondents was reviewed through several aspects, namely how important it is to drink milk, the benefits of milk, understanding of nutritional value, type of milk, frequency of consumption of milk, location of purchase of milk, and consumption pattern of generation Z (Table 3).

The majority of respondents (41%) concluded that it is important to consume milk because it contains nutrients that are beneficial to the body. The research found that one respondent considered drinking milk as a practical thing to get balanced nutrition for the body instantly. The benefits of milk are one of the considerations when consuming milk. There are several benefits of milk for the body such as increasing immunity, increasing muscle mass and bone health (45%), increasing energy, and preventing depression (37%).

Table 3. Consumer behavior of respondents

Category	Total	Percentage (%)
<b>How important is drinking milk</b>		
Not important	3	2.0
Quite important	35	23.0
Important	61	41.0
Very important	51	34.0
<b>The benefits of drinking milk</b>		
Increase immunity	21	14.0
Increase muscle mass and bone health	67	45.0
Increase energy and prevent depression	56	37.0
Others	6	4.0
<b>Type of milk consumed</b>		
Powdered milk	20	13.33
Packaged liquid milk (UHT)	118	78.66
Sweetened condensed milk	10	6.66
Others	2	1.33
<b>Frequency of purchasing UHT Ultra Milk Flavor</b>		
Once a week	69	46.0
Twice a week	40	26.67
Three times a week	13	8.67
Once a day	4	2.67
Twice a day	2	1.33
Others	22	14.67
<b>Location</b>		
Minimarket/Supermarket	147	98.0
Grocery store	1	0.67
Traditional market	0	0.0
Others	2	1.33

The level of understanding of the nutritional value in this study varied from a scale of 1 (the lowest level of understanding) to a scale of 10 (the highest level of understanding). The majority of respondents 40 people gave a score of 7 for their understanding of the nutritional value contained in UHT milk. Scale 7 indicates that the respondent quite understands that milk contains good nutrition for the body (Figure 3). The data shows that respondents understand the nutritional value contained in milk before buying it.

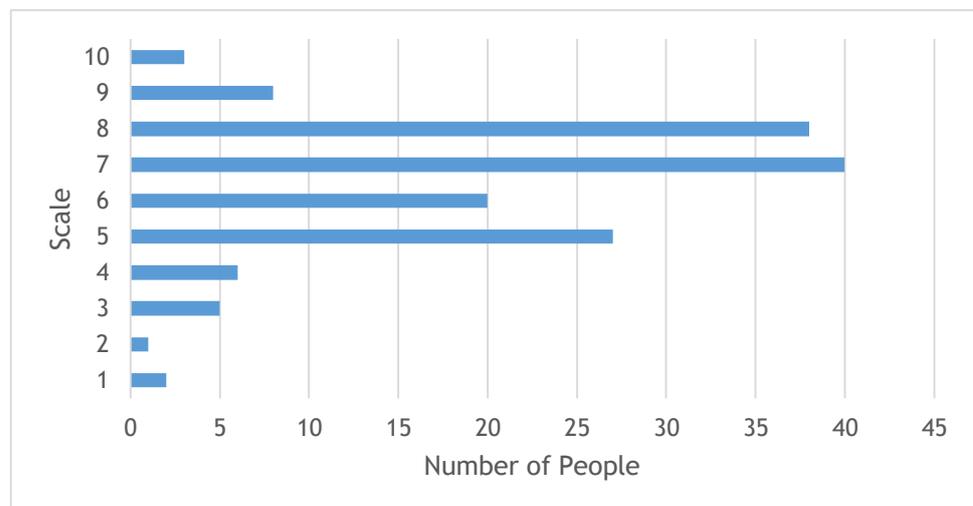


Figure 2. Level of understanding of the nutritional

The type of milk consumed the most was packaged liquid milk (UHT) by 118 people (78.66%). The reason respondents like UHT milk is that it is considered safer and hygienic. UHT milk is a type of milk that is good for consumption because its nutritional value in it is better maintained through aseptic processing. The highest frequency of buying UHT Ultra Milk is once a week, 46 percent. There are differences in the frequency of purchases because each consumer has different needs for drinking milk and is adjusted to each individual's budget.

Table 3 showed that most of the respondents bought UHT Ultra Milk Flavor at minimarkets/supermarkets, namely as much as 98 percent, minimarkets/supermarkets were locations that were easily accessible to respondents and UHT milk products were found there. Most of the respondents (96%) in this study were students living in boarding houses in Tembalang, Semarang, Central Java, while the remaining 4 percent lived at home in the city of Semarang outside Tembalang. Tembalang District is the sub-district with the second largest population in Semarang City and is known as an education center because there are several tertiary institutions such as Diponegoro University, Semarang State Polytechnic, Semarang Muhammadiyah University, Pandanaran University, Health Polytechnic of the Ministry of Health Semarang, Karya Husada College of Health Sciences, and Asih Husada Health Academy. Generally, locations close to campus will have many facilities such as minimarkets/supermarkets because they are strategic and crowded with students.

### 5.3 Gen Z's Preferences for UHT Ultra Milk Flavor

Respondent's preference for UHT Ultra Milk Flavor was analyzed using conjoint analysis, on the conjoint analysis it can be seen the utility and importance values. Based on Table 4, it can be seen that the utility value of the UHT Ultra Milk Flavor chocolate flavor attribute is positive, which is equal to 0.476. This means that respondents prefer chocolate flavor over other flavors, then the strawberry flavor is in second place with a utility value of 0.141, followed by the caramel flavor with a utility value of 0.011. Flavors that respondents disliked were Mocca with a negative utility value (-0.144) and taro flavor which respondents disliked the most with a utility value of -0.485. The most preferred packaging attribute for respondents was the 250 ml packaging with a utility value of 0.173, followed by the 200 ml packaging with a utility value of 0.068 and the respondents most disliked the 125 ml packaging with a utility value of -0.241. The most preferred price attribute by respondents was ≤IDR 5,000 with a utility value of 0.222 and prices >IDR 5,000 which respondents disliked with a utility value of -0.222. The product attribute that was considered the most important by respondents was taste with 64.751 percent, second place was packaging attribute at 18.123 percent and the most important was the price at 17.126 percent.

Table 4. Utility estimate and importance values

Attributes	Importance values	Description	Utility estimate	Std. error
	---%---			
Flavor	64.751	Chocolate	0.476	0.040
		Strawberry	0.141	0.043
		Mocca	-0.144	0.040
		Caramel	0.011	0.039
		Taro	-0.485	0.043
Packaging	18.123	125 ml	-0.241	0.028
		200 ml	0.068	0.029
		250 ml	0.173	0.030
Price	17.126	>IDR 5.000	-0.222	0.021
		≤IDR 5.000	0.222	0.021
		(Constant)	3.557	0.021

## 6. Discussion

The objective of this study is to analyze the characteristics and preferences of Generation Z consumers for UHT Ultra Milk Flavor. This research was conducted because Generation Z consumers are referred to as potential consumers (Putri & Deliana, 2020). This is supported by the opinion of Santoso and Triwijayati (2018) that marketers make Generation Z their target market because they are deemed worthy of making their own choices. The second reason for this research is that in Indonesia there are not many studies that discuss the preference of the generation Z consumers for packaged liquid milk.

The characteristics of Generation Z consumers in this study have been analyzed using descriptive analysis. The results of the study found that the Generation Z consumers studied had characteristics like Generation Z in general, liking the use of social media. It is consistent with that finding Duffett (2020) that Generation Z is very knowledgeable, do a lot of research before deciding to buy products, and prefers to shop through social media. Su, Tsai, Chen, and Lv (2019) also found that the general characteristics of Generation Z are highly educated, tech-savvy, and future-oriented.

The analysis used in this study was conjoint to see the preferences of Generation Z consumers and also the most selected attributes of UHT Ultra Milk Flavor milk. The results of the study showed that taste is the main factor for respondents as Generation Z consumers in buying UHT Ultra Milk Flavor milk. This is not in line with the findings (Nugroho, Mukson, & Setiawan 2021) that consumer preference for packaged liquid milk is expired information, and the attributes that are most considered sequentially are price, taste, brand, and packaging. Nonetheless, the results of this study are in accordance with Kresova, Gutjahr, and Hess (2022) who explained that taste is an important criterion in making purchasing decisions. Respondents like chocolate the most which is indicated by the highest utility value. This is in line with Murti, Setyowati, Farida, and Astuti (2022) who found that respondents prefer chocolate-flavored milk to other flavors. The distinctive taste of chocolate, which is a combination of bitter and sweet taste, is unique in itself, so it is in great demand (Tiro et al., 2021).

The perfectionist characteristics of Generation Z have caused Generation Z to be a generation that is more anxious than previous generations (Tagare, 2022). According to Wong et al. (2022) chocolate flavor contains caffeine and milk that contains too much sugar can cause obesity. On the packaging, it is not explained in detail how much caffeine is listed, it is only explained that one of the ingredients in Ultra Milk chocolate is cocoa powder. Another ingredient in Ultra Milk chocolate is 14 g of sugar. According to WHO (2018), the safety standard minimal for sugar consumption is below 25 g per day. Although chocolate contains some nutrients such as calcium and potassium, chocolate also contains excess sugar (Mahato et al., 2020). Milk that contains too much sugar can cause obesity. This statement is supported by Patel et al. (2018) that there is still a possibility of an effect on calories as well as obesity in flavored milk with excess sugar.

The strawberry flavor is in the second place. Respondents rated the strawberry flavor as quite refreshing. The third position for the flavor variant preferred by respondents is caramel. The combination of creamy and sweet flavors is the main attraction of the caramel flavor. Not all respondents liked the sweet taste, some respondents said the caramel taste was too sweet. Respondents think that a taste that is too sweet is not good for their health. This is in accordance with the characteristics of Generation Z who still care about their body's health (Thangavel, Pathak, & Chandra, 2022). The flavor that respondents disliked the most was taro.

The second attribute that is considered by respondents in buying Ultra Milk Flavor UHT milk is the packaging. It is not in line with the research of Sipple et al. (2021) who found that packaging is the most considered attribute of dairy products. Respondents still pay attention to packaging even though it is not a top priority. Respondents liked the 250 ml packaging the most, it is considered according to the portion of the respondent. The 200 ml package occupies the second position and most

respondents dislike the 125 ml package because it is considered too small and runs out quickly. Respondents considered that the type of UHT Ultra Milk Flavor milk packaging in the form of a box was appropriate and practical. Box packaging makes it easier for consumers to consume liquid milk (Stankiewicz, Auras, & Selke, 2019). Generation Z consumers like practical things, therefore packing boxes of milk according to the characteristics of Generation Z. In line with Fromm & Read (2018) that Generation Z carries out activities quickly, practically, and efficiently.

Price is the last attribute considered by respondents when buying UHT Ultra Milk Flavor milk. The results of this study support previous research that price is one of the attributes considered in buying milk even though it is not a top priority (Nugroho, Mukson, & Setiawan 2021). Even though respondents did not make price their top priority, they still paid attention to price. According to Rahmalia Sari, Kaysmir, and Tantriadisti (2022), price is a crucial factor for consumers because it is used as an evaluation material. The price for UHT Ultra Milk Flavor is divided into  $\leq$ IDR 5.000 and prices  $>$ IDR 5.000. According to respondents, the price of UHT Ultra Milk Flavor is relatively affordable for students, but among these choices, respondents prefer prices  $\leq$ IDR 5.000 and prices  $>$ IDR 5,000 are not liked by respondents. Consumers logically prefer lower prices (Ramadhani, Priyanto, Estiasih, & Putranto, 2022). The study had limitations including, this research only focusing on one brand for UHT milk products and using generation Z samples at first university scope, the sample is not valid enough to be generalized on a large scale because the research was only conducted in 1 university. It is hoped that future research can use several samples of UHT milk brands on the market and examine Generation Z consumers throughout Indonesia.

## 7. Conclusions

Based on the results of the analysis and discussion in this study, it can be interpreted that Generation Z consumers of UHT Ultra Milk Flavor milk are dominated by women with the majority of students aged 20 years. The consumer income level belongs to the middle-class category. Consumers of Generation Z in this study realized that drinking milk is important with a level of understanding of nutritional value on a scale of 7 and consumers chose packaged liquid UHT milk as the type of milk most consumed with a purchase frequency of once a week buy at minimarket/supermarket. The characteristic of every Generation Z consumer in this study is to prefer the use of technology, in this case, social media, because it is considered effective and efficient in obtaining information.

The results of the Z generation's consumer preferences show that consumers prefer UHT Ultra Milk Flavor, which has a chocolate flavor with a 250 ml size package and a price of  $\leq$ IDR 5,000. Attributes that are most prioritized by Generation Z consumers respectively, are taste, packaging, and price.

## 8. Recommendation

For Generation Z consumers of Ultra Milk Flavor dairy products, taste is a top priority. The results of this study can serve as a suggestion as well as a consideration so that in the future the taste quality of the product can be maintained so that it remains the top choice for consumers, besides that new flavor innovations can be made (a blend of local fruit flavors or other trending food such as lotus biscoff). For further research, research subjects can be generalized more broadly (Generation Z throughout Indonesia), furthermore, it can also compare the characteristics and behavior of consumers between generations.

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