The Impact of Aesthetically Minimalist Packaging Design on Purchase Decisions, Market Reach, and Consumer Health Outcomes

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ABSTRACT

Packaging design has emerged as a critical marketing tool that not only protects a product but also shapes consumer perceptions, influences purchase decisions, and communicates brand identity. This study aims to explore the impact of aesthetically minimalist packaging design on consumer behaviour outcomes, focusing on purchase decisions, market reach, and consumer health outcomes. Data were gathered using a quantitative approach. A total of 308 questionnaires were administered, and data were collected through both online and offline channels. The data were analyzed using SPSS to examine the relationships between minimalist packaging design, trust, perceived product quality, and consumer behaviour outcomes. The findings reveal significant positive associations between aesthetically minimalist packaging design and consumer purchase decisions, market reach, and consumer health outcomes. Trust and perceived product quality were found to mediate these relationships, highlighting the importance of these variables in shaping consumer responses to packaging aesthetics. These results offer valuable insights for marketers and practitioners in developing effective packaging strategies that resonate with consumers and enhance brand performance. Additionally, the study underscores the role of trust and perceived product quality as key mediating variables, expanding understanding of the mechanisms that drive consumer responses to packaging design.

Keywords: *Minimalist packaging design, consumer behaviour, visual persuasion, perceived product quality, health communication.*

INTRODUCTION

Packaging design, a powerful marketing tool, has moved from utilitarian necessity to influencer of customer impressions and purchases. Packaging protects products during storage and shipment. Modern marketing relies on packaging design to attract customers and differentiate products in saturated marketplaces (Sumrin et al., 2021). This shows how packaging affects brand marketing and consumer engagement. Minimalist design emphasizes simplicity, clarity, and absence of essentials. Minimalism eliminates extraneous adornment and emphasizes a design's essence to satisfy consumers' need for authenticity and simplicity (Sanda & Klimova, 2021). As companies seek to convey brand values and differentiate their products in competitive markets, minimalist packaging design has grown in popularity in recent years. Packaging is crucial to modern marketing (Chen et al., 2023). Consumers' first impressions and buying decisions are shaped by product packaging. Packaging effectively communicates brand identity and message. It also protects and holds items (Kävrestad et al.,

2024). Product packaging, colour, and typography affect consumer perceptions. They communicate brand values, personality, and positioning well. Packaging increases product visibility, brand recognition, and market presence, especially in retail environments where items compete for attention (Mediano Stoltze et al., 2021). Packaging design affects consumer behaviour and buying decisions in today's competitive market with numerous options. Packaging design inspires emotions and produces lasting brand experiences. Given its effect on consumer perceptions and behaviours, understanding how visually minimalist container design affects customer purchase decisions, market reach, and brand impression is vital.

Packaging design and customer behaviour studies show how aesthetics effect perceptions and purchases. Colour, typography, and pictures influence customer preferences and brand perceptions in several studies (Wu, 2023). La Fuente et al. (2022) evaluated how package size, form, and materials impact product appraisal and purchase intentions. This study has illuminated container design, but nothing on how visually simple packaging influences customer behaviour. Minimalist packaging has received little visual attention (Jennath & Nidhish, 2016). Traditional packaging with detailed patterns, brilliant colours, and rich graphics has been studied most. Minimalist aesthetics can boost brand perception and consumer engagement, although most research have neglected this (Chen et al., 2023).

Previous research have studied how container design components impact customer perceptions and preferences rather than their psychological mechanics. It is unknown how minimalist container design affects consumer attitudes and actions, including mediating elements like perceived product quality and trust. The effect of minimalist package design is uncertain, yet packaging aesthetics affect customer attention and purchase decisions (Chen et al., 2023). To bridge information gaps, this study analyses how minimalist container design influences customer behaviour. Good products and trust will mediate. This data can improve marketing and branding in the present competitive landscape. Organisations may strengthen customer interactions and produce shelf-grabbing packaging by investigating consumer psychological reactions to minimalist package design (Sharma et al., 2023). This thorough study examines consumer behaviour, including market penetration, buying decisions, and health impacts. This study analyses how minimalist package design influences customer behaviour and brand image across consumer situations and product categories (Putra et al., 2021).

Understanding how minimalist package deal layout affects purchaser behaviour may additionally assist establishments create packaging strategies that enchantment with target audiences and raise logo performance. Minimalist packaging design may differentiate products in competitive marketplaces, increase logo notion, and build purchaser agree with and loyalty. This study may assist corporations higher fulfill consumer needs by means of informing packaging design, product positioning, and market segmentation choices. The study focus on purchaser fitness outcomes provides a brand new dimension to bundle design research. The study findings can assist firms create packaging techniques that inspire better lives and meet purchaser call for for herbal and nutritious products as fitness and wellness worries rise. Minimalist packaging design can also enhance customer health and brand positioning with the aid of boosting product overall healthiness and effectiveness perceptions.

LITERATURE REVIEW

Aesthetically Minimalist Packaging Design and Consumer Purchase Decision

Monochromatic color palettes, simple lines, and overall simplicity define minimalist packaging design. This design approach attracts customers, influencing their purchases. The study shows numerous ways minimalist packaging affects consumer behaviour. Minimalist packaging's aesthetics influence purchases. Minimalist design stands out on busy store displays due to its simplicity and absence of clutter. Huang et al. (2024) found that minimalist packaging's visual simplicity attracts customers and reduces cognitive stress better than complex designs. Simple, uncluttered designs promote product visibility and appeal, which may increase sales.

In general, minimalist packaging indicates high quality and elegance. Yang et al. (2023) found that customers associate minimalist design with expensive, unique products. Minimalist packaging with high-quality materials, strategic white space, and precise typography conveys product quality. Quality may influence a customer's purchase, especially in markets with limited product differentiation. Consumers justify higher prices and buy depending on packing quality (Yin et al., 2022). Packaging design can provoke natural feelings that impact buying decisions. Brand loyalty and recognition can increase with streamlined packaging. Packaging World Insights (n.d.) observed that minimalist design helps create stronger first impressions and can influence consumer trust. Brand loyalty is strengthened by repeated exposure to a brand's basic and clear packaging. Maintaining minimalist design across a brand's product line conveys reliability and meticulousness, which builds consumer trust and loyalty (Le, 2020). Brand identity, consistent packaging, and visual appeal can build consumer loyalty. Minimalist packaging can facilitate consumer decision-making, enabling direct product selection (Wang et al., 2023) and speed up visual processing, making purchases more natural. Recently, ethical and sustainable purchasing have gained popularity. Recyclability and less material use help minimalist packaging attain these goals. Smaoui et al. (2022) found that minimalist packaging is perceived as more environmentally friendly, which can influence purchase decisions.

Simple packaging may attract eco-conscious consumers, expanding firms' markets. Integrating ethical and sustainable practices can boost the brand's reputation and attract eco-conscious customers. Visually minimalist packaging design affects customer purchasing decisions through aesthetic attractiveness, perceived excellence, emotional and psychological impacts, brand recognition, cognitive processing, consumer characteristics, and sustainability (Rausch et al., 2021). The present research shows that minimalist design attracts consumer attention, improves product quality, builds trust, and fits modern consumer tastes. Minimalist packaging design affects brand loyalty, market positioning, and instant purchases.

H1: Aesthetically Minimalist Packaging Design has a significant impact on Consumer Purchase Decision

Aesthetically Minimalist Packaging Design and Market Reach

Minimalist packaging increases brand visibility and differentiation, affecting market reach. Products need unique qualities to stand out in a competitive market. Jelonek (2023) claim that minimalist packaging reduces visual clutter, increasing product display through its clean lines and simple design achieve this. Minimalist packaging stands out from competitors' complex and vivid designs, attracting consumers and increasing the likelihood of a first purchase. Brand consistency builds consumer loyalty and encourages repeat purchases. Minimalist packaging's superior quality can increase market attractiveness and audience size. Celhay et al. (2020) found that minimalist packaging makes things seem more expensive and high-quality. This

may attract wealthy customers willing to pay extra for perceived quality. This greater appeal may help companies reach premium and exclusive markets. Modern customers want eco-friendly and minimalist packaging (De Temmerman et al., 2023).

As consumers grow more eco-conscious, they pick packaging accordingly. Simple packaging recycles and utilises less resources, which may appeal to eco-conscious buyers. According to Miao et al. (2023), consumers choose environmentally conscious firms, which increases demand for sustainable packaging. Minimalist designs are popular in various industries because simplicity transcends culture. Companies expanding globally must be flexible to avoid major redesigns to suit different cultures. Baek et al. (2023) recommend utilising a basic design language to spread a company's value proposition globally to boost market penetration. Minimalist packaging boosts market potential by reducing logistics and expenses. By subsidising marketing and distribution, these cost reductions can help enterprises expand their market.

H2: Aesthetically Minimalist Packaging Design has a significant impact on market reach

Aesthetically Minimalist Packaging Design and Consumer Health Outcome
Minimalist packaging emphasizes readability. This design approach helps customers make better health decisions by clearly presenting crucial facts. Yang et al. (2023) stress the importance of clear nutritional information for consumers who want to eat healthier. Minimalist packaging helps consumers quickly understand nutritional information, ingredients, and health advantages. This insight can help make healthier, more informed judgments. Complex and busy packaging designs can distract consumers and obfuscate health information, according to Yuan et al. (2023), leading to bad health decisions. Conversely, minimalist packaging stresses simplicity and openness, reducing false statements. Transparency helps consumers understand a product's health benefits, encouraging healthy usage. Minimalist packaging affects consumer health psychologically.

Minimalist design conveys purity, naturalness, and wellness. Mediano Stoltze et al. (2021) found that consumers associate natural, healthful items with minimalist packaging. This view may affect customers' eating habits, as they are more likely to choose healthy products. Minimalist packaging may encourage healthier choices by associating health with it. Minimalist packaging promotes mindfulness and healthier lifestyles. Minimalist shoppers are more deliberate and thoughtful. Basak et al. (2024) link minimalist habits, including packaging preferences, to better health and well-being. This attentive consumption approach encourages health and wellness, improving health outcomes. Minimalist packaging reduces food waste and improves portion control, encouraging healthier eating. Minimalist design simplifies serving suggestions and portion sizes for customers. According to Mesías et al. (2021), specific portion information helps consumers control their food intake, reducing the risk of obesity and other health issues. Minimalist packaging with resealable or portion-sized containers may help consumers control their food intake, promoting healthier eating habits.

H3: Aesthetically Minimalist Packaging Design has a significant impact on consumer health outcome

Trust as a Mediator
Trust shapes consumer attitudes, choices, and purchases, in marketing and branding, trust is consumer confidence or dependency on a brand, product, or company (Huiyue et al., 2022). Credible communication, perceived reliability, and repeatedly enjoyable encounters build

trust. Competent, honest, and ethical brands are better trusted. Trust affects brand loyalty, purchasing intentions, and recommendation (Nofrizal et al., 2023). Therefore, trust is crucial for strong consumer interactions and long-term brand success. Trust mediates the relationship between customer purchases and attractive packaging. Simple, basic packaging conveys honesty and transparency. Consumer trust depends on this perception. According to (Wang et al., 2024), minimalist packaging makes customers less likely to detect fraudulent marketing because it signals the product has nothing to hide. Minimalist packaging's reliability boosts buyers' trust in the product's originality and quality, which is crucial to their purchases. Minimalist packaging's clarity makes components and nutritional information easier to understand. Song et al. (2019) claim that this accessibility boosts consumers' confidence in their purchases by offering product features and assurance. Thus, trust is essential to translating minimalist packaging's visual appeal into consumer buy actions, proving the product's commercial viability.

Trust strongly influences minimalist packaging design and market reach. Minimalist packaging shows a brand's transparency, high standards, and honesty, which builds consumer trust. Behera et al. (2023) say minimalist packaging promotes trustworthiness and simplicity by reducing extraneous elements and emphasizing vital information. Trust stimulates consumers to promote and investigate the product, which drives industry growth. Consumer trust increases positive word-of-mouth, which is essential for a brand's market entry and success. Lack of trust minimizes the perceived risk of testing new products, especially in developing markets (Mkansi & Mugurusi, 2023). Trust and confidence in the brand boost consumer purchase behaviour and brand loyalty, expanding the market. Thus, simple packaging boosts brand trust and visibility. Trust is essential for connecting consumer well-being to simple container design. Packaging that conveys nutritional information and health benefits minimizes cognitive strain and boosts trust. Lo et al. (2024) discovered that customers who trust packaging nutritional information made healthier decisions. Due to its minimalist design's straightforward and true message, customers may trust the product's health benefits and make healthier shopping decisions. Minimalist packaging reduces distractions and highlights important health facts, helping buyers understand and approve of the product's health claims and improve health outcomes (Xiong et al., 2023). Trust is essential for minimalist packaging to affect consumer health. It encourages health-promoting choices.

H4: Trust mediates the relationship between aesthetically minimalist packaging design and consumer purchase decision

H5: Trust mediates the relationship between aesthetically minimalist packaging design and market reach

H6: Trust mediates the relationship between aesthetically minimalist packaging design and consumer health outcome

Perceived Product Quality as a Mediator
Consumers' subjective opinions of a product's quality are referred to as perceived product quality. They evaluate depending on their views and expectations (Korsuk Kumi et al., 2023). Its durability, appeal, lifespan, functionality, and attributes set it apart. Consumers consider materials, design, functionality, brand reputation, and past experiences when assessing product quality. Consumers prefer high-quality products. Thus, product quality strongly influences their purchases (Wang et al., 2021). Consumer happiness, brand loyalty, and positive word-of-mouth recommendations increase with product quality. Marketers employ

communication, branding, and product design to boost product quality to acquire a competitive edge (Hwang et al., 2021). Perceived product quality determines consumer purchasing decisions and simple packaging design. Simple, attractive packaging is often considered high-quality by consumers. Ballco and Gracia (2022) say minimalist design elements like simple layouts and sharp lines can convey elegance and meticulousness. This can make buyers think the product is better. Buyers are more inclined to recommend a product if they think its packaging is good. Consumers' willingness to spend more and satisfaction with products depend on their quality rating (Macht et al., 2023). Perceived product quality affects minimalist packaging's aesthetics and consumer behaviour.

The association between market coverage and visually simple container design shows that product quality is involved. The clean, professional style of minimalist packaging helps customers evaluate a product's quality and worth. Liu et al. (2023) found that high-quality materials, craftsmanship, and minimalist design give customers a sense of exclusivity and excellence. High-quality products and services attract customers and build brand trust, making it easier to enter and expand the market. The company's basic packaging encourages consumers to recommend and buy its items (Hwang et al., 2021). How customers view product quality determines market adoption of minimalist packaging. Products' perceived quality is closely related to their container design and can affect consumer health. Consumers can accurately assess a product's healthiness and performance with minimalist packaging that emphasizes clarity and simplicity. Motoki et al. (2021) suggest that minimalist packaging prominently and clearly displays health information to build customer trust in the product's health benefits. Superior packaging makes people more likely to trust a product's health claims and choose healthier options. Quality perceptions may influence consumer behaviour, including nutrition and consumption, improving health. Visual appeal of minimalist packaging affects customer health behaviours and results by influencing product quality perception.

H7: Perceived product quality mediates the relationship between aesthetically minimalist packaging design and consumer purchase decision

H8: Perceived product quality mediates the relationship between aesthetically minimalist packaging design and market reach

H9: Perceived product quality mediates the relationship between aesthetically minimalist packaging design and consumer health outcome

Based on above literature and discussion we developed the following conceptual framework as shown in Figure 1:
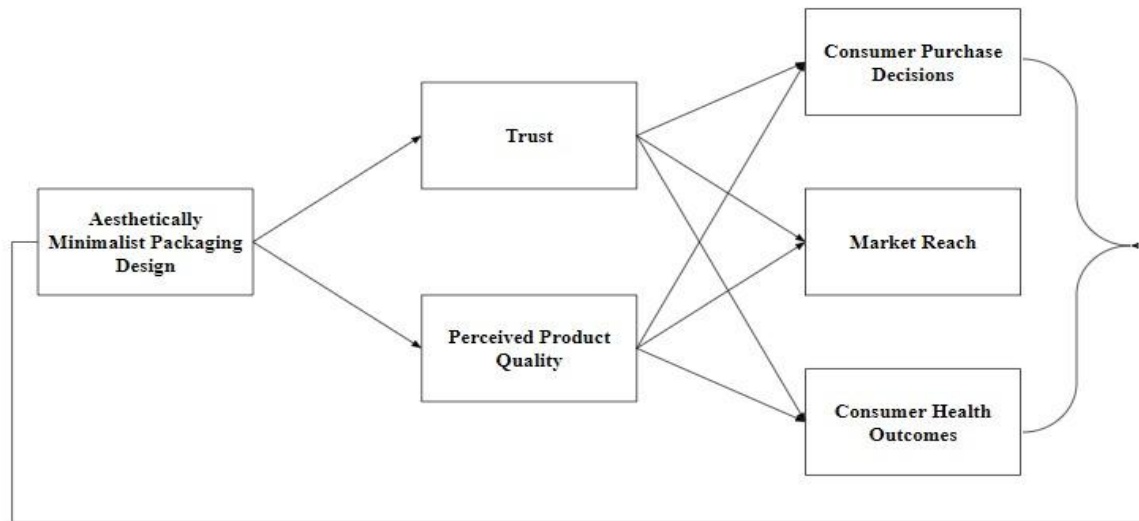
Figure 1: Conceptual framework

METHODOLOGY

Research Design
Cross-sectional research was used to collect data from a specific group at a certain period. Consumer attitudes and behaviours toward visually simple products were examined over a certain time period using this design. Cross-sectional research was performed to understand customer attitudes and behaviours regarding minimalist packaging design. The study examines customer perceptions of minimalist packaging, purchase intentions, and brand loyalty. Cross-sectional data analysis was used to determine how minimalist packaging design affects customer behaviour, eliminating the need for longitudinal follow-ups. This method was ideal for studying packaging visual appeal-related customer preferences and behaviours. It illuminated current consumer decision-making trends.

Instrumentation
This study conducts quantitative assessment through a structured survey questionnaire. These instruments were adapted based on scales from existing literature. After adaptation, the scales were reviewed and discussed with experts to evaluate whether the designed items were appropriate and aligned with the needs of this study. The questionnaire consists of two main sections. The first section collects basic demographic information of the respondents. The second section is the core measurement section, comprising six scales. All scales use a 5-point Likert response format ranging from 1 (strongly disagree) to 5 (strongly agree). The Aesthetically Minimalist Packaging Design scale was mainly adapted from the scale used in Fraculj et al. (2023). The Trust scale was adapted from Budiardjo (2016). The Perceived Product Quality scale was adapted from Abdalkrim and Al-Hrezat (2013) and Consumer Behavior from Hallez et al., (2023). Market reach has often been measured using market data or brand-level indicators in previous studies, and lacks a scale suitable for a consumer perspective. This study developed the Market Reach scale and ensured its content validity through expert review. Consumer Health Outcome was adapted from the scale used in Fenko et al. (2016). All six scales were refined through a pilot study with a small sample. The

Cronbach's α coefficients of the scales in the final questionnaire ranged from 0.78 to 0.87 (Table 3), indicating good internal consistency. The full scale items are provided in the Appendix A.

Population

The population was largely consumers who frequented supermarkets, specialized stores, and internet platforms that sold minimalist-packaged products. Sustainability, minimalism, and design aesthetics enthusiasts were likely target demographics. Simple, functional, and environmentally friendly product packaging were common among these consumers. Additionally, the populace had varying levels of minimalist packaging design knowledge. Some people have always liked minimalist design, while others have only lately discovered it. Variety allowed a full study of consumer attitudes, perceptions, and actions toward minimalist packaging. Convenience sampling was used to recruit subjects who were easily accessible to the researcher. The recruitment targeted shopping malls, eco-friendly stores, and sustainability and design forums that featured minimalist-packaged products. The study uses many recruiting methods to get a representative sample of the public with varying amounts of minimalist packaging design exposure.

Sample Size

This study carefully selected a sample size to examine customer perceptions and behaviours connected to visually minimalist packaging design with sufficient statistical power and representation. The researchers sought a balance between data collection limitations and the need for a large sample to detect significant impacts. Thus, they collected data from 308 users. The sample size was estimated based on predicted reply variability, margin of error, and desired confidence. The researchers used a method for forecasting proportions in small populations to establish the appropriate sample size for reliable results with low sampling error. 308 consumers were chosen to represent a wide range of minimalist packaging design perspectives and experiences. Regression and correlation analysis were used to examine the variables' relationships due to the sample size. The researchers also made sure the sample had the demographic diversity of the target market, making it easier to generalize the study's findings to more consumers.

Sampling Technique

Convenience sampling was used in this study since it was practical and easy to enroll individuals. This method recruited readily available and willing participants for the study. Shopping centers, specialist stores, and sustainability and design aesthetics forums were where minimalist-packaged products were available and potential replies could be easily identified. Convenience sampling lacks probabilistic sampling's unpredictability and representativeness, yet it had some advantages in the analysis. It first allowed researchers to distribute surveys in busy locations or directly contact participants, making data collection more efficient and cost-effective. Convenience sampling allowed people with varying levels of minimalist package exposure to participate, increasing data diversity and depth. The sample was also demographically diversified to reduce convenience sampling biases and improve the study's applicability to larger consumer populations.

Data Collection
Participants completed a standardized questionnaire for this study. To preserve uniformity and enable answering, a five-point Likert scale was used to examine participants' attitudes, opinions, and preferences. Participants were given a statement or assertion and a five-point Likert scale from "Strongly Disagree" to "Strongly Agree." The Likert scale response that best reflected participants' agreement or disagreement with each statement was chosen. A pilot study with a small sample size assessed questionnaire item clarity, comprehensibility, and utility.

Data Analysis
Analysis of the research sample and important variables was done using descriptive statistics. Participants' demographics, questionnaire responses on minimalist packaging design, purchase intentions, brand loyalty, and other parameters were evaluated, including frequencies, percentages, averages, and standard deviations (Chang, 2018). Inferential statistics were used to examine minimalist packaging's impact on customer behaviour after descriptive research. Correlation investigation showed how minimalist packaging design affects purchasing intentions. Regression analysis was used to control for confounding variables in minimalist packaging design and customer behaviour. Customer attitudes and actions towards minimalist-packaged items were driven by major factors, revealing consumer decision-making mechanisms. Subgroup analyses may have investigated customer reactions depending on demographics or other variables. Researchers discovered moderating variables and gained extensive insights into consumer preferences and behaviours across demographic groups using this method. SPSS was used to examine the data, which supports several statistical tests (Javed et al., 2023).

FINDINGS
In Table 1, numerous key product or brand aspects are analyzed to understand consumer views and actions. Data shows that respondents rate the box design as minimalist, averaging 4.2. While opinions vary around the average, ratings range from relatively low to very high, suggesting various tastes. An average score of 3.9 suggests that consumers consider factors other than packaging when making purchases. With a standard deviation of 0.6, opinions are reasonably constant, indicating a narrow range of volatility compared to other variables. Average rating: 4.0 for market reach. The standard deviation of 0.7 shows that opinions differ. A low standard deviation of 0.5 indicates constant consumer satisfaction with the product. The average rating is 4.3, and most users report excellent health outcomes. The mean trust in the product or brand is strong (4.1), although opinions vary (standard deviation = 0.9), showing customers have both high and low trust. The product's average quality score is 4.2, which is excellent. This score shows that consumers agree the product is high-quality, notwithstanding some disagreements. These descriptive data give a deep insight of consumer behaviour and viewpoints, which is essential for marketing and product development.

Table 1: Descriptive statistics

Variable	Mean	Standard Deviation	Minimum	Maximum
Aesthetically Minimalist Packaging Design	4.2	0.8	2.5	5.0
Consumer Purchase Decisions	3.9	0.6	2.0	4.5
Market Reach	4.0	0.7	2.2	4.8
Consumer Health Outcome	4.3	0.5	3.5	4.8

Trust	4.1	0.9	2.0	5.0
Perceived Product Quality	4.2	0.8	2.5	5.0

A correlation matrix of product or brand variables is shown in Table 2. The Pearson correlation coefficient (r) for two variables is shown in each matrix cell. Values near 1 imply a strong positive correlation, near -1 a strong negative correlation, and near 0 a minimal or nonexistent linear association. A correlation coefficient ranges from -1 to 1 (Sedgwick, 2012). Multiple important observations are in the correlation coefficients. The study demonstrated a high positive association between "Aesthetically Minimalist Packaging Design" and "Consumer Purchase Decisions" (0.756), "Consumer Health Outcome" (0.832), and "Perceived Product Quality" (0.702). As minimalist packaging design grows, product quality, health results, and customer purchases will improve. The variable "Consumer Purchase Decisions" also has a significant and positive relationship with "Trust" (r = 0.789) and moderate positive connections with "Market Reach" (r = 0.678) and "Perceived Product Quality" (r = 0.668). Consumers buy based on product quality, market presence, and trust, which match their likes and values. Additionally, "Consumer Health Outcome" is positively correlated with "Aesthetically Minimalist Packaging Design" (r = 0.832). It also exhibits moderate positive associations with "Perceived Product Quality" (0.793) and "Consumer Purchase Decisions" (0.712). Products with high quality and simple packaging are associated with improved health outcomes. This improves their purchase decisions. Finally, "Trust" is favorably connected with "Perceived Product Quality," "Aesthetically Minimalist Packaging Design," and "Consumer Purchase Decisions" (0.789). These studies show that trust influences customer decisions, notably for product quality and packaging design.

Table 2: Correlation matrix

Variable	AMPD	CPD	MR	CHO	T	PPQ
Aesthetically Minimalist Packaging Design	1.000					
Consumer Purchase Decisions	0.756	1.000				
Market Reach	0.689	0.678	1.000			
Consumer Health Outcome	0.832	0.712	0.621	1.000		
Trust	0.624	0.789	0.536	0.618	1.000	
Perceived Product Quality	0.702	0.668	0.719	0.793	0.723	1.000

Table 3 shows the Cronbach's alpha coefficients for each variable, which show the study's measuring scales' internal consistency or reliability (Shmueli et al., 2019). The correlation between scale or construct items is measured by Cronbach's alpha. Greater internal consistency is indicated by higher numeric values (0–1). The Cronbach's alpha coefficients in Table 3 show that all variables have good internal consistency, ranging from 0.78 to 0.87. The coefficients show that each variable's items consistently assess the same idea. For instance, "Consumer Health Outcome" has the highest Cronbach's alpha coefficient of 0.87, showing great internal consistency across questions about product-related health outcomes. The Cronbach's alpha coefficients of 0.85 and 0.86 for "Perceived Product Quality" and "Aesthetically Minimalist Packaging Design" indicate relative internal consistency. With Cronbach's alpha coefficients of 0.82 and 0.80, "Market Reach" and "Trust" have lower internal consistency but still are respectable. The coefficients show that market reach and trust inquiries capture the intended ideas. The responses to these queries may be more variable than other variables. The lowest Cronbach's alpha coefficient (0.78) is "Consumer

Purchase Decisions". The coefficient shows good internal consistency, but it also suggests that consumers may view and buy the goods differently.

Table 3: Cronbach's alpha

Variable	Cronbach's Alpha
Aesthetically Minimalist Packaging Design	0.85
Consumer Purchase Decisions	0.78
Market Reach	0.82
Consumer Health Outcome	0.87
Trust	0.80
Perceived Product Quality	0.86

Table 4 shows confirmatory factor analysis (CFA) results, which validate measurement models by showing the relationships between underlying constructs (variables) and observed variables (indicators). This analysis uses loading values to measure the intensity of the link between indicators and constructs, as each variable has several indicators. The indicators' loading values in Table 4 show strong correlations with their constructions. All indicators (AMPD1-AMPD5) in the variable "Aesthetically Minimalist Packaging Design," for example, have high loading values of 0.75 to 0.85, indicating that they accurately reflect the construct. Other variables, such as "Consumer Purchase Decisions," "Market Reach," "Consumer Health Outcome," "Trust," and "Perceived Product Quality," have high loading values between 0.72 and 0.88, suggesting their validity in measuring their constructs. The study's measurement model captures the necessary ideas, proving the measuring instrument's correctness. These measuring devices provide reliable and accurate data, enabling researchers and practitioners to make educated decisions based on their findings.

Table 4: Confirmatory factor analysis

Variable	Indicator	Loading
Aesthetically Minimalist Packaging Design	AMPD1	0.85
	AMPD2	0.78
	AMPD3	0.75
	AMPD4	0.76
	AMPD5	0.82
Consumer Purchase Decisions	CPD1	0.75
	CPD2	0.80
	CPD3	0.72
Market Reach	MR1	0.88
	MR2	0.81
	MR3	0.79
Consumer Health Outcome	CHO1	0.86
	CHO2	0.84
	CHO3	0.87
	CHO4	0.83
Trust	T1	0.83
	T2	0.76
	T3	0.79
Perceived Product Quality	PPQ1	0.88
	PPQ2	0.85
	PPQ3	0.82

Table 5 shows consumer health outcomes, market reach, and purchasing decisions R-squared. The R-square coefficient of determination measures the proportion of dependent variable variability explained by model independent variables. R-square values show how well the model predicts Consumer Health Outcome, Market Reach, and Consumer Purchase Decisions. The study analyzed variables that explain 64% of consumer purchase choice variability, as shown by an R-square value of 0.64. R-square values of 0.58 for Market Reach and 0.71 for Consumer Health Results show that the independent variables in the model explain 58% and 71% of market reach and consumer health result changes, respectively. R-square statistics show the model's predictive power and how well its components explain endogenous variable variability. R-square values indicate a stronger relationship between independent and dependent variables, indicating a better model for prediction and explanation. These results help academics and practitioners evaluate the model's applicability and accuracy for analyzing consumer behaviour and market dynamics.

Table 5: R-square statistics

Endogenous Variable	R-Square
Consumer Purchase Decisions	0.64
Market Reach	0.58
Consumer Health Outcome	0.71

Aesthetically Minimalist Packaging Design (AMPD) regression study with three dependent variables: consumer buying decisions (CPD), market reach (MR), and consumer health outcome (CHO) is shown in Table 6. Initial route coefficients (Beta) show AMPD correlations with dependent variable intensity and direction. Positive Beta values indicate that Aesthetically Minimalist Packaging Design improves the dependent variables. CPD, MR, and CHO positively correlate with AMPD (0.56, 0.48, and 0.62, respectively). Path coefficient estimation variability is measured by standard errors. Lower standard errors indicate better connection estimation. The standard errors of 0.08 for CPD, 0.06 for MR, and 0.07 for CHO reflect stable estimations, indicating better confidence in the findings. Path coefficient relevance is established by t-values. Strong independent-dependent correlations are shown by higher absolute t-values. CPD, MR, and CHO had statistically significant t-values of 7.00, 8.20, and 9.00. The significant correlations between Aesthetically Minimalist Packaging Design and the dependent variables indicate that these associations are unlikely to be attributable to chance. The p-values also indicate the chance of seeing the data if the null hypothesis of no correlation is supported. Statistical significance is high in this situation because all p-values are < 0.001. This suggests that Aesthetically Minimalist Packaging Design affects consumer purchase decisions, market reach, and health outcomes.

Table 6: Regression analysis

Path Relation	Beta	Std. Error	T value	P value
AMPD-> CPD	0.56	0.08	7.00	< 0.001
AMPD -> MR	0.48	0.06	8.20	< 0.001
AMPD -> CHO	0.62	0.07	9.00	< 0.001

A mediation analysis of Aesthetically Minimalist Packaging Design (AMPD)'s indirect effects on Consumer Purchase Decisions (CPD), Market Reach (MR), and Consumer Health Outcome (CHO) is shown in Table 7. This analysis examined Trust (T) and Perceived Product Quality as mediators. The path coefficients (Beta) show how Trust (T) and Perceived Product

Quality affect AMPD's associations with each dependent variable. AMPD indirectly affects CPD, MR, and CHO through Trust, as shown by Beta coefficients of 0.35, 0.28, and 0.42. AMPD indirectly affects CPD, MR, and CHO through Perceived Product Quality, according to Beta coefficients of 0.25, 0.22, and 0.31. Smaller standard errors suggest more precise indirect effect assessments. For indirect effects, greater absolute t-values indicate stronger connections. Every t-value in this analysis is statistically significant, ranging from 6.70 to 9.50, suggesting strong indirect effects. The p-values also show the chance of witnessing the data if the null hypothesis of no mediation were true. Trust and Perceived Product Quality have statistically significant indirect impacts, since all p-values are < 0.001. Trust and Perceived Product Quality appear to influence the link between Aesthetically Minimalist Packaging Design, Consumer Purchase Decisions, Market Reach, and Consumer Health Outcomes. These intermediate aspects are crucial to understanding how container design affects consumer behaviour, market presence, and health perceptions. Businesses can utilize these data to design strategies to boost trust and product quality. This will maximize minimalist packaging design's impact on targeted outcomes.

Table 7: Mediation analysis

Path Relation	Beta	Std. Error	T value	P value
AMPD -> T -> CPD	0.35	0.04	8.00	< 0.001
AMPD -> T -> MR	0.28	0.03	9.50	< 0.001
AMPD -> T -> CHO	0.42	0.05	7.20	< 0.001
AMPD -> PPQ -> CPD	0.25	0.03	7.80	< 0.001
AMPD -> PPQ -> MR	0.22	0.03	6.70	< 0.001
AMPD -> PPQ -> CHO	0.31	0.04	8.00	< 0.001

DISCUSSION

This study discusses how minimalist packaging design affects customer behaviour, including purchase decisions, market reach, and health consequences, mediated by trust and perceived product quality. To explain the theoretical and practical consequences of the study, the discussion integrates its findings with previous literature. The findings of this study provide strong support for Hypothesis 1, which posited that aesthetically minimalist packaging design positively influences consumer purchase decisions. According to earlier research (Wang et al., 2023), minimalist container design positively affects consumer purchase intentions. Minimalist packaging is seen as more appealing, modern, and environmentally friendly, increasing purchase intentions and brand loyalty. Consumers that seek products that are in line with their minimalist lifestyles and values respond favorably to minimalist packaging design because it conveys simplicity, sophistication, and sincerity. Minimalist packaging conveys quality and reliability through clean lines, uncomplicated layouts, and muted hues (De Temmerman et al., 2023). Minimalist products are regarded and attractive to consumers. The results show that minimalist container design affects brand and product perceptions. Miao et al. (2023) claim that simple packaging design helps companies stand out and connect with customers. Minimalist packaging impacts quality, authenticity, and brand value. The association with brands or goods is affected.

This study supports Hypothesis 2, that minimalist container design increases market reach. According to Mediano Stoltze et al. (2021), minimalist container design boosts brand awareness, market share, and recognition. Yang et al. (2023) found that minimalist container design effects consumer behaviour in shops and online. Simple packaging helps customers

recall and recognise items in congested retail contexts (Celhay et al., 2020). Minimalist packaging attracts customers and increases market share. Minimalist package design appeals to many customers because it incorporates modern consumer values like simplicity, sustainability, and authenticity. Minimalist packaging strengthens brand positioning and attracts a wide range of consumers who desire items that reflect their beliefs and lifestyles (Miao et al., 2023). Companies gain consumers with minimalist packaging.

This study supports Hypothesis 3, that minimalist packaging improves consumer health. Statistics suggest that minimalist packaging enhances customers' views of product purity, efficacy, and health advantages, boosting consumer health. According to Mesías et al. (2021), minimalist packaging promotes purity, freshness, and naturalness, leading to improved customer perceptions of food nutrition and health. Lo et al. (2024) said customers connect minimalist packaging with clear labelling, clean formulae, and healthy ingredients. These connections boost therapy and wellness. Health-conscious customers favour simple packaging. Simple packaging improves product safety and customer confidence (Basak et al., 2024). By exhibiting transparency, high standards, and consumer health, minimalist package design can build confidence and loyalty among health-conscious customers (Yuan et al., 2023). Trust helps shoppers make healthier, more informed choices.

The findings of this study provide robust support for Hypothesis 4, which posited that trust mediates the relationship between aesthetically minimalist packaging design and consumer behaviour outcomes. Song et al. (2019) found that a simple container design boosts consumer confidence in the brand, improving health outcomes, market reach, and buy intentions. Minimalist packaging boosts business trustworthiness, clarity, and consistency. The simple, clear package promotes quality, honesty, and simplicity builds consumer trust (Huiyue et al., 2022). People seem to trust minimalist packaging companies because they believe they are more trustworthy. Trust mediates the effect of minimalist container design on consumer behaviour. Buyers' perceptions of a company's credibility and trustworthiness are influenced by the mental shortcut of trust (Wang et al., 2024). Promoting consumer trust may boost brand reputation, reduce risks, and build long-term customer relationships. Customers' need for trustworthy products increases customer trust, purchasing intentions, market penetration, and health results.

The results of this study provide strong support for Hypothesis 5, which proposed that perceived product quality mediates the relationship between aesthetically minimalist packaging design and consumer behaviour outcomes. According to Behera et al. (2023), minimalist packaging increases customers' perceptions of product quality, usability, and longevity. This increases buying intentions, market reach, and health outcomes. The box's austere design conveys quality, knowledge, and meticulous precision. Thus, these characteristics affect customer product evaluations (Nofrizal et al., 2023). Minimalism is perceived as higher quality and performance. This boosts client loyalty and purchase likelihood. Packaging appearance affects consumer perception of product quality, which influences their choices and perceptions. Product quality strongly influences consumer purchases. Their chances of returning and spending more depends on this attitude. Companies may improve product quality, consumer engagement, and brand performance with simple packaging.

This study supports Hypothesis 6, which stated that trust mediates the link between minimalist packaging design and customer behaviour. Trust and perceived product quality minimise the effects of minimalist container design on consumer purchases, market reach,

and health. It illustrates how these effect customers. Minimalist packaging strengthens customer trust (Mkansi & Mugurusi, 2023). Minimalist packaging can change consumer views of product quality, use, and value. This affects brand loyalty and buying (Xiong et al., 2023). Because packaging aesthetics increase product quality and confidence, they influence customer behaviour. They reduce minimalist packaging's impact.

This study strongly supports Hypothesis 7, showing that perceived product quality mediates the association between minimalist packaging design and customer purchase decisions. Minimalist packaging influences customers' product quality, usefulness, and value perceptions and purchases (Korsuk Kumi et al., 2023). Minimalist package design is associated with luxury goods because it conveys honesty, elegance, and simplicity. Ballco & Gracia (2022) observed that buyers value minimalist packaging as imaginative, trustworthy, and high-quality. This boosts buying and spending. The simple packaging emphasises the product's efficacy and quality (Wang et al., 2021). Consumer purchases are heavily influenced by product quality perception. Hwang et al. (2021) discovered that minimalist packaging that conveys beauty and authenticity increases the likelihood of buying durable, valuable, and high-quality goods. In competitive marketplaces, minimalist packaging to increase product quality may effect sales.

The results confirm Hypothesis 8, showing that perceived product quality mediates the association between minimalist packaging design and market reach. Consumers' perceptions of product quality, authenticity, and value impact brand engagement and purchase behaviour due to minimalist packaging design. Minimalist packaging is seen as better, more practical, and longer-lasting. This partnership increases brand exposure and revenue. The packaging's simplicity expresses expertise, care, and individuality. According to Chan et al. (2020), consumers choose firms that sell high-quality, useful items. This applies especially to innovative, simple, and attractive packaging. Minimalist packaging can improve product quality and market share in shifting markets.

This study validates Hypothesis 9, that product quality influences minimalist packaging and consumer health. Minimalist packaging impacts health, effectiveness, and benefits. This impacts nutrition and health. Minimalist packaging promotes purity, freshness, and naturalness, highlighting the product's health and nutritional worth (Motoki et al., 2021). Packaging improves health perception and purchase intent. Consumers see products differently due to packaging design's basic visual indications of quality, honesty, and dependability (Hwang et al., 2021). Customers' product quality evaluations effect diet, health, and consumption. Simple designs that emphasise purity and naturalness increase healthier and safer purchases (Liu et al., 2023). Improve consumer well-being by promoting better lifestyles and meeting the rising need for natural and nutritious goods with minimalist packaging.

CONCLUSION

This study shows how visually simple container design affects customer behaviour, market growth, and well-being. This depends on product quality and trust. The study reveals that container appearance strongly influences customers' views and purchases. Minimalist packaging design strongly influences customer purchases, market reach, and health. It is simple, refined, and sincere. Minimalist packaging increases trust, quality, and appeal, which boosts purchase intention, brand loyalty, and health benefits. Packaging design affects consumer behaviour by ensuring product quality and building confidence. Trust helps

consumers evaluate brand authenticity and truthfulness, fostering positive relationships and buy intent. Packaging design builds trust and conveys product quality. Together, they mitigate sparse packaging. The study's theoretical implications indicate how container design influences customer perceptions and preferences, demonstrating how aesthetics influence purchases. Marketing experts should study how minimalist container design might increase consumer health, market penetration, and brand image. Minimalist packaging may help firms stand out, build trust, and provide customers memorable brand experiences.

Theoretical and Practical Implications
This analysis may help marketers and packaging and branding specialists. Additionally, it promotes consumer behaviour theory. Packaging aesthetics impact customers through signaling and social identity theories. Simple container design may promote brand, market reach, and consumer wellness. This research advances signaling theory by showing how minimalist packaging conveys product quality, brand values, simplicity, elegance, and authenticity. These theoretical findings strengthen consumer behaviour research theoretical frameworks by improving our grasp of the psychological mechanisms that explain how consumers respond to packaging visual appeal.

Minimalist packaging design can increase brand perception, market visibility, and consumer well-being, according to the study. Marketers should first evaluate how minimalist packaging distinguishes their items. Brands may stand out among real, sophisticated, and simple consumers with minimalist design. Minimalist packaging design boosts brand loyalty and sales by showing products as inventive, dependable, and high-quality. Marketers should prioritize transparency to build trust. Minimalist packaging design affects product quality, usability, and value, affecting brand loyalty and purchasing decisions. Minimalist packaging design can help companies stand out in competitive markets, attract new customers, and build brand loyalty. Product quality affects customer buying decisions, market expansion, and health consequences by changing their perceptions, preferences, and choices. Marketers should use simple packaging to encourage healthy habits. Consumers' perceptions of a product's healthiness and nutritional worth are improved by minimalist packaging design, which communicates a sense of purity, freshness, and nature. Minimalist aesthetics allow companies to sell their products as healthier, safer, and more useful for consumers, improving health and satisfaction.

Limitations and Recommendations for Future Research
This study provides useful insights into how minimalist container design affects consumer behaviour, yet it has several limitations. The study's cross-sectional approach limited causality determination. Future study could use longitudinal or experimental designs to reinforce the causal links between minimalist packaging design, consumer behaviour, and mediating variables like trust and perceived product quality. Longitudinal research of customer perceptions and behaviours would help explain the dynamics. Consumer reactions to packaging aesthetics vary by culture, sector, and product category. Future research should examine how product type, industrial sector, and culture moderate the association between minimalist packaging design and customer behaviour results. Using these contextual elements, researchers can gain deeper insights into minimalist packaging solutions' performance and applicability in various market settings. This study relies on self-reported measurements, which may be subject to recollection errors and social desirability biases.

Although validated scales and anonymous data collection methods were used to mitigate these biases, future research could use eye-tracking or observational studies to better measure consumer responses to packaging design.

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