

# A COMPREHENSIVE ANALYSIS OF THE INFLUENCE OF FOOD PACKAGING DESIGN AMONG ISLAND COLLEGE STUDENTS IN BONGAO, TAWI-TAWI

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## Abstract

Packaging serves as a vital tool in attracting new customers and significantly influencing the purchasing decisions of target demographics. This study investigates explicitly how packaging affects the buying behavior of college students living on islands, examining five critical packaging elements: color, shape, material, information content, and graphic design. By employing a descriptive research methodology, this research aims to delineate the contexts in which these packaging factors operate and to uncover the relationships among them. To achieve this, a quantitative research design has been employed to measure the values associated with each packaging factor systematically. The data collected were analyzed using frequency and percentage methods to ensure robust validation and insightful interpretation. The findings reveal that respondents strongly agree with the importance of all five packaging factors, indicating a clear recognition of their impact. Notably, these island college students predominantly belong to Generation Z, a cohort known for its unique purchasing habits shaped by digital influences and environmental consciousness. Their responses suggest a heightened sensitivity to how packaging design aligns with their values and preferences. This study not only contributes valuable insights to the existing body of knowledge regarding consumer behavior but also identifies and bridges gaps in understanding the specific implications of packaging on purchasing behavior among this demographic.

**KEYWORDS:** Packaging, Food Packaging, Packaging Design, College Students

## 1. INTRODUCTION

Packaging plays a vital role in brand communication, influencing consumer behavior through its design and functionality (Prendergast & Pitt, 1996; Vyas & V, 2015). It helps develop a brand image, attract consumers (Shaw, 2024), and assure product quality (Ahmad & Ahmad, 2015; Onyeaka & Nwabor, 2022). Consumers form perceptions based on packaging elements such as materials, shape, color, and graphic design (Krishna et al., 2016; Bahrainizad & Rajabi, 2018). However, research suggests that companies' attention-grabbing strategies may have a greater impact on consumers than the packaging itself (Husić-Mehmedović et al., 2017). The materials used in packaging are found to have minimal influence on purchasing decisions (Wang et al., 2023).

While packaging affects all generations, the emotional drivers of Generation Z are less explored (Cheng et al., 2022). This study examines the influence of food packaging on purchasing decisions among Gen Z college students in Bongao, Tawi-Tawi, offering insights into how packaging design affects their perceptions and behaviors towards food products.

### 1.1 LITERATURE REVIEW

The study review focuses on five packaging elements. It includes colors, shapes, materials used, information, and graphic design. These elements play a significant role in consumer purchasing buying (Alhamdi, 2020). According to Ganai et al. (2019), these packaging elements are essential for food products. It can satisfy overall customer expectations and experiences, leading to inspiring positive reviews (Li et al., 2018).

#### 1.1.1 Color

Color in marketing plays a crucial role in influencing consumer behavior, affecting 62% to 90% of purchasing decisions. Companies must diversify their product offerings to remain competitive (Khandelwal et al., 2024). Additionally, consumers view packaging color as a key factor in their purchasing choices, driving impulsive buying (Kauppinen-Räsänen, 2014; Rajkumar & Jain, 2021; Bizongo, 2024).

#### **The color of the food packaging is a key factor in attracting consumers.**

Color significantly influences purchase decisions (Chitturi et al., 2019; Martinez et al., 2021) and a company's success (Daggar, 2024). Spence (2016) noted that appealing visuals are effective in attracting shoppers. Specific colors attract buyers: bright colors (Green Seed Group, 2023), red (Ganai et al., 2019), pastel orange (Anggraini et al., 2022), yellow for sweet products, blue for salty items, and white for tasteless products (Wang & Chang, 2022). Poor color choices

can harm product messaging (Stephenson, 2024). Hence, companies should carefully select color combinations for packaging to engage their target customers.

**Consumers are more likely to purchase a product if the packaging color is appealing.**

Colors play a crucial role in consumer decision-making, often leading to impulse purchases (Polyakova, 2013; Hubert et al., 2013). Effective color design can evoke emotions, enhance brand preference, and influence purchase intentions (Dave, 2023; Barnuevo & Roma, 2023). Packaging color also affects health perceptions and beliefs (Steiner & Florack, 2023). However, Imiru (2017) found no direct link between packaging color and purchasing, while Kong et al. (2017) noted that males and young adults were less responsive to color appeal.

**The color of food packaging influences consumers' perception of the product's quality.**

The colors in packaging significantly affect consumer appeal and perceptions of quality (Brandwell, 2024). They influence expectations (Casper, 2022), perception (Impact Consumer Products Group, 2024), taste (Veflen et al., 2023), and identification (Su & Wang, 2024). "White" space in food packaging can enhance perceived quality and trust (Margariti, 2021). Marketing professionals use color principles to shape perceptions and convey product qualities (Spence, 2018; Dillon, 2021; Nagy & Temesi, 2024). However, Berthold et al. (2024) found no link between packaging color and product quality.

**Consumers are more likely to try new products if the packaging color is visually appealing.**

Effective packaging design is vital for influencing consumer behavior during product launches. Factors like packaging color significantly impact buying decisions (Mastropietro von Rautenkrantz, 2016) and preferences (Nilsen et al., 2023). Strong packaging enhances brand image and prompts impulse purchases (Canpack, 2023). Consumers are increasingly attracted to biodegradable products, with 85% considering packaging color essential for appeal (Newsguard, 2017). This affects choices from initial observation to final selection (Dillon, 2024), but more research is needed on the symbolic meanings of design combinations, especially in food markets (Spence & Van Doorn, 2022).

**The color of the food packaging conveys certain emotions or feelings.**

Color is a powerful tool for conveying emotions and shaping brand identity (Mastropietro von Rautenkrantz, 2016). It significantly influences buyer behavior, with 85% of consumers affected by a product's color (Bizongo, 2024). Color combinations evoke specific emotions that impact purchase decisions (Khattak et al., 2018). While uncommon colors can suggest modernity, they are seldom used in food packaging (Swasty & Mustafa, 2023). Companies must consider color choices carefully, as each color is linked to distinct emotions and can represent nutritious food (Impact Consumer Products Group, 2024).

**1.1.2 Shape**

Packaging shape is a key aspect of packaging design, particularly for ready-to-eat food products (Ganai et al., 2019). It significantly influences consumer buying intentions (Berkowitz, 1987; Purwaningsih et al., 2019; Chou & Wang, 2012) and helps differentiate products in a competitive market (Shaw, 2024). According to Ganai et al. (2019), packaging shapes significantly influence consumer perception and preferences (Lo et al., 2017).

**The shape of the food packaging is appealing.**

Customers have varied perspectives when evaluating products, with packaging design, including shape, being particularly influential. Research by Agariya et al. (2012) highlights that package shape is crucial for packaging communication. Size and shape significantly impact purchasing decisions, particularly among low-engagement consumers (Wulansari, 2019), and have a positive influence on perceived usability (Bahrainizad & Rajabi, 2018). Interestingly, a study by Malešević and Stančić (2021) found that some consumers favor non-standard shapes, while Vladoić et al. (2023) noted that consumers tend to pay less attention to all packaging attributes, including shape.

**Consumers are more likely to purchase a product with unique packaging.**

The shape of a product's packaging can significantly influence purchasing decisions, often attracting customers to make a purchase. Chitturi et al. (2019) found that container shape has a positive effect on customer preferences, while Patel et al. (2024) noted a positive impact of unique packaging on customer retention. Research by Ansari and Siddiqui (2019) and Baptista et al. (2022) highlights the contribution of packaging design to purchase behavior. Interestingly, Basso et al. (2016) found that consumers view unconventional food packaging shapes as safe, though older consumers tend to prefer traditional packaging shapes.

**The shape of the food packaging catches the attention of consumers.**

Effective packaging designs, including those with persuasive shapes, effectively communicate with consumers and enhance brand value (Machiels et al., 2019; Velasco et al., 2014). Complex geometrical shapes attract consumer attention and influence preferences and satisfaction (Garber et al., 2008; Dadras, 2015). Distinctive packaging forms positively impact product visibility on shelves, as supported by Ogonowski and Piwowarski (2024) and Hassan et al. (2012) for processed foods. Draskovic (2007) also highlights the link between package shape and purchasing behavior.

**Consumers prefer food packaging shapes that match the specific type of food.**

Consumer impressions often begin with product packaging, particularly its shape, which can influence taste expectations (Veflen et al., 2023). Research shows that packaging shape affects taste perception (Velasco et al., 2016), with complex shapes suggesting greater taste intensity (Poslon et al., 2021). While packaging shapes shape pre-tasting expectations for coffee, they do not impact post-tasting ratings (de Sousa et al., 2020). Preferences also vary by gender; females tend to prefer curved shapes, while males opt for angular designs (Pang & Ding, 2021). Rounded packaging positively influences cereal cookie choices (da Rosa et al., 2018), and slim shapes increase choice likelihood without affecting enjoyment (van Ooijen et al., 2017). Westerman et al. (2013) found no strong preference for angular packaging.

**Consumers are more likely to try new products if the packaging shape is innovative.**

Packaging plays a vital role for discerning consumers, as innovative shapes can enhance product value (Makanjuola & Enujiugha, 2015). The shape of the packaging influences quality perception and buying preferences (Chitturi et al., 2019), leading consumers to pay more for appealing designs. Brand choice is often influenced by package shape and perceived brand status (Chen et al., 2020). However, some consumers, particularly seniors, still favor traditional packaging styles (Srisuro et al., 2024).

### 1.1.3 Material Used

Packaging material has a significant influence on consumer purchase intentions for food products (Asri et al., 2020; Nilsen et al., 2023). Many customers prefer sustainable, durable packaging that protects the product, is easy to use, and features high-quality components.

#### **The materials used in food packaging effectively protect the product.**

Packaging is essential for protecting products from contamination and spoilage (Liebmann et al., 2012). Auras et al. (2024) highlight the use of Polylactide polymers in food packaging. Selecting the appropriate containers and closures is crucial for companies (NASA, 2014). Naranjo-Guevara et al. (2023) found that transparent packaging enhances safety against microorganisms. However, Rebollar et al. (2017) noted that packaging materials have a limited influence on consumer purchasing behavior, and Imiru (2017) found that packaging materials have a minimal impact on consumer decisions for cereal products.

#### **The packaging materials used are easy to open and close.**

Easy-to-open product packaging significantly impacts consumer choices, especially for the elderly, who may face challenges with traditional packaging. Delić et al. (2018) found a preference for such systems, while Wenk et al. (2016) noted that perceptions of ease differ among consumers. Additionally, Duizer et al. (2008) pointed out problems like tight lids causing spills. Therefore, packaging should prioritize easy opening (Aithani et al., 2006).

#### **The materials used in the food packaging feel durable.**

Food packaging has evolved from its primitive origins to modern designs that reflect global trends and cater to consumer preferences. Contemporary packaging conveys a sense of durability and reliability to consumers. According to Silvestre et al. (2011), the application of polymer nanotechnology in packaging enhances product quality and effectively fulfills its primary functions: protection, preservation, marketing, and communication. This modern approach to packaging enhances the perception that the product is both durable and trustworthy.

#### **Consumers prefer food products that use high-quality packaging materials.**

High-quality packaging materials vary based on a company's needs. Some businesses choose eco-friendly options like glass and transparent plastics to protect products and preserve antimicrobial agents (Ait-Oubahou et al., 2019; Cha & Chinnan, 2010). However, consumer interest in such sustainable packaging remains low (Ketelsen et al., 2020), and glass may negatively impact perceptions of product quality (Poslon et al., 2021). Transparent designs can boost purchase intentions for small food items, while opaque packaging for larger items, like vegetables, engages consumers less (Barnuevo & Roma, 2023; Deng & Srinivasan, 2013; Ogonowski & Piwowski, 2024).

### 1.1.4 The Information

Packaging plays a crucial role in influencing consumers' purchasing decisions. Some consumers are more inclined to read the information presented on the packaging. Ganai et al. (2019) emphasize the significance of product information as a guide for ready-to-eat food items. Many customers are motivated to buy a product based on the information displayed on its packaging. Wulansari (2019) also notes that packaging information significantly impacts customers' purchasing decisions and their level of engagement.

#### **The information provided on the food packaging is straightforward to understand.**

Information representation is a crucial aspect of aesthetic packaging elements that can enhance brand awareness (Dave, 2023). It plays a significant role in influencing consumers' purchasing decisions. Nyblom (2020) confirmed that visual elements, particularly production information on packaging, pique consumers' curiosity and influence their purchasing decisions. Additionally, Van Rijswijk and Frewer (2011) discovered that consumers prefer clear information about production processes and the food itself. Therefore, companies face the challenge of presenting their products clearly and understandably to consumers.

#### **The product information on the food packaging is presented clearly and in an easily readable format.**

Clear and easy-to-read packaging information provides consumers with all the necessary details to understand the product. This information is crucial for consumers when making purchase decisions (Polyakova, 2013; Al-Samarraie et al., 2019). In addition to influencing decision-making, effective packaging also captures customers' attention and shapes their intentions. The information must be printed clearly and be easily noticeable (Carrero et al., 2021). However, older consumers tend to focus primarily on reading expiration dates, manufacturer details, and ingredient lists, often overlooking information presented in small font sizes (Świda et al., 2018).

#### **The instructions on the food packaging are easy to follow.**

Clear and easy-to-follow instructions have a significant impact on consumer purchasing behavior. Many novice customers require guidance on how to use products effectively. Therefore, brands need to include key information on their packaging, such as the production location, manufacturing date, and usage instructions (Ahmad & Ahmad, 2015). A study by Setiawardani et al. (2021) found that consumers prioritize instructions and information over brand promotion.

#### **The information about the brand or company on the food packaging is informative.**

Product information on packaging significantly influences customer purchase decisions (Ribeiro et al., 2018). Accurate details, including brand identification, instructions for use, and pricing, are vital for consumers' purchasing intentions (Barnuevo & Roma, 2023; Marsh & Bugusu, 2007). It also highlights product benefits (Figueiredo Muniz et al., 2023) and can include QR codes for improved interaction (Taware, 2024). According to Świda et al. (2018), essential information like expiration dates and product composition should be prominently displayed, particularly for older consumers.

#### **Consumers find the nutritional information on food packaging to be clear and comprehensive.**

Nutritional information is crucial for consumers to make informed food choices and receive health warnings. However, many find food health claims confusing, making clear information essential (Nocella & Kennedy, 2012). Interest in nutrition labels varies depending on the situation and product (Grunert & Wills, 2007). Mahgoub et al. (2016) found that while consumers are generally aware of nutrition information, and proper labeling aids purchase decisions (Green Seed Group, 2024), Bix et al. (2015) noted that consumers often spend little time on nutrition panels, highlighting the need for further research on understanding this information (Van Trijp, 2009).



### 1.1.5 Graphic Design

Food packaging acts as a marketing tool with designs ranging from simple to complex (Chen et al., 2023). To be effective, packaging must be perceived as attractive by consumers (Prayogi et al., 2022; Shaw, 2024). Key design elements, such as images, labels, font size, font style, and brand names, can significantly impact the perception of product quality. Westerman et al. (2013) highlight that congruence between graphical and product forms can increase the likelihood of purchase.

#### **Food packaging design influences purchase decisions.**

Packaging significantly influences consumer buying decisions. A study by Rebollar et al. (2017) found that product images strongly drive purchase willingness. User-centered designs are crucial for ready-to-eat food products (Ganai et al., 2019; Nemat et al., 2020). Rajkumar and Jain (2021) highlight that features like illustrations, font, and wrapping design affect shopping intentions. While packaging images can enhance brand preference (Dave, 2023), graphics may not always positively impact purchasing decisions for food products (Hassan et al., 2012).

#### **The food packaging design reflects the quality of the product inside.**

Consumers associate various packaging attributes with specific benefits (Vyas & V, 2015). Graphical images are particularly effective in minimizing feelings of disgust (Naranjo-Guevara et al., 2023). According to Rebollar et al. (2012), the packaging format can enhance customers' expectations of product quality, but it may also decrease visual appeal, which can reduce their willingness to purchase.

#### **Consumers prefer food products with innovative packaging designs.**

Packaging design significantly influences customer purchasing behavior (Waheed et al., 2018). Understanding economic factors is crucial for effective packaging (Brunazzi et al., 2014). Unique designs affect consumers' perceptions of product value (Romeo-Arroyo et al., 2023), while varied designs can enhance attraction and buying intentions but may not impact willingness to pay (Suci et al., 2022). Elements like text, images, and styles are important (Schifferstein et al., 2022). Creative packaging can enhance purchase decisions (Elkhattat & Medhat, 2022), and innovative designs for familiar products boost consumer intentions (Guo et al., 2024).

#### **The food packaging design has caught the attention of consumers.**

Packaging design significantly impacts customer interest, with varying effects in different retail contexts (Shukla et al., 2022). Font style is especially effective in food packaging (Asri et al., 2020), and well-designed graphics capture more attention (Ma et al., 2020). Although large, thick characters may draw viewers, they don't enhance appeal (Kovačević et al., 2018). Key attention-grabbing attributes include font style, design characteristics (Wang et al., 2023), and graphics (Asadollahi & Givee, 2011; Polyakova, 2013). Additionally, imagery can evoke hunger and boost appetite (Simmonds & Spence, 2017).

#### **Consumers prefer food products with visually appealing designs.**

Graphics significantly boost product sales (Mohebbi, 2014) and connect with consumer emotions (Ganai et al., 2019; Tyler, 2023), speeding up purchasing decisions (Warrell, 2016). Font style impacts consumers' expectations (Farahani et al., 2021), and illustrations are crucial in packaging design, prompting important changes (Wang, 2023). Children are attracted to characters and playful visuals (Abrams et al., 2015), while readable typefaces grab attention on food packaging (Kovačević et al., 2022). Older consumers tend to prefer simpler graphics (Swida et al., 2018).

## 2. METHODOLOGY

### 2.1 Research Design

This study used descriptive research methods to explore the relationships between the values of a specific group and their interpretations of various events, situations, and phenomena. According to Shinija (2024), the research highlights the characteristics of this particular population. To assess the values of the selected population, a quantitative research design was employed to validate the respondents' answers to specific questions. This method provides a systematic way to collect information from a defined sample.

Surveys were conducted among the respondents as a means of data collection. Surveying is a quantitative method used to gather data from a sample, allowing researchers to compile factual responses. It can also reveal the opinions and behaviors of willing participants (Avedian, 2014). A questionnaire was used in this survey to collect evidence regarding the influence of food packaging design on students' purchasing behavior.

### 2.2 Research Respondents

The primary respondents of this study are college students from Bongao, Tawi-Tawi, enrolled in business courses at three institutions: Mindanao State University Tawi-Tawi College of Technology and Oceanography (MSUTCTO), Mahardika Institute of Technology (MIT), and Tawi-Tawi Regional Agricultural College (TRAC). MSUTCTO and MIT offer a Bachelor of Science in Business Administration, while TRAC offers a Bachelor of Science in Agribusiness Management. Enrollment figures are 78 students at MSUTCTO, 95 at TRAC, and 85 at MIT. The sample size was 10% of the total population from these institutions, with a minimum of ten respondents per college. Each selected student completed a survey questionnaire to assess the influence of food packaging design, presented as a checklist.

### 2.3 Research Instrument

The study utilized a checklist questionnaire to gather data on the impact of food packaging design. It consisted of two sections: a personal profile covering sex, age, civil status, year level, and college affiliation, and an evaluation of packaging design through a 5-item checklist focusing on color, shape, materials, images, information, and overall design. This approach allowed researchers to collect relevant and reliable data to meet the study's objectives.

### 2.4 Data Gathering Procedure

The survey research was initiated in the last quarter of 2023. Permission was obtained from the heads of the target colleges to allow their students to participate in the study. Additionally, a request letter was sent to the college registrar's office to establish the appropriate sample size. Consent forms were also secured from the target respondents. The survey questionnaire was subsequently distributed in person to facilitate the administration of the survey at the colleges. All information provided by the respondents was treated with strict confidentiality.

2.5 Statistical Treatment of the Data

The study analyzed the impact of packaging design on college students using simple statistical methods like mean and standard deviation. The standard deviation condenses data, while the mean indicates central tendency (Lee et al., 2015). This approach is effective for data that is not significantly skewed (Laerd Statistics, n.d.). Effective data presentation is crucial for research clarity. Tools like tables enhance understanding by organizing data and minimizing redundancy (Slutsky, 2014). This research utilized tables for clear information presentation.

3. RESULTS

3.1 Demographic Profile

Consumers packaging preferences and needs are greatly affected by their age (Ford, 2016; Świda et al., 2018). The respondents in the study consisted of 53% males and 47% females. Among them, 33% were aged 15 to 20, while 67% fell within the 21 to 25 age range. 47% of the respondents are first year and 27% for second year.

3.2 Assessment of Responses

Table 1 Student Perception on the Color of the Food Packaging

No.	Statement	Mean	Std Deviation	description
1.	The color of the food packaging is a key factor in attracting consumers.	4.5667	0.56832	Strongly agree
2.	Consumers are more likely to purchase a product if the color of the packaging is appealing.	4.3667	0.61495	Agree
3.	The color of the food packaging influences the perception of the product quality.	4.5000	0.68229	Strongly agree
4.	Consumers are more likely to try new products if the packaging color is visually appealing.	4.5000	0.68229	Strongly agree
5.	The color of the food packaging conveys specific emotions or feelings.	4.6667	0.54667	Strongly agree
	Overall	4.52002	0.618904	Strongly agree

Respondents strongly agree with item 5, which has the highest mean of 4.6667, indicating a positive perception of food packaging color (Table 1). Conversely, item 2 has the lowest mean of 4.3667, labeled as 'agree.' The standard deviation of 0.618904 shows that most students view food packaging color positively, with an overall mean of 4.52002 suggesting strong agreement on its importance.

Table 2 Student Perception on the Shape of the Food Packaging

No.	Statement	Mean	Std Deviation	Description
1.	The shape of the food packaging is appealing.	4.5667	0.56832	Strongly agree
2.	Consumers are more likely to purchase a product if the packaging has a unique shape.	4.3667	0.61495	Agree
3.	The shape of the food packaging catches the attention.	4.5000	0.68229	Strongly agree
4.	Consumers associate certain shapes on food packaging with specific types of food.	4.5000	0.68229	Strongly agree
5.	Consumers are more likely to try new products if the packaging shape is innovative.	4.6667	0.54667	Strongly agree
	Overall	4.52	0.539732	Strongly agree

As shown in Table 2, the highest mean score of 4.6667 for item 5 indicates that students strongly prefer food packaging with innovative shapes. In contrast, item 2 received the lowest mean of 4.3667, suggesting a preference for packaging with specific shapes. The standard deviation of 0.539732 indicates varied responses, reflecting differences in preferences. The overall mean is 4.52, classified as 'strongly agree,' reinforcing the preference for food packaging with specific shapes.

Table 3 Student Perception on the Material Used in Food Packaging

No.	Statement	mean	Std deviation	description
1.	The material used for the food packaging is high quality.	4.5667	0.56832	Strongly agree
2.	The materials used in food packaging effectively protect the product.	4.3667	0.49013	Agree
3.	The packaging materials used are easy to open and close.	4.5000	0.50855	Strongly agree
4.	The materials used in the food packaging feel durable.	4.6333	0.49013	Strongly agree
5.	Consumers prefer food products that use high-quality packaging materials.	4.7000	0.46609	Strongly agree
	Overall	4.55334	0.41914	Strongly agree

The respondent strongly agrees with item number 5, which has the highest mean of 4.7000, indicating a positive perception of food packaging materials (Table 3). In contrast, item number 2 has the lowest mean of 4.3667 and is categorized as 'agree.' The standard deviation of 0.41914 shows variability in responses, reflecting differing opinions on food packaging materials. The overall mean is 4.55334, also indicating strong agreement, suggesting that students prefer products with high-quality packaging.

Table 4 Student Perception on the Image/Graphic of the Food Packaging

No.	III-Images\Graphics	Mean	Std Deviation	Description
1.	The images or graphics on the food packaging are attractive.	4.6333	0.55605	Strongly agree
2.	The image or graphic on the food packaging influence consumers' perception of the product quality.	4.4333	0.50401	Strongly agree
3	Consumers associate certain images or graphics on food packaging with specific brands or types of food.	4.5333	0.57135	Strongly agree
4.	The image or graphics on the food packaging make the product stand out on the shelf.	4.5667	0.50401	Strongly agree
5.	The image or graphics on the food packaging affect consumers' overall satisfaction with the product.	4.6667	0.47946	Strongly agree
	Overall	4.56666	0.426964	Strongly agree

The respondents strongly agree with item 5 received the highest mean of 4.6667 (Table 4). On the other hand, item 2 affected consumers' perception of product quality, with the lowest mean of 4.4333. Considering the standard deviation of 0.426964, there is heterogeneity in the responses of the items. The Overall mean is 4.56666, with a description of 'strongly agree.' Students preferred food packaging with images or graphics.

Table 5 Student Perception on the Information Provided on the Food Packaging

No.	Statement	Mean	Std Deviation	Description
1.	The information provided on the food packaging is clear and understandable.	4.57	0.50401	Strongly agree
2.	The product information on the food packaging is presented clearly and easily readable.	4.40	0.56324	Strongly agree
3.	The instructions (if any) on the food packaging are easy to follow.	4.57	0.50401	Strongly agree
4.	The information about the brand or company on the food packaging is informative.	4.70	0.46609	Strongly agree
5.	Consumers find the nutritional information on food packaging to be clear and comprehensive.	4.77	0.43018	Strongly agree
	Overall	4.6	0.42018	Strongly agree

According to Table 5, respondents strongly agreed with item 5, which had the highest mean of 4.7667, indicating a positive perception of the information on food packaging. In contrast, item 2 had the lowest mean of 4.3667 but still fell under 'strongly agree.' With a standard deviation of 0.42018, most students view the information positively. The overall mean is 4.6, showing strong agreement that the product contains the information stated on its packaging.

Table 6 Student Perception on the Design of the Food Packaging

No.	Statement	Mean	Std deviation	Description
1.	The food packaging design influences my purchase decision.	4.5000	0.57235	Strongly agree
2.	The food packaging design reflects the quality of the product inside.	4.4333	0.56832	Strongly agree
3.	I prefer food products with innovative packaging design.	4.4000	0.56324	Strongly agree
4.	The food packaging design has been well-received by consumers.	4.5000	0.57235	Strongly agree
5.	Consumers prefer food products that have a convincing design	4.4667	0.57135	Strongly agree
	Overall	4.46	0.495914	Strongly agree

Table 6 shows that respondents strongly agreed with items 1 and 4, each scoring a mean of 4.5000. This indicates students are inclined to purchase the product based on the food packaging design. Item 3 had the lowest mean of 4.4000, still reflecting strong agreement. With a standard deviation of 0.495914, it suggests that most students have a positive view of the packaging design. The overall mean is 4.46, confirming strong agreement regarding the product design in food packaging.

CONCLUSION

This research investigated the influence of food packaging design on the purchasing behavior of Generation Z college-island students in Bongao, Tawi-Tawi. Five factors of packaging design were analyzed, including color, shape, material used, information, and graphic design. Despite the research area is far from the city, the buying behavior of the respondents was strongly influenced by the five factors. The findings consistently indicated a strong consensus across all five elements evaluated. Students expressed a significant level of agreement that packaging color captures attention, influences perceptions of quality, and conveys emotions. Likewise, they affirmed that appealing packaging shapes, unique designs, and innovative forms can drive purchasing decisions and encourage product trials. High-quality materials, ease of opening, and durability were also ranked highly among their preferences. Additionally, attractive images and graphics were perceived as enhancing product quality and overall satisfaction. Clear and comprehensible information, easy-to-read product details, and informative brand messaging were all strongly favored, with nutritional information receiving the highest rating.

The strong response from the students highlights the considerable impact of the internet in the municipality. The internet shapes consumers' product selection decisions. The students are enthusiastic users of gadgets and social media within the community. In addition to the internet, the experiences of individuals who have traveled to larger cities and overseas can significantly alter the perspectives of the island community.

This pronounced agreement across all dimensions suggests that Generation Z college students in this region are exceptionally responsive to the effects of food packaging design. Marketers targeting this demographic should focus on creating visually appealing and informative packaging that incorporates innovative shapes, high-quality materials, and clear communication. These results highlight the importance of understanding consumer preferences in packaging design to achieve successful marketing outcomes. Further research could investigate generational differences in packaging preferences more comprehensively, identify the specific color, shape, and design elements that most influence this demographic, and examine the impact of packaging on actual purchasing behaviors beyond stated preferences.

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