

**STUDY THE ROLE OF PACKAGING AND LABELLING IN CONSUMER
BUYING DECISION OF COOKING OILS**

**by
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(J-22-M-102-ABM)**

**A project submitted to
Faculty of Agriculture
in partial fulfillment of the requirements
for the degree of**

**MASTER IN BUSINESS ADMINISTRATION
AGRI-BUSINESS MANAGEMENT**

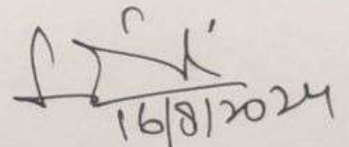


Division of Agricultural Economics and ABM
Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu
Main Campus, Chatha, Jammu-180009
2024

CERTIFICATE - I

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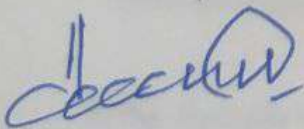
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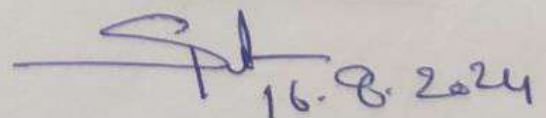
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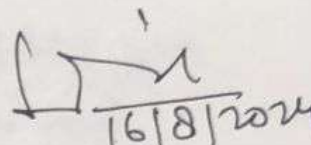
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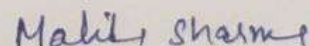
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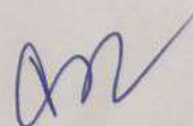


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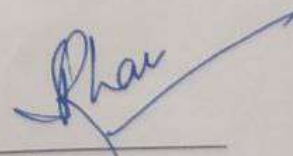


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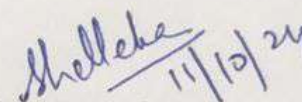
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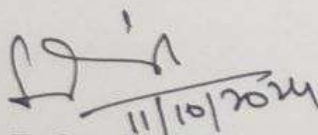


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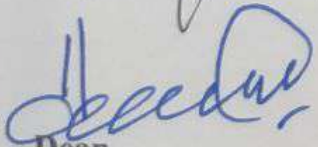
This is to certify that the project entitled “**STUDY THE ROLE OF PACKAGING AND LABELLING IN CONSUMER BUYING DECISION OF COOKING OILS**”, submitted by **Mr. Karandeep Attri**, Registration No. **J-22-M-102-ABM**, to Sher-e-Kashmir University of Agricultural Sciences and Technology, Jammu, in partial fulfillment of the requirements for the degree of **MBA-ABM**, was examined and approved by the advisory committee and external examiner on **11-10-2024**.


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To reach a goal, you don't need to know all the answers in advance. But you must have clear idea of the goal you want to reach. Success is possible only after involvement of many minds and hands to beautiful it. Emotions cannot be expressed in words because then emotions are transformed into mere formalities. Nevertheless, formalities have to be completed. My acknowledgements are many more than what I am expressing here.

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Date: 23/10/2024

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ABSTRACT

Title of the Thesis : **STUDY THE ROLE OF PACKAGING AND LABELLING IN CONSUMER BUYING DECISION OF COOKING OILS**

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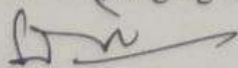
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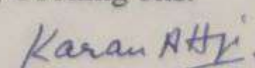
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Packaging can be defined as all the activities of designing and producing the container or wrapper of the product. Labelling is part of packing and consists of printed information that describes the product, appearing on or with the package. The changing dietary preferences and growing population in India are driving incredible growth in the cooking oil industry. With a projected market value of INR 1.5 trillion in 2023, the market is anticipated to continue growing. Indian customers are becoming more aware of their health and are scrutinizing ingredient lists and nutritional labels more closely. The 65 percent of consumers believe that these characteristics are important when making judgments about what to buy. The necessity for attractive and unambiguous packaging has grown due to the growing demand for specialized and premium oils, such as cold-pressed and fortified types. Keeping all these in view, the present study entitled "**Study the role of Packaging and Labelling in Consumer buying decision of cooking oils**" has been undertaken with objectives to analyze the segmentation of consumers on the basis of their choice of packaging, identify the determinants of packaging & labelling and evaluate the relationship between consumer buying decision and attributes of packaging by using cluster analysis, factor analysis & correlation analysis in SPSS 20 software. The area of the study was Jammu urban and total 100 consumers were selected conveniently. The results of the study were that the consumers were divided into two segments on the basis of choice of packaging, we identify Convenience consumers cluster & Health-Conscious consumers cluster. In first cluster 70% of all consumers, these consumers were influenced by packaging attributes like sustainability, visual appeal & brand recognition. In other cluster 30% of all consumers were Health-conscious, they check packaging material, advanced labelling (e.g. health benefits, nutritional facts) & eco-friendly packaging of cooking oils. The major determinants that influence buying behaviour include were Perceived Quality & Influence from Packaging, Packaging Appeal & Material, Product Labelling & Product Information of cooking oils. These determinants have significant relationship with consumer buying decision.

Key words – Packaging & Labelling, Consumer Buying Decision, Cooking oils.


Signature of Major Advisor


Signature of Student

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INTRODUCTION

Cooking oil is a crucial component of kitchens all over the world and is used in a wide variety of food preparations. It serves as a channel for heat transfer as well as a transporter of flavors, textures and nutritional value in a variety of foods. Cooking oils are a staple of the human diet and are derived from plant and occasionally animal sources. They have evolved from their historic applications to include contemporary cooking methods and health considerations.

Packaging and labelling are vital in addressing consumer worries regarding the authenticity, purity and safety of cooking oils, particularly given the prevalent issues of adulteration and mislabeling in the food industry. Consumers now place greater emphasis on transparency and traceability, making accurate labeling, supported by certifications and quality assurances, crucial for instilling confidence. This reassures consumers about the integrity and safety of the oil they're consuming. As consumer preferences evolve and awareness of health and environmental concerns grows, the role of labeling and packaging in influencing consumer decisions regarding cooking oils becomes increasingly intricate. It's imperative for brands to grasp the interaction between these elements and consumer perceptions to stand out in a competitive market and build strong connections with discerning buyers. Brands and consumers are connected through packaging, especially labels, which communicate shelf attractiveness and information about the product. In addition to increasing customer engagement with a brand, smart labels which make use of RFID (Radio frequency identification) technology or a printed QR code can also offer traceability and transparency regarding a product's carbon footprint. The important component of the packaging is the label. It's an excellent way to educate customers about all the different aspects of sustainable design and to encourage buying behaviour (Labelandnarrow, 2024).

In the dynamic landscape of consumer preferences and purchasing behavior, the roles of labelling and packaging have gained extensive significance as influential factors in shaping buying decisions. As consumers are presented with an ever-expanding selection of choices, the packaging and labelling of products have exceeded their conventional roles of protection and information provision to become powerful tools for communicating product attributes, values and appeal. Cooking oil, a staple in kitchens

worldwide, presents a study for exploring the interplay between labelling, packaging and consumer buying decision. Cooking oil is chosen not just for its practical qualities, such as flavor and health advantages, but also for emotional and perception indicators that can be conveyed through label and packaging design. The packaging serves as the first point of contact between the consumer and the product, making it a critical touchpoint for conveying essential information and establishing a visual and emotional connection.

Cooking oil packages display nutritional, health benefit information usage instructions and certifications such as organic or non-GMO. This information helps the consumer decide what to eat with confidence - and in accordance with personal health goals or tastes (Campos *et.al.* 2011). Packaging is essential for drawing in customers and communicating a brand's identity. The appearance, texture and construction of the packing materials can enhance the overall perception of the product. Packaging components like material, colour and design have a big influence on customer attitudes and behaviours. They also work as silent salesmen on store shelves. (Speece and Silayoi, 2007).

The food sector has recently seen a discernible change toward consumption patterns that are health-conscious and this development has had a direct impact on how cooking oil products are labelled and marketed. Nowadays, labels frequently make statements about their products health benefits, such as heart-healthy, organic or rich in essential nutrients. However, packaging has changed to reflect modern design sensibilities, sustainability issues and brand values, all of which have a significant impact on consumers views and purchasing decisions. In today's highly competitive marketplace, the role of labelling and packaging has become increasingly significant in influencing consumer behaviour. This phenomenon is particularly evident in the food industry, where product differentiation can greatly impact purchasing decisions. Among various food products, cooking oils represent a substantial category where consumer choice is heavily swayed by the packaging and labelling. Consumer decision making in groceries is very much influenced by packaging and labelling: an area of focus for marketers who study the consumer buying decisions, particularly with essential products like a cooking oil. Labels and packaging are not only a medium to which information is passed from the business to customers, but labels can play huge role in consumer perceptions, preferences as well as their purchase decisions. Labelling and packaging can often differentiate one of

dozens of brands in a given category - such as the highly competitive market for cooking oils.

The selection of cooking oil, a staple in many households, is influenced by multiple factors such as health benefits, brand reputation, price and sensory appeal. It may be begun with point of contact for buyers is frequently the packaging & labelling, which serve as significant showcasing instruments. Effective packaging not only protects the product but also communicates essential information and brand identity, while labelling provides details about the product's origin, nutritional content and usage instructions. These elements collectively shape consumer perceptions and can significantly drive purchasing decision. This study seeks to examine how different aspects of labelling and packaging, such as design, colour, material, information transparency and branding, affect consumer preferences and decisions when selecting cooking oils. By understanding these dynamics, manufacturers and marketers can develop strategies to enhance product appeal and consumer satisfaction. This study intends to investigate the complex roles that labelling and packaging play in influencing customer preferences and cooking oil buying decisions. We aim to offer useful insights for both marketers and consumers by exploring the cognitive, emotional and psychological processes that underlie the interaction between labelling, packaging and consumer buying decision. Additionally, this study will advance knowledge of how informational and visual signals influence purchasing choices in the context of a fast-moving consumer goods (FMCG) product category.

THE PROJECT

2.1 Title and Statement of Project

The project work entitled **“Study the role of Packaging and Labelling in Consumer Buying Decision of Cooking Oils”** was carried out in urban region of Jammu.

2.2 Global Scenario

Global advancements in technology, environmental concerns, and health consciousness have all had an impact on the cooking oil business. The market is expected to grow to a value of over USD 220 billion by 2027, driven by an increase in demand for innovative packaging solutions and healthier cooking alternatives. Features like organic certification, non-GMO status, and nutritional benefits are being highlighted on labels more and more. Furthermore, convenience-focused designs and eco-friendly materials found in package developments have a big impact on consumer choices. As instance, the increasing usage of transparent packaging increases consumer trust and buy intent by enabling them to physically verify the oil's quality. (MRFR, 2023).

2.3 Indian Scenario

The changing dietary preferences and growing population in India are driving incredible growth in the cooking oil industry. With a projected market value of INR 1.5 trillion in 2023, the market is anticipated to continue growing. Indian customers are becoming more aware of their health and are scrutinizing ingredient lists and nutritional labels more closely. The 65% of consumers believe that these characteristics are important when making judgments about what to buy. The necessity for attractive and unambiguous packaging has grown due to the growing demand for specialized and premium oils, such as cold-pressed and fortified types. Tamper-proof seals and easy-pour spouts are two examples of innovations being offered to suit consumer expectations for convenience and safety. (Nielsen India 2023).

2.4 Objectives of the Project

1. Segment the consumer on the basis of their choice of packaging & labelling
2. Identify the determinants of packaging & labelling affecting buying decision
3. Relationship between consumer buying decision and attributes of packaging

2.5 Scope of the Study

- The study was help to understand how packaging and labelling was used to influence consumer behavior about a product. Packaging and information around the product superior device for unveils the notice since brand talks itself, which can lead to edge over competing brands.
- The study was analyzing the role of packaging as a tool for communicating with the consumers.
- The study was help to segment the consumers on the basis of underlying behavioral aspects of the consumers. This study can provide important information that is utilized by the marketers to communicate effectively with the different consumer segments.
- The study was evaluated how consumers assess quality in terms of specific product's characteristics, namely colors, labels, nutritional value, shape & size.

2.6 Limitations

- This study was conducted in Jammu urban only and therefore cannot generalized for whole Jammu and Kashmir UT.
- The study might not account for all factors influencing buying decisions, such as price, brand loyalty or previous experiences with the product. Focusing solely on packaging and labelling may overlook these other important factors.

REVIEW OF LITERATURE

Objective 1. Segment the consumer on the basis of their choice of packaging & labelling

Rokka and Uusitalo (2008) studied the relative significance of environmentally friendly packaging against other pertinent product features. The empirical study is based on a conjoint analysis of choices made by 330 consumers who use functional beverages to determine their preferences. The finding showed that people have different preferences when it comes to everyday products' price, brand, packaging and ease of use. The results highlight how important packaging had become when making decisions about products.

Visschers *et al.* (2013) conducted a study to determine if customers could be categorized based on their use of nutrition information and their interest in health and nutrition through cluster analysis. They identified four categories: official information users, internet users, moderate users and uninterested users. They then examined the demographics, food frequencies and food perceptions of these groups. The study suggests that not all consumers were motivated to use nutrition information through education or better labels; some might respond better to environmental cues that encourage healthy eating. The findings indicate that while consumer groups were interested in such information and should be encouraged to use it.

Eberhart and Naderer (2017) indicated that understanding customers' sustainable purchasing behaviour for personal care products involves leveraging the concepts of reasons and heuristics. Their research utilized a mixed methods approach, combining actual data and detailed qualitative data to achieve high external validity. The findings from both quantitative and qualitative analyses, a segmentation technique was developed, identifying specific heuristic cues linked to relevant motives and values for each customer segment. The analysis suggests that consumers were motivated by environmental concerns and self-interest, using simple heuristic cues for quick decision-making to meet their needs. Each consumer segment responds uniquely to certain stimuli based on underlying motivations. The most effective strategy to target consumers and address the three main purchase barriers (lack of motivation, competing incentives, and rejection of alternatives) is to use segment-specific heuristic cues. The three key factors influencing

customers' decisions towards more sustainable choices are indulgence, health and universality.

Olsen *et al.* (2017) conducted a study to classify customer groups based on the importance of product qualities when purchasing fish for weekday dinners. They placed particular emphasis on the significance of fresh seafood packaging characteristics. Most packaging characteristics were found to be moderately important, except for the expiration date, which is highly significant. The study identified three consumer groups based on the importance of 33 seafood-related characteristics: careless, quality-conscious and perfectionists. Quality-conscious consumers, compared to perfectionists, are less concerned with packaging, branding, convenience and emotional benefits and are more confident in their ability to assess quality. Careless consumers, who frequently use convenient, pre-packaged fish products, value recipe information on the packaging. These findings can assist the fish industry in better positioning seafood for three distinct consumer segments.

Jagabathula *et al.* (2018) studied the challenge of segmenting a large customer base with similar preferences using diverse preference observations such as purchases, ratings, and clicks. The findings highlighted the importance of categorizing customers based on their preferences. The proposed approach is designed to handle missing observations and integrate data from various sources, such as clicks, ratings and sales. This model-based embedding technique transforms customer observations into a consistent and comparable scale and addresses missing data issues by projecting the transformed data into a low-dimensional space.

Fernandez-Serrano *et al.* (2020) conducted a study using responses from an online survey with 394 fruit consumers. Although 90% of participants expressed a desire for more information when purchasing fruit, their choice between loose or packaged fruit was not influenced by this need for information. A gap was identified between the participants' interest in information and their actual use of it, as their final purchasing decisions often did not rely on the information provided. This indicates that Spanish consumers are keen to learn more before buying fruit. Key information gaps included "harvest date," "production method," "percentage of the price received by the farmer," "applied treatments," "sensory characteristics," and "environmental information," as many consumers interested in these labels could not access them. Consumers felt that sensory labels should include details on "sweetness" and "flavour intensity" for all fruit varieties.

Specific attributes such as "firmness" and "juiciness" were important for kiwis, while "sourness" and "juiciness" were significant for citrus fruits. For stone fruits and pome fruits, information on textural qualities was needed, and for citrus fruits, ease of peeling was also important.

Ketelsen *et al.* (2020) highlighted that consumer choices significantly influence the market success of eco-friendly food packaging. This paper aims to examine the current landscape of consumer reactions to environmentally friendly packaging, identifying existing purchase barriers and proposing potential solutions. It is based on a systematic review of 46 scientific journal articles on consumer studies related to eco-friendly packaging. Firstly, consumers struggle to recognize eco-friendly packaging, focusing on material and eco-labels, but also considering other design features like colours and misleading nature imagery. Secondly, consumers are generally unaware of new packaging materials, such as bio-based options.

Niedermeier *et al.* (2021) emphasized the importance of consumer segmentation due to the frequently divergent consumer preferences for fast moving consumer goods across many markets. This study explores the factors that differentiate Germany's consumer categories for environmentally friendly all-purpose adhesives. Using data from an online survey of 709 respondents and a choice experiment, the study identifies six consumer segments. It highlights green consumer value, perceived consumer effectiveness (PCE), and trust as the primary factors distinguishing eco-friendly from non-eco-friendly consumers. The findings facilitate the development of targeted business and marketing strategies and deepen the understanding of various consumer categories for green fast moving consumer products. Specifically, the study distinguishes eco-friendly consumer groups from others based on a significant level of trust, green consumer value, and PCE.

Panda *et al.* (2022) conducted a study to explore whether Bottom of the Pyramid (BoP) consumers can be segmented based on their perceptions of various packaging qualities when making Packaging Influenced Purchase (PIP) decisions for Fast-Moving Consumer Goods (FMCG). The findings revealed distinct consumer segments and the varying impacts of different packaging factors on these segments. The study underscored the potential of packaging characteristics in shaping BoP consumer categories. Notably, there were significant differences in the influence and preferences for packaging features among segments. Urban BoP consumers and diluted urban BoP consumers exhibited

similarities in their preferences for attributes such as price, material, convenience and aesthetics.

De Temmerman *et al.* (2023) discovered that packaging generates considerable waste, which imposes a significant burden on the environment. The study employs hierarchical clustering and multivariate component analysis to identify consumer segments. Three main groups emerged: minimal waste buyers (37%), proximity shoppers (36%) and quality and health seekers (27%). The first group consists mainly of customers seeking local retailers that sell products without packaging. The second group looks for natural, organic, and high-quality items without packaging. The third group is driven by concerns about food waste and packaging. These segments vary in terms of education levels, genders, ages, travel times to stores, shopping experiences, attitudes toward package-free shopping, plans to purchase package-free products, as well as health and environmental concerns.

Vazquez *et al.* (2023) conducted a study aimed at categorizing Spanish consumers based on their knowledge, perspectives and application of 28 verified sustainability labels across eight popular household product categories (food, clothes, cosmetics, and multi-sector). The goal was to characterize these consumer segments according to their socio-demographic attributes and level of environmental concern. Using latent class analysis on survey data from 3,000 participants, the study identified seven typologies: experts, convinced, interested, moderate, sceptical, neutral and unmotivated. The segments showed varying levels of knowledge and attitudes toward different labels across product categories, strongly influencing the purchase of certified goods. The most effective consumers in this regard were young women, who were well-educated and environmentally conscious. However, the study found that for approximately half of Spanish consumers, sustainability labels were perceived to add little value.

Objective 2.: Identify the determinants of packaging & labelling affecting buying decision

Ampuero and Vila (2006) researched the importance of understanding consumer perceptions for designing product packaging and establishing a favourable consumer perception. The study consisted of two stages for data collection. The first stage aimed to identify key graphic elements in packaging design, while the second stage linked each package to a positioning strategy based on consumer perceptions. Using multidimensional

scaling, the study depicted seven product positioning techniques from the consumer's perspective. The research produced four maps related to alternative package colours, typography, graphical shapes and images. The study found that packaging designers should adhere to consumer expectations to effectively meet consumer needs. Simulated packaging was prepared for each of the 46 participants in the two-phase trial, where they selected their preferred colour, typography, shapes and images based on the described positioning technique. The results indicated that high-end products with sophisticated designs typically use cold, dark colours like black, while affordable products aimed at price-sensitive consumers use light, predominantly white packaging. In terms of typography, attractive packaging often features bold, large, uppercase Roman letters, whereas expensive products are associated with square, symmetrical designs with a single element and vertical lines.

Hasan and Khan (2009) conducted a study to investigate how different characteristics of packaging impact consumers' preferences for edible oil brands. They examined various packaging attributes such as package sizes, safety, shelf life, storage convenience, ease of use, versatility and aesthetic appeal. The study aimed to understand how consumers evaluate these factors and how they influence their purchasing decisions. The research involved 117 female respondents who completed a questionnaire. The authors used optimal scaling (CATREG) to analyze the influence of packaging attributes on brand preferences. Their findings, which showed that all eight packaging attributes had a significance level (F value) of less than 0.05, concluded that packaging attributes significantly affect consumer brand preferences in the context of edible oils. Therefore, the study determined that packaging attributes play a crucial role in influencing consumer brand preferences for edible oils.

Ahmad *et al.* (2012) explained that their study aimed to identify the primary components of product packaging and their impact on consumers' purchasing decisions. They noted an increasing interest in packaging as a sales promotion tool and a driver of impulsive buying behaviour due to the rise of self-service and changing consumer lifestyles. Consequently, packaging plays a critical role in marketing and can significantly influence a customer's decision to purchase a product, particularly at the point of sale or when choosing between similar products. This highlights the importance of product packaging as a key factor in consumer choice. The study found that among various

packaging elements, colour accounted for 1% of its overall importance, while images or pictures ranked second at 10%.

Deliya and Parmar (2012) investigated the influence of packaging on consumers' purchasing decisions, aiming to understand the elements contributing to its success. The study, based in the Patan District of Gujarat, India, focused on various components of packaging, such as colour, design, material and printed information and their impact on consumer choices. The researchers explored how these factors relate to independent and dependent variables. They noted that changing consumer lifestyles and increased self-service have heightened the importance of packaging as a tool for sales promotion and impulse buying. Consequently, packaging plays a crucial role in marketing, especially at the point of sale, affecting consumers' decisions. The study highlighted the significance of package components like product information, brand, design and material in influencing consumer behaviour, suggesting that their impact depends on consumer involvement, time constraints and individual attributes.

Abdullah *et al.* (2013) conducted research to explore the influence of packaging on consumer buying behaviour. The study revealed the importance of packaging in customer obtaining choices in Bangladesh. The researchers employed both convenient and judgmental sampling methods to select 150 respondents. The findings indicated a strong association between these factors and consumer purchasing behaviour. Notably, the design and colour of the packaging were positively correlated with consumer purchasing behaviour. Effective packaging involves making appropriate choices among various packaging elements.

Ahmed *et al.* (2014) conducted a study to examine how packaging and labelling affect the purchasing decisions of Pakistani consumers. The research aimed to explore the critical factors contributing to a brand's success and their impact on consumer choices in the FMCG sector. The study also investigated the relationship between various variables that influence consumer purchasing behaviour. SPSS software is used for data analysis of survey responses. The study gathered a sample of 100 respondents to assess the reliability of the model. The findings suggest that labelling and packaging are pivotal elements, particularly in influencing consumer purchasing decisions. The research concludes that packaging elements such as colour, material and design significantly influence consumer purchasing behaviour across various product categories. Ultimately, the study emphasizes the significant role of packaging in shaping consumer purchase decisions.

Katiyar *et al.* (2014) conducted a study to examine the impact of packaging on consumer purchasing decisions and to identify the factors contributing to its effectiveness. The research aimed to establish the relationship between various factors and consumer behaviour. Key factors affecting consumer choices include packaging colour, material, design, printed information, innovation and font style. The study involved 100 respondents and utilized both primary and secondary data sources. The survey was conducted in the Kanpur region using a questionnaire due to respondent reluctance. Simple random sampling was employed. The study identified purchasing behaviour as the dependent variable and packaging features such as colour, background image, background colour, design and information as independent factors. The study found that written information and packaging material significantly influence consumer decisions, with educated businessmen and salaried individuals focusing on printed materials and packaging, while less educated individuals are more concerned with the package's background image.

Steenis *et al.* (2017) conducted a study to examine the influence of sustainable packaging on consumer attitudes and perceptions of packaged goods. They surveyed 249 students who regularly use soup products, testing different packaging materials and designs. The findings suggest that sustainable packaging is strongly associated with consumer perceptions, though its actual impact on consumer attitudes is somewhat limited. Comparing life-cycle assessments with consumer judgments reveals that consumers often make poor environmental decisions due to misconceptions about package sustainability. The study also highlights how packaging can shape consumer opinions about food products. Specifically, it demonstrates that changes in packaging materials can affect perceptions of sustainability, as well as other attributes such as flavour and quality. Even simplistic graphical signals on packaging, without significant environmental benefits, can significantly influence how consumers evaluate sustainability.

Saha (2020) conducted research to examine key packaging elements influencing consumers in Bangladesh's rapidly growing consumer products industry. They utilized a structured questionnaire to gather data from 338 participants. The data were subsequently analyzed using the Statistical Package for Social Sciences to evaluate the strength of relationships between consumer buying decisions (the dependent variable) and various packaging attributes including packaging colour, materials, design attractiveness,

labelling, and innovation. The results provide sufficient evidence to confirm the proposed correlations and offer valuable insights for managers to develop strategies that influence consumer behaviour.

Rajkumar and Jain (2021) stated that consumer shopping habits are significantly impacted by packaging and its features. Elements such as colour, design novelty, wrapping, printed details, typeface, contextual illustrations, and information on the packaging play crucial roles. The rise of self-service and evolving consumer lifestyles has heightened the importance of packaging as a tool for product advertising and impulse buying triggers. Consequently, packaging plays a vital role in advertising during the sale phase, a key factor influencing consumer purchase decisions. The study implies that clever product packaging can sway consumer purchasing choices. A well-designed package serves as a valuable tool for fostering customer loyalty. It is crucial to diversify packaging sizes to cater to varying consumer budgets. A colour scheme that meets consumer expectations can influence their decision to choose a product based solely on the packaging. Furthermore, using higher-quality materials in packaging construction can encourage consumers to retain and possibly recycle the package long after its contents are consumed.

Getahun and Degoma (2022) studied that how consumers' awareness of label information on certain products impacts their usage of packaged goods. The study highlighted the importance of understanding information labelling and customer comprehension in Gondar's urban area. Results indicated that consumer acceptance and use of packaged foods were significantly influenced by label awareness, label format, opinions on the format and health consciousness. Confirmatory factor analysis (CFA) was conducted to validate the findings. The hypotheses were tested using binary logistic regression because the independent variables were measured on a Likert scale and the dependent variable (willingness to pay a price premium) was binary. The empirical investigation identified six factors that influence consumers willingness to pay more for environmentally friendly packaging.

Objective 3: Relationship between consumer buying decision and attributes of packaging

Enneking *et al.* (2007) conducted a study exploring the intrinsic and extrinsic attributes of a product using a choice-based conjoint experiment. After tasting three

different soft drinks, 621 participants chose their preferred option. The choice sets varied systematically in terms of sweetening method, calorie reduction label, price, and brand. A conditional logit model was applied to analyze the choice data along with consumption habits, attitudes, and socio-demographic information. This method allowed the researchers to model product choice based on customer characteristics, one intrinsic attribute and three extrinsic attributes, enabling segmentation of preference data by market. The key findings indicated that brand familiarity significantly impacts customer preferences for sweetening methods. Market share simulations based on the entire sample showed a general preference for sugar over sweetening agents. However, in specific consumer segments, sugar did not perform significantly better than sweetening systems, highlighting the importance of market segmentation.

Silayoi and Speece (2007) found that packaging is getting to be more vital in customer communication and branding. Effective packaging design relies on understanding consumer psychology, as it helps manufacturers predict how customers will respond to their products. This study explores this issue in the context of Thailand's highly competitive packaged food industry, drawing on collective consumer research. The findings indicate that purchase decisions are primarily influenced by perceptions of packaging technology, particularly its convenience. Consumers' views on the most important packaging elements vary: a small group focuses on product details, while the majority prioritize the visual aesthetics on labels. These preferences fall into three categories- convenience-oriented, information-oriented and image-seeking that align with global trends. This suggests that the behaviour of middle-class urban consumers in Thailand is becoming similar to that in other developed countries.

Ares *et al.* (2010) investigated how non-sensory attributes, such as packaging, might be as influential on customers' decisions to purchase functional foods as health and sensory attributes. The current study aimed to explore whether consumers' level of involvement with the product affected the impact of different packaging features on their willingness to buy regular and functional chocolate milk desserts. The study found that consumers' interest in the products and their responses to the conjoint variables were influenced by their level of involvement with the product, suggesting it could be a useful segmentation tool in the food industry. Regardless of their level of involvement, the most influential factors were package colour and the presence of an image on the label. These elements were more important than the type of dessert, indicating that packaging can

significantly impact consumers' perceptions of functional foods and their purchase decisions.

Mueller and Szolnoki's (2010) research on the relative importance of different product features was analyzed in this study, which also considered variations in consumer responses to different product signals. A central location test was conducted in 2005 with 521 frequent wine customers across three German towns. Participants first rated the hedonic liking of a white wine in a blind tasting before stating their preference and purchase intention in an informed setting. They then evaluated product concepts that varied in four extrinsic attributes: brand, place of origin, grape variety, and packaging style. Overall, the most influential factors on informed liking were label style and brand rating, followed by blind liking. A latent class regression identified three customer segments with different responses to product attributes. These findings reveal significant variations in consumer reactions to product attributes and highlight the relative impact of packaging, branding, and labelling on overall product liking.

Sial *et al.* (2011) conducted research to measure the impact of packaging and labelling on consumers' purchasing choices. They also explored how brand perception influences the connection between packaging and labelling and consumer purchasing behaviour. In study data were gathered from 200 participants and applying regression analysis, correlation analysis, and the Sobel test. The results indicated a positive correlation between packaging and consumer purchasing behaviour. Furthermore, the study found that the relationship between packaging and consumer purchasing behaviour is completely mediated by brand perception.

Hassan (2012) conducted a study highlighting the importance of packaging in marketing, emphasizing its role as a crucial determinant of consumer choice at the point of sale. The study aimed to examine how the verbal and visual elements of food packaging influence purchasing decisions. Data were collected from 181 participants through standardized questionnaires. The analysis revealed that information and design were the most influential packaging attributes affecting consumer decisions to purchase processed foods. Interestingly, elements such as graphics, colour, size, and material did not significantly impact consumer choices for processed packaged goods. These findings offer valuable insights for food producers and marketers, particularly in the context of the Malaysian market. The study underscores the necessity of adopting effective packaging strategies for processed foods. It enhances our understanding of how packaging features

affect consumer purchasing behaviour, highlighting that shape and information are key factors. The results of this study provide practical guidance for making strategic decisions about packaging types and strategies to enhance sales and brand awareness in the food industry.

Koutsimanis (2012) noted that packaging characteristics influence food consumption and consumer purchasing decisions. To explore these effects on fresh produce, an online questionnaire was distributed in the United States. The first part of the questionnaire addressed consumer preferences for various packaging features, including convenience, characteristics, materials, and disposal methods for fresh produce. The second part focused on specific attributes such as price, container size and shelf life for sweet cherries. Analyses of responses from 292 participants using cluster and conjoint methods revealed that certain preferences vary by population segment ($P \leq 0.05$) and that specific packaging and produce qualities impact purchasing decisions for both general fresh produce and sweet cherries. Extending the "best by" date was rated as the most important packaging feature, with 92.7% of respondents believing that packaging material affects food quality, and bio-based containers scored an appeal rating of 3.52 out of 5.00. For sweet cherries, the most significant factors influencing purchasing decisions were price (25%), shelf life (19%) and container size (17.2%). The study placed consumers in hypothetical scenarios rather than real purchasing situations, possibly increasing focus on all variables but not on any specific one. Additionally, the decision to buy may have been affected by absent or poorly represented factors.

Aday and Yener (2014) found that several factors influence young consumers' purchasing decisions. Conducted in Turkey, a country bridging Europe and Asia, the study surveyed 324 individuals using a self-administered questionnaire containing thirty-one questions. Most respondents (87.34%) were young adults aged 18 to 25, with only 8.95% being married and 91.05% single. The study used correspondence analysis to examine the relationships between questions, presenting the results graphically in a multidimensional format. The research revealed that consumers preferred glass packaging for its transparency, protection, and health benefits, while plastic and paperboard packaging were favoured for their convenience and durability. Label information such as ingredients, production, and expiration dates were deemed essential, with male consumers prioritizing protein content and female consumers focusing on fat content. The study also found that impulsive purchases were mainly driven by low prices and special offers.

Overall, packaging characteristics and labelling were the most significant factors influencing consumer buying behaviour.

Mamo (2014) conducted research to explore how various packaging elements of bottled water influence consumer purchasing decisions, focusing on Addis Ababa, Ethiopia. The study examined several independent variables, including colour, graphic design, size, printed content, and packaging shape, while the dependent variable was the consumers' purchase decision. The research utilized a survey featuring open-ended questions and a 5-point Likert scale, distributed to 200 respondents, with a response rate of 96.5%. The data was analyzed using descriptive and inferential statistics, such as mean, correlation, and multiple regression. The findings indicated that the colour, graphic design, size and shape of the packaging significantly influence consumers' decisions to buy bottled water, whereas the printed content does not have a substantial effect. The study concluded that bottled water producers should emphasize packaging design and creativity to attract consumers, as well-designed and easily understandable printed information can more effectively impact purchase decisions.

Imiru (2017) conducted a study to investigate the impact of packaging characteristics on consumer purchasing decisions. A total of 384 questionnaires were distributed to conventional supermarkets across Addis Ababa and other major Ethiopian cities. Out of these, 369 questionnaires were returned, resulting in a high response rate of 96%. After data cleaning, 362 questionnaires were deemed viable for statistical analysis. The study utilized regression and correlation analysis to look at the collected information in SPSS software. The study found that consumers' decision to purchase cereal foods was primarily influenced by innovation (0.392), followed by written content (0.193), backdrop image (0.168) and text size (0.168). On the other hand, packaging colour (-0.054) and packaging materials (0.016) did not significantly affect consumers' decisions to buy cereal packaged foods. This suggests that Ethiopian consumers do not prioritize the colour or material quality of the packaging when making purchasing decisions. Based on these findings, the study recommends that marketers should focus more on understanding consumers' preferences related to innovation, written content, backdrop image and text size in order to enhance their understanding of purchasing decisions. In conclusion, the study did not find any significant correlation between packaging colour and materials and consumers' decisions to purchase cereal-packaged foods.

Lim *et al.* (2020) found that packaging characteristics like box designs, colours, shapes and photographs influence product perceptions by drawing consumer attention to specific brands. However, the main focus of their study is to explore how packaging attributes impact consumer purchasing decisions. Specifically, the study investigates the effects of packaging colour, material and printed information on consumer buying choices. The researchers employed survey questionnaires to collect data, which was analyzed using the Statistical Package for Social Science (SPSS 16). According to the study, consumers identified printed product information as the most significant factor influencing their purchase decisions. Conversely, the study's findings indicate that package material has a lesser impact on consumer purchase decisions. In conclusion, the study suggests that marketers should prioritize printed materials when implementing automotive marketing strategies aimed at potential buyers.

Maharani *et al.* (2021) conducted a study to identify the key preferences of consumers and the most appealing mix of attributes in packaged cooking oil. The study was conducted in Bandar Lampung City, Lampung Province, involving 100 respondents who purchased packaged cooking oil. According to the survey, these consumers typically have four to six family members, aged between 38 and 52 years old. The most preferred brand of packaged cooking oil is Bimoli, which is typically purchased in a 2-liter plastic container and used about 3.714 times per month in a typical household. The conjoint analysis revealed that consumers prefer packaged cooking oil that is golden yellow in colour, priced between IDR 11,000 and IDR 13,000 per litre, packaged in a 2-liter bottle, and has transparent bottled packaging. The survey also indicated that the most important feature for consumers is the clarity of the cooking oil. On average, households purchase between four to six litres of cooking oil per month, with Bimoli being the most popular brand. The preferred location for purchasing packaged cooking oil is a minimarket. The consumer mostly prefers the clarity of bottled cooking oil, alongside specific preferences for packaging size, colour and pricing.

RESEARCH METHODOLOGY

A methodology is usually a guideline system for solving a problem, comprising of specific elements such as categories, tasks, methods, techniques and tools. The study entitled “**Study the Role of Packaging and Labelling in Consumer Buying Decision of Cooking oils**” The sampling area and tools used during this research are described in this chapter.

4.1 Locale of the study

The study was conducted in Jammu urban of Jammu and Kashmir UT.

4.2 Sample design

100 Individual consumers were selected conveniently for the study from Jammu urban area.

4.3 Data Collection

Primary data was collected with the help of surveys using a pre-tested questionnaire cum schedule. Secondary data was gathered from various sources such as websites, books, leading journals, magazines or any other published data.

4.4 Data analysis

It was based on the pattern of collection of data, suitable economic and statically tools were used to analyse the data in order to achieve the objectives of the study.

4.4.1 Segment the consumer on the basis of their choice of packaging & labelling

Five-point Likert scale is used to collect the data for level of satisfaction. Further mean value is calculated for all the brands on the basis of ranks given by the consumer and cluster analysis was performed further for segmenting the consumers.

4.4.2 Identify the determinants of packaging & labelling affecting buying decision

Factor analysis was used to identify the determinants of packaging & labelling, which are the factors that influence the design, materials, and other aspects of packaging.

$$X_i = A_{i1} F_1 + A_{i2} F_2 + A_{i3} F_3 + \dots + A_{im} F_m + V_i U_i$$

Where,

X_i = i^{th} standardized variable

A_{ij} = standardized multiple regression co-efficient of variable on

common factor j

F = common factor

V_i = standardized regression co-efficient of variable I on unique factor

U_i = unique factor for variable i

M = number of common factors

4.4.3 Relationship between consumer buying decision and attributes of packaging

Correlation analysis is the strength of a relationship between two or more variables can be determined by using correlation analysis. The correlation method was used to evaluate the data and reveal the relationship between packaging attributes and consumer buying decision.

$$r = \frac{\sum (x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum (x_i - \bar{x})^2 \sum (y_i - \bar{y})^2}}$$

Where,

r – the correlation coefficient of the linear relationship between the variables x and y

x_i – the values of the x-variable in a sample

\bar{x} – the mean of the values of the x-variable

y_i – the values of the y-variable in a sample

\bar{y} – the mean of the values of the y-variable

RESULTS

The result pertaining to the present study “**Study the role of Labelling and Packaging in Consumer Buying Decision of Cooking oils**” has been presented in this chapter through appropriate tables and figures under the following headings:

5.1 Demographic profile of consumers**5.2 Segment the consumer on the basis of their choice of packaging & labelling****5.3 Identify the determinants of packaging & labelling affecting buying decision****5.4 Relationship between consumer buying decision and attributes of packaging****5.1 Demographic profile of consumers****Table 5.1 Age group of consumers****(n=100)**

Demographic	Particular	N	Per centage
Age Group	21-40	60	60.00
	40-60	36	36.00
	Above 60	4	4.00

Table 5.2 Gender of consumers**(n=100)**

Demographic	Particular	N	Per centage
Gender	Male	42	42.00
	Female	58	58.00

Table 5.3 Qualification of consumers**(n=100)**

Demographic	Particular	N	Per centage
Qualification	Secondary	4	4.00
	Higher Secondary	4	4.00
	Under Graduate	32	32.00
	Post Graduate	60	60.00

Table 5.4 Marital status of consumers (n=100)

Demographic	Particular	N	Per centage
Marital Status	Married	50	50.00
	Unmarried	50	50.00

Table 5.5 Occupation of consumers (n=100)

Demographic	Particular	N	Per centage
Occupation	Student	32	32.00
	House wife	10	10.00
	Employee	32	32.00
	Own Business	14	14.00
	Retired	12	12.00

Table 5.1, 5.2, 5.3, 5.4, 5.5 and figure 5.1, 5.2, 5.3, 5.4 & 5.5 clearly explained the demographic profile of consumers in which it was represented that out of 100 respondents, 60 per cent were from the age group of 21 to 40 years whereas 36 per cent were from the age group of 40 to 60 years and as it were 4 percent of respondents were over the age of 60 years. The table represented that 58 percent of the respondents were female and 42 percent respondents were male. Out of 100 respondents, 60 per cent of the respondents were post graduate, 32 percent were under graduate and 4 percent were Secondary and only 4 per cent were higher secondary. The table also represented that 50 percent of respondents were married and 50 per cent of respondents were unmarried. Occupational status showed that out of 100 respondents, 32 percent were students, 32 percent were employees, 14 per cent were owned business, 12 percent retired and 10 percent were house wife.

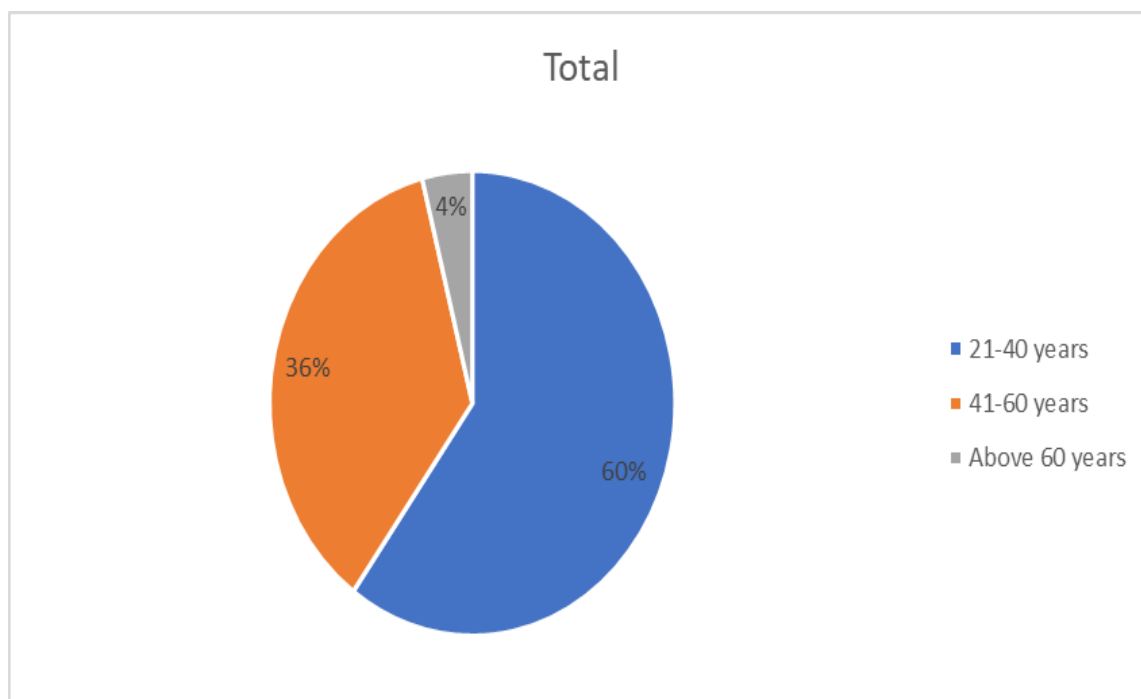


Fig. 5.1Age group of consumers (n-100)

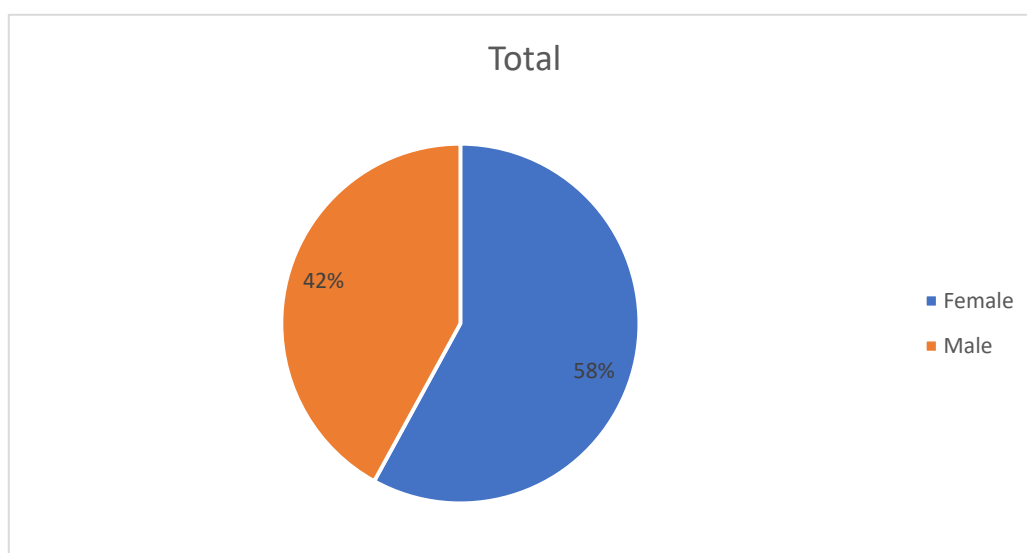


Fig. 5.2 Gender of consumers (n-100)

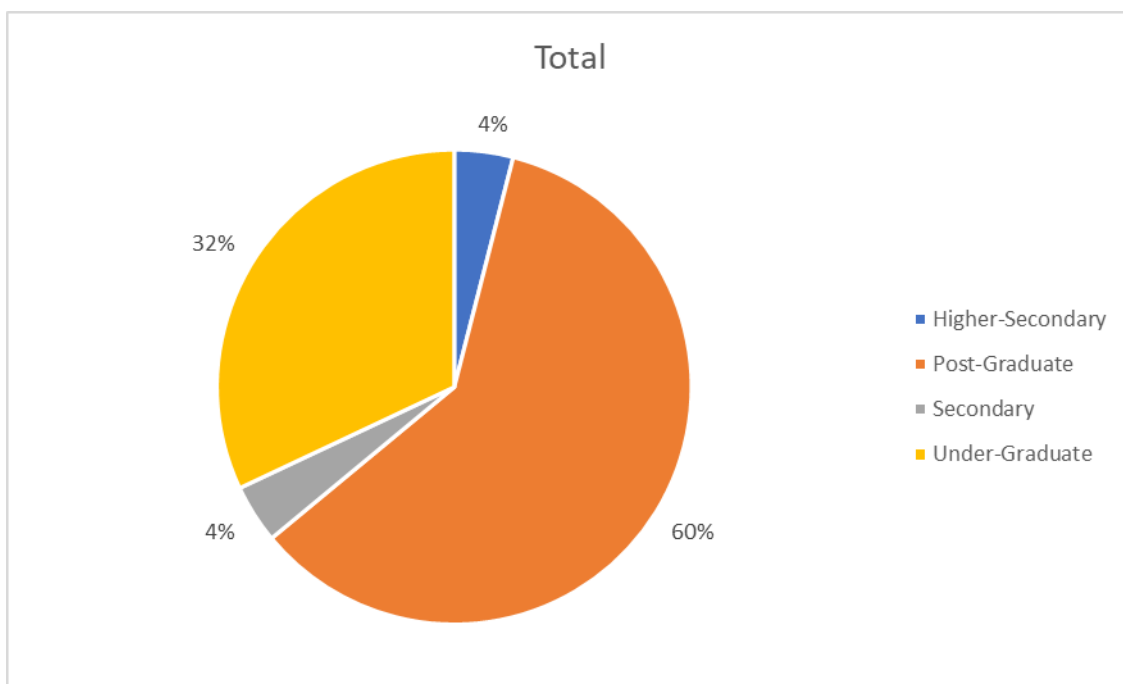


Fig. 5.3 Qualification status of consumers (n-100)

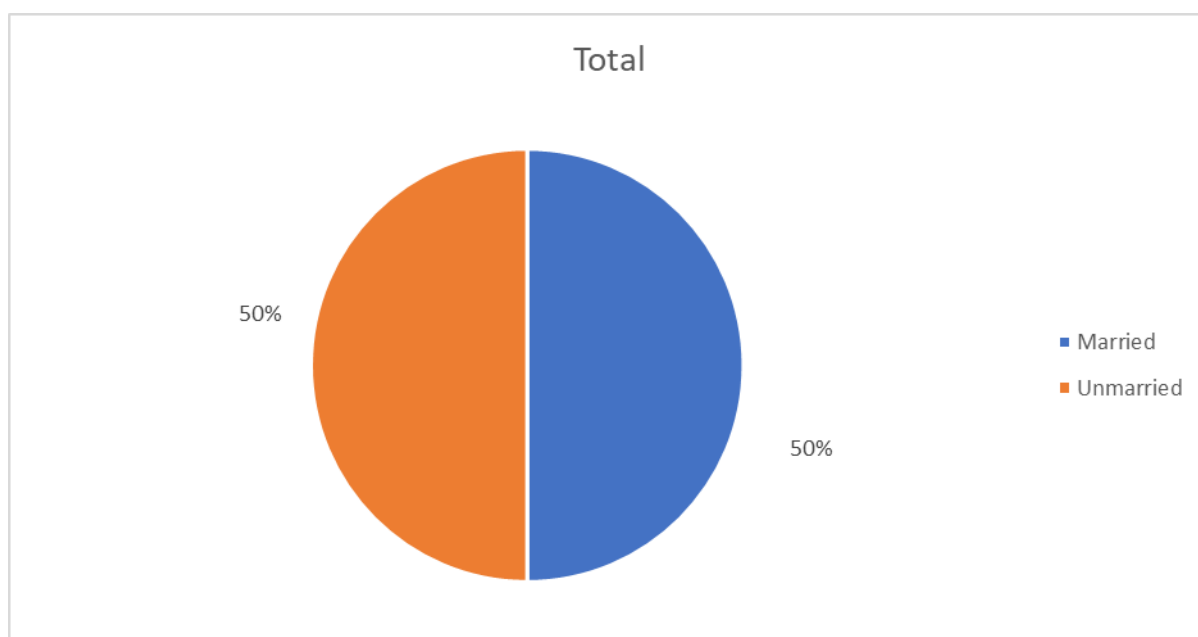


Fig. 5.4 Marital status of consumers (n-100)

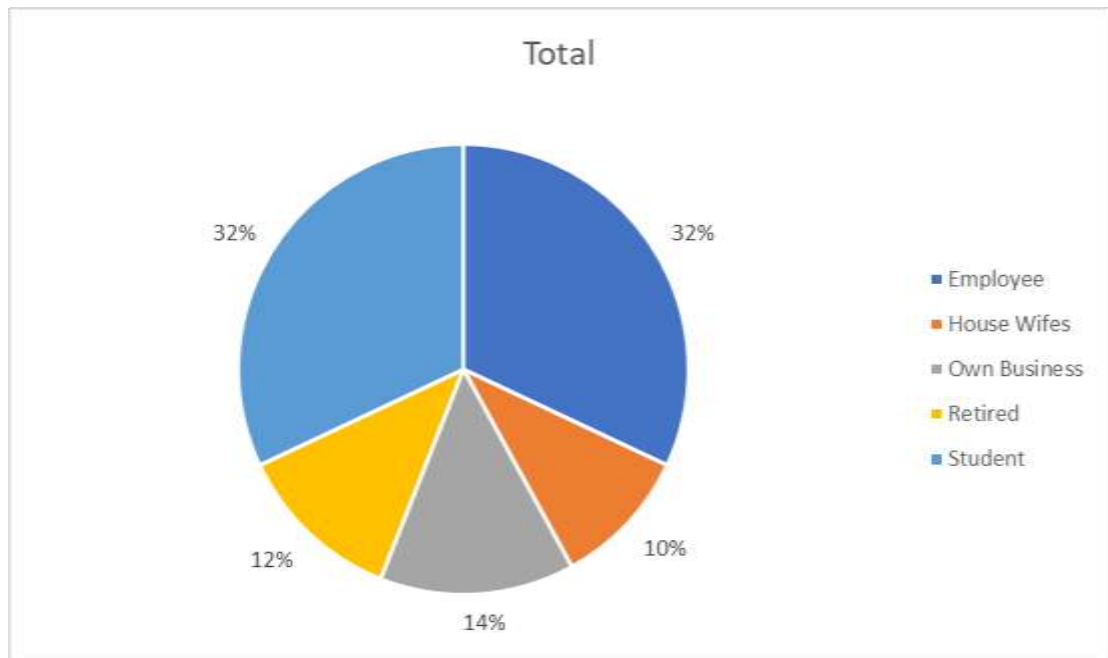


Fig. 5.5 Occupational status of consumers (n-100)

Table 5.6 Monthly income of Consumers (n-100)

Particular	No. of Respondents	Per centage
Below Rs. 30,000	42	42.00
Rs. 30,000-Rs. 60,000	24	24.00
Rs. 60,000-Rs. 90,000	14	14.00
Rs. 90,000-Rs.120,000	10	10.00
Above Rs. 1,20,000	10	10.00
Total	100	100.00

Table 5.6 and figure 5.6 represented the monthly income of consumers which showed that the 42 per cent of consumers had monthly income below Rs. 30000, whereas 24 per cent of consumers had income between Rs. 30000- Rs. 60000 and 14 per cent of the consumers felled in income ranges from Rs. 60000 to Rs. 90000 and 10 per cent of the consumers are having income ranges from Rs. 90000 to Rs. 120000 and 10 per cent of consumers having income above Rs. 120000.

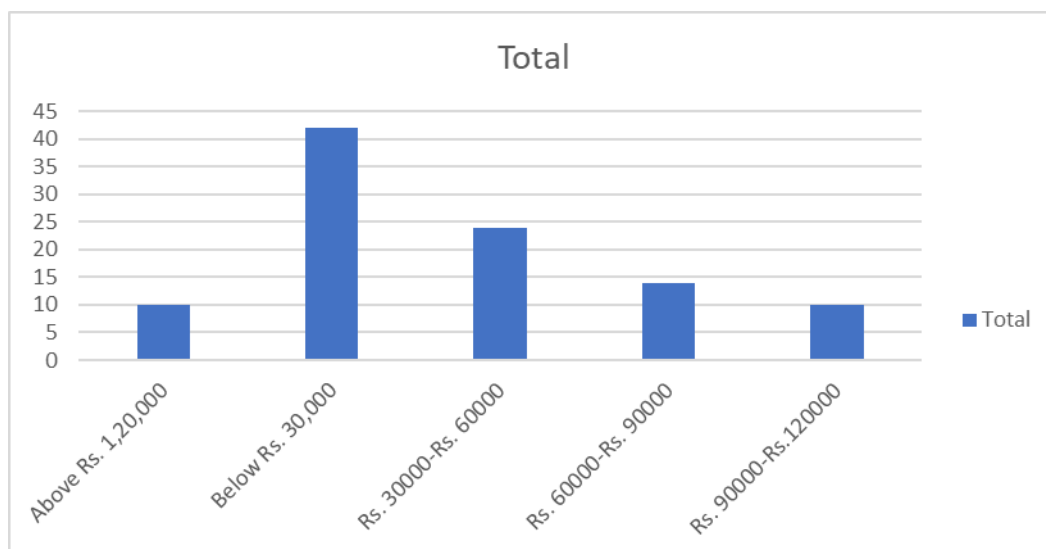


Fig. 5.6 Monthly income of consumers (n=100)

Table 5.7 Number of members in your household (N=100)

Particular	No. of Respondents	Per centage (%)
0-2	10	10
2 to 4	54	54
4 to 6	30	30
Above 6	6	6
Total	100	100

Table 5.7 & Figure 5.7 represented the number of household members of the respondents that showed the 54 per cent of 2-4 household members, 30 per cent of 4-6 household members, 10 per cent 0-2 household members and only 6 per cent above 6 household members.

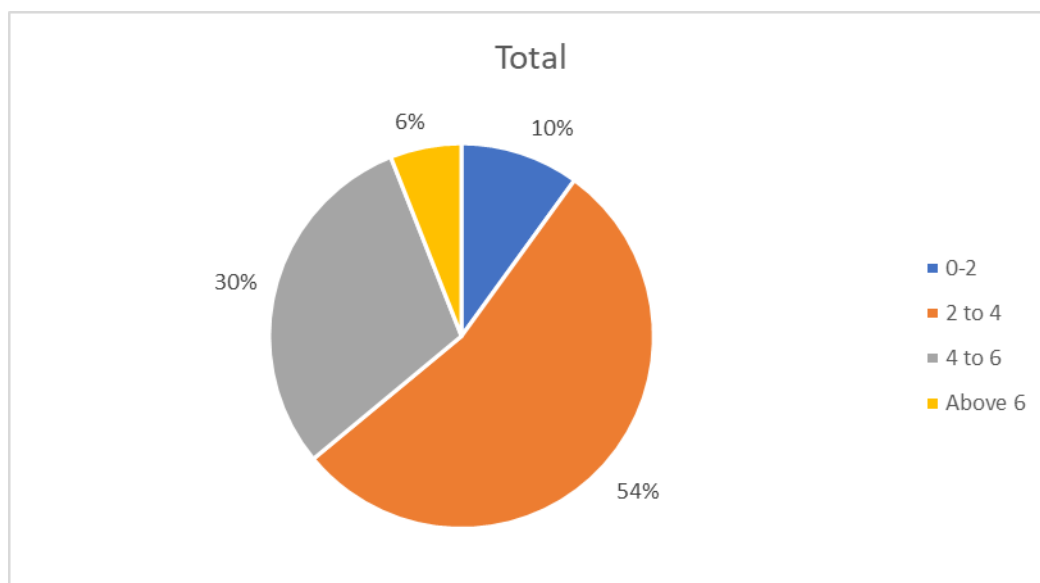


Fig. 5.7 Number of members in your household

Table 5.8: How far consumers travel to buy cooking oil (N=100)

Particular	No. of Respondents	Per centage (%)
0-2 KM	62	62.00
2-4 KM	22	22.00
4-6 KM	14	14.00
6-8 KM	2	2.00
Total	100	100.00

Table 5.8 and Figure 5.8 shows the distance of location consumer travel to buy cooking oils, majority of the respondents 62 per cent travel a short distance of 0-2 kilometres to buy cooking oil, 22 per cent respondents travel between 2-4 kilometres to buy cooking oil, smaller group 14 per cent travels even further, between 4-6 kilometres. Only a very small segment of the respondents 2 per cent travel the furthestmost distance of 6-8 kilometres.

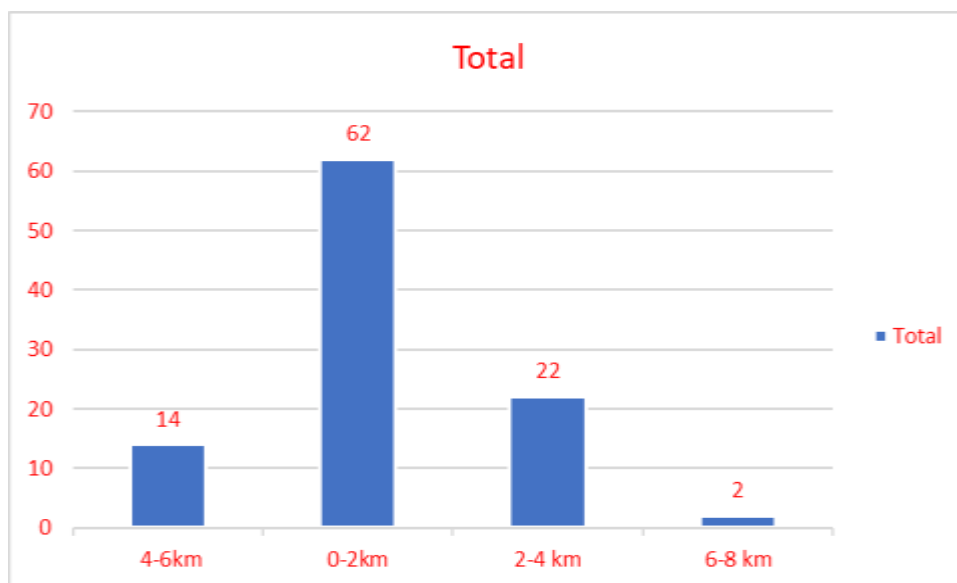


Fig. 5.8 How far consumers travel to buy cooking oil

Table 5.9: Monthly consumption of the cooking oil in consumer's home

Particular	No. of Respondents	Per centage (%)
0-2 Litres	42	42.00
2-4 Litres	42	42.00
4-6 Litres	14	14.00
Above 6	2	2.00
Total	100	100.00

Table 5.9 and Figure 5.9 shows the monthly consumption of cooking oil of consumers, 42 per cent of the respondents consume between 0-2 litres of cooking oil per month, another 42 per cent of the respondents consume between 2-4 litres of cooking oil, 14 per cent of the respondents consume between 4-6 litres of cooking oil and only 2 per cent of the respondents consume more than 6 litres of cooking oil per month.

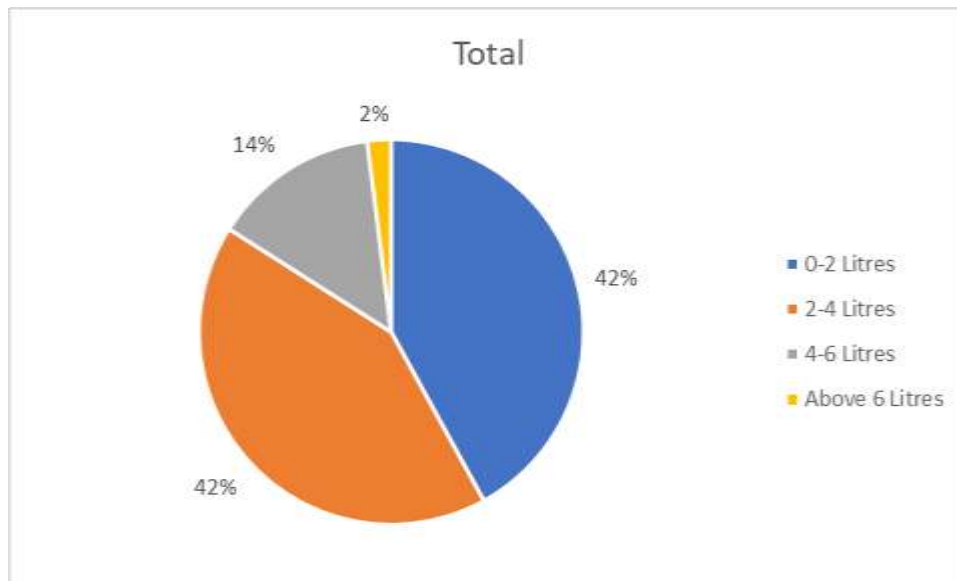


Fig. 5.9 Monthly consumption of the cooking oil in consumer's home

Table 5.10. Reliability Statistics with Cronbach's Alpha (consumers)

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.878	.894	45

Table 5.10 represented that the Cronbach's determined was high, that is 0.878. According to the Cronbach's coefficient, which gauges the consistency of the instrument, values above 0.60 were considered to be reliable.

5.2 Segment the consumer on the basis of their choice of packaging & labelling

Table 5.11. Descriptive Statistics of Likert Scale

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Important	100	1.00	3.00	1.7700	.46829
Interesting	100	1.00	3.00	1.8600	.49278
Relevant	100	1.00	3.00	1.9900	.26572
Means lot to me	100	1.00	4.00	2.2800	.84184
Appealing	100	1.00	4.00	2.1600	.50692
Value for money	100	1.00	4.00	2.0300	.43705
Valid N (listwise)	100				

Table 5.2.1 Descriptive Statistics of Likert Scale

Rensis Likert gave Likert scale theory in 1932 which is used in Table 5.11 that shows the descriptive statistics of Likert scale for feeling you have about packaging of cooking oils. The mean rating for “important” i.e. 1.7700 is slightly above the midpoint, suggesting that the item means a moderate amount to the respondents. The higher mean and standard deviation of “Means lot” i.e. 2.2800 & i.e. 0.84184 indicates more variability in how much the item means to different respondents. Overall, the respondents tended to rate the items more positively (closer to the left side of the scales) across all dimensions, with varying degrees of consensus. The relevance and importance had the least variability, indicating strong agreement among respondents, while the personal meaning of the item had the most variability.

Table 5.12. Final Cluster centers

Final Cluster Centers		
Statements	Cluster	
	1	2
Do you usually buy large cooking oil packs.	3.60	2.13
Do you prefer to buy cooking oil pack that are placed in front of rack.	2.46	3.07
Do you usually buy smaller pack of cooking oil.	2.86	4.20
The visual appeal of product packaging is important to you when making a buying decision.	3.83	4.13
Do you prefer products with environmentally friendly packaging materials.	4.11	4.47
Packaging convenience (e.g., easy opening, reseal ability) influences your buying decisions.	3.91	4.53
Do you prefer to buy cooking oil with value offers.	3.91	4.40
The size and shape of packaging affect your perception of the product.	3.23	4.20
Packaging durability is an important factor in your buying decisions.	3.83	4.13
Do you read information about quality of the cooking oil.	4.20	4.60
Do you prefer cooking oil pack which mention the nutritional information.	4.40	4.80
Ingredient list help you to make decision for purchase of cooking oil.	4.06	4.33
Clear and readable product information on packaging is essential to you.	4.11	4.53
If the cooking oil do not show information clearly, you will definitely not buy them.	3.74	4.47
Do you pay attention to the design and colours used on product packaging.	3.46	3.80
Do you likely to choose a product with minimal packaging over one with excessive packaging.	3.26	3.93

Colour of packaging influences your perception of the product's freshness.	2.80	3.80
Do you consider switching brands if you are dissatisfied with the packaging of a product.	3.57	4.27
Attractiveness of packaging influencing your buying decisions.	3.31	3.73
Do you engage with supplementary information provided on cooking oil packaging, such as cooking tips, recipes or nutritional information.	3.51	3.87
Do you trust cooking oil brands more if their packaging includes detailed information about health benefits, certifications or quality standards.	4.00	4.67
Do you prefer cooking oil packaging with clear and easy-to-read front labels.	3.97	4.27
Font style and size on the front of the packaging influence your buying decision.	3.26	3.53
Do you prefer cooking oil with recyclable packaging material.	3.77	4.73
Do you prefer package with manufacturing and expiry dates clearly visible.	4.57	4.80

Table 5.2.2 Final Cluster Centers

The table 5.12 shows that final cluster centers represent the average preferences of two distinct groups regarding cooking oil packaging. Cluster 1 tends to prioritize certain aspects more than Cluster 2 across various criteria. Cluster 1, for instance, shows a stronger inclination towards buying larger cooking oil packs (3.60) compared to Cluster 2 (2.13), suggesting they might value bulk purchasing or longer-lasting supplies. They also place higher importance on visual appeal (3.83), environmental friendliness (4.11), and packaging convenience (3.91), indicating a preference for aesthetically pleasing, eco-friendly, and easy-to-use packaging. Additionally, Cluster 1 places significant emphasis on clear and readable product information (4.11) and nutritional details (4.40), suggesting a more informed purchasing behaviour.

Conversely, Cluster 2 shows a higher preference for smaller packs (4.20) and places greater importance on factors like packaging durability (4.13) and trust in brands with detailed health and quality information (4.67). They also prioritize recyclable packaging (4.73) and clear visibility of manufacturing and expiry dates (4.80), indicating a focus on sustainability and transparency in product information. These cluster centers provide valuable insights for marketing strategies, helping to tailor packaging designs and product messaging to better resonate with the distinct preferences of each consumer group.

Table 5.13. Distances between Final Cluster Centers:

Distances between Final Cluster Centers		
Cluster	1	2
1		3.352
2	3.352	

Table 5.2.3 Distance between Final Cluster Centers

Table 5.13 shows that distances between the final cluster centers provide a measure of how distinct or similar the two identified consumer groups are based on their preferences for cooking oil packaging. The distance of 3.352 units between Cluster 1 and Cluster 2 indicates a moderate separation between these groups in terms of their average preferences. This suggests that while there are notable differences in what influences their purchasing decisions, there are also some commonalities or overlaps in preferences that could potentially influence their buying decisions. Understanding these distances helps marketers and product developers refine their strategies to better target each group's specific preferences and priorities, ensuring that packaging designs and product features align closely with consumer expectations and maximize appeal within their respective segments.

Table 5.14. Number of cases in each Cluster:

Number of Cases in each Cluster		
Cluster	1	70
	2	30
Valid		100
Missing		.000

Table 5.2.4 Number of cases in each Cluster

The table 5.14 represented the information provided indicates the distribution of cases across the identified clusters based on their preferences for cooking oil packaging features. Cluster 1 comprises 70 cases, while Cluster 2 includes 30 cases, totalling 100 cases overall. This distribution suggests that Cluster 1 represents a larger segment of the consumer population compared to Cluster 2. The unequal distribution between the clusters implies varying levels of preference or importance placed on the analyzed packaging features among consumers. Cluster 1 i.e., Convenience consumer cluster, it suggests that group might be more influenced by specific packaging attributes such as Convenience, sustainability, visual appeal or brand recognition. Cluster 2 i.e., Health-conscious consumer cluster, that indicates group of consumers prefer cooking oils packaging features include unique packaging materials, advanced labelling information (e.g., health benefits, nutritional facts) or eco-friendly packaging solutions. Understanding these cluster sizes is crucial for market segmentation strategies, allowing businesses to tailor their product offerings, packaging designs and marketing messages to effectively meet the specific needs and preferences of each consumer group identified within the clusters.

5.3 Identify the determinants of packaging & labelling affecting buying decision

Table 5.15 KMO and Bartlett's Test:

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.651
Bartlett's Test of Sphericity	Approx. Chi-Square	1177.589
	df	190
	Sig.	.000

Table 5.3.1 KMO and Bartlett's Test

Table 5.15 showed an index that evaluates the suitability of factor analysis is called the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy which is 0.651. The Bartlett's test has a significance value of 0.00. As a result of the correlation between the variables, factor analysis is a suitable test in this case.

Table 5.16 Rotated Component Matrix

Rotated Component Matrix^a

Statements	Component			
	1	2	3	4
Do you influenced by packaging changes when deciding to purchase a product.	.839			
Certain packaging materials indicate a higher quality product to you.	.814			
The packaging of a product can influence your perception of its healthiness.	.774			
Do you chosen a product solely based on its packaging design.	.738			
Colour of the packaging impact on decision to purchase.	.686			

Complicated labels of cooking oil do not influence your buying decision.	.593			
Do you likely to recommend a product solely based on its packaging.	.586			
Labelling on pack of cooking oil influence to buying.	.556			
Packaging material influence your buying decision.	.547			
Special offers or promotions on packaging influence your buying behaviour.		.819		
The presence of certifications (e.g., organic, fair trade) on product packaging influences your buying decisions.		.763		
Different packages size of cooking oil influences your buying decision.		.739		
It is important for you that the packaging reflects the brand's values and identity.		.734		
Do you usually buy cooking oil packet with attractive colour, logo & design.		.644		
The accuracy of product expiration date and batch information is crucial for your trust in the product.			.876	
Do you prefer package with manufacturing and expiry dates clearly visible.			.825	
Do you regularly read the information provided on product labels before making a purchase.				.812
Do you closely examine the packaging before making a buying decision.				.766
Minimal or no information on the label affects your trust in a product.				.687
Inclusion of allergen information on product labels affects your buying decision.				.533

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 4 iterations.

Table 5.3.2 Rotated Component matrix

Table 5.16 showed the rotated component matrix using Varimax rotation with Kaiser Normalization, the table suggests that after undertaking the factor analysis and showing the results in the rotated form of component matrix, all the items with factor loading larger than 0.60 be divided. Component 1 reflects consumer tendencies strongly

inclined towards packaging changes when deciding to purchase a product (loading: 0.839) and relatively lower influence by packaging material (0.547). Component 2 highlights factors such as the impact of special offers or promotions on packaging (loading: 0.819) and the significant influence by cooking oil packets with attractive colour, logo & design (loading: 0.644). Component 3 underscores the accuracy of product expiration date and batch information is crucial for trust in the product (loading: 0.876) and consumer preference to cooking oils with clearly visible manufacturing and expiry dates (loading: 0.825). Component 4 shows that consumers regularly read the information provided on product labels before making a purchase. (loading: 0.812) and reliance on presence of allergen information on product labels (loading: 0.533). For determinants identifications we selected only those statements that have factor loading above from 0.60, So below 0.60 statements are rejected due to not significant loadings.

Table 5.17. The statements under determinant 1 i.e., Perceived Quality & Influence from Packaging with factor loadings:

Statements	Factor Loading
Do you influenced by packaging changes when deciding to purchase a product	.839
Certain packaging materials indicate a higher quality product to you.	.814
The packaging of a product can influence your perception of its healthiness.	.774
Do you chosen a product solely based on its packaging design.	.738
Colour of the packaging impact on decision to purchase.	.686
Complicated labels of cooking oil do not influence your buying decision.	.593
Do you likely to recommend a product solely based on its packaging.	.586
Labelling on pack of cooking oil influence to buying.	.556
Packaging material influence your buying decision.	.547

Table 5.18. The statements under determinant 2 i.e., Packaging Appeal & Material with factor loadings:

Statements	Factor Loading
Special offers or promotions on packaging influence your buying behaviour.	.819

The presence of certifications (e.g., organic, fair trade) on product packaging influences your buying decisions.	.763
Different packages size of cooking oil influences your buying decision.	.739
It is important for you that the packaging reflects the brand's values and identity.	.734
Do you usually buy cooking oil packet with attractive colour, logo & design.	.644

Table 5.19. The statements under determinant 3 i.e., Product Labelling with factor loadings:

Statements	Factor Loading
The accuracy of product expiration date and batch information is crucial for your trust in the product.	.876
Do you prefer package with manufacturing and expiry dates clearly visible.	.825

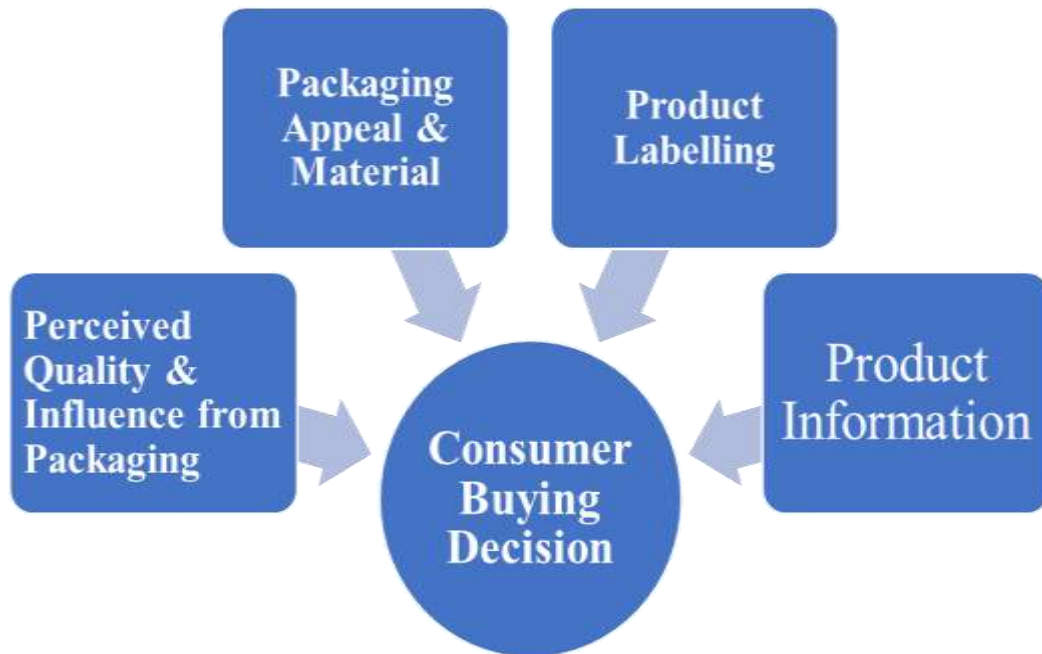
Table 5.20. The statements under determinants 4 i.e., Product Information with factor loadings:

Statements	Factor Loading
Do you regularly read the information provided on product labels before making a purchase.	.812
Do you closely examine the packaging before making a buying decision.	.766
Minimal or no information on the label affects your trust in a product.	.687
Inclusion of allergen information on product labels affects your buying decision.	.533

There is only one statement left, so we add it in determinant 4 as the statement has similar content with determinant 4.

5.4 Relationship between consumer buying decision and attributes of packaging

Fig. 5.10 Dependent and Independent variables



Hypothesis:

1. H₀- There is no Relationship between Consumer Buying Decision and Perceived Quality & influence from Packaging
 H₁- There is Relationship between Consumer Buying Decision and Perceived Quality & influence from Packaging
2. H₀- There is no Relationship between Consumer Buying Decision and Packaging Appeal & Material
 H₂- There is Relationship between Consumer Buying Decision and Packaging Appeal & Material
3. H₀- There is no Relationship between Consumer Buying Decision and Product Labelling
 H₃- There is Relationship between Consumer Buying Decision and Product Labelling
4. H₀- There is no Relationship between Consumer Buying Decision and Product Information
 H₄- There is Relationship between Consumer Buying Decision and Product Information

Table 21: Pearson Correlation Between Consumer Buying Decision and Perceived Quality & Influence from Packaging:

Correlations		Consumer Buying Decision	Perceived Quality & Influence from Packaging
Consumer Buying Decision	Pearson Correlation	1	.420*
	Sig. (2-tailed)	-	.030
	N	100	100
Perceived Quality & Influence from Packaging	Pearson Correlation	.420*	1
	Sig. (2-tailed)	.030	-
	N	100	100

Table 5.3.1 Pearson Correlation Between Consumer buying decision and Perceived Quality & Influenced from Packaging

The Pearson correlation coefficient between Consumer Buying Decision and Perceived Quality & Influence from Packaging is 0.420. A correlation coefficient of 0.420 indicates a relationship between Consumer Buying Decision and Perceived Quality & Influence from Packaging. The significance value (p-value) for the correlation between Consumer Buying Decision and Perceived Quality & Influence from Packaging is 0.030. The p-value of 0.030 is less than the common alpha level of 0.05, suggesting that the correlation is statistically significant. Thus, null hypothesis (H_1) is accepted.

Table 22: Pearson Correlation Between Consumer Buying Decision and Packaging Appeal & Material

		Correlations	
		Consumer Buying Decision	Packaging Appeal & Material
Consumer Buying Decision	Pearson Correlation	1	.560*
	Sig. (2-tailed)	-	.040
	N	100	100
Packaging Appeal & Material	Pearson Correlation	.560*	1
	Sig. (2-tailed)	.040	-
	N	100	100

*. Correlation is significant at the 0.05 level (2-tailed).

Table 5.3.2 Pearson Correlation Between Consumer Buying Decision and Packaging Appeal & Material

The Pearson correlation coefficient is $r=0.560$. This value indicates the correlation between the two variables. In this context, as the Packaging Appeal & Material increases, the Consumer Buying Decision also increases, therefore, the relationship is significant. The p-value is 0.040, which is less than the significance level of 0.05. This indicates that the correlation is statistically significant. This mean null hypothesis (H_2) is accepted.

Table 23: Pearson Correlation Between Consumer Buying Decision and Product Labelling

		Correlations	
		Consumer Buying Decision	Product Labelling
Consumer Buying Decision	Pearson Correlation	1	.387**
	Sig. (2-tailed)	-	.000
	N	100	100
Product Labelling	Pearson Correlation	.387**	1
	Sig. (2-tailed)	.000	-
	N	100	100

**. Correlation is significant at the 0.01 level (2-tailed).

Table 5.3.3 Pearson Correlation Between Consumer Buying Decision and Product Labelling

The Pearson correlation coefficient of 0.387 indicates a positive relationship between Consumer Buying Decision and Product Labelling. This indicates that the correlation is statistically significant. Therefore, there is evidence to suggest a meaningful relationship between the two variables. This indicates that the correlation is statistically significant. Thus, null hypothesis (H_3) is accepted.

Table 24: Pearson Correlation Between Consumer Buying Decision and Product Information

		Correlations	
		Consumer Buying Decision	Product Information
Consumer Buying Decision	Pearson Correlation	1	.396**
	Sig. (2-tailed)	-	.000
	N	100	100
Product Information	Pearson Correlation	.396**	1
	Sig. (2-tailed)	.000	-
	N	100	100

** . Correlation is significant at the 0.01 level (2-tailed).

Table 5.3.4 Pearson Correlation Between Consumer Buying Decision and Product Information

The Pearson correlation coefficient between consumer buying decisions and the Product Information is 0.396. This indicates that the correlation is statistically significant at the 0.01 level (2-tailed). Thus, the null hypothesis (H_4) is accepted.

DISCUSSION

The results obtained after the analysis of the present study “**Study the role of Packaging and Labelling in Consumer buying decision of Cooking oils**” in the chapter have been discussed under the following:

6.1 Demographic profile of the respondents

6.2 Segment the consumers on the basis of their choice of packaging & labelling

6.3 Identify the determinants of packaging & labelling affecting buying decision

6.4 Relationship between consumer buying decision and attributes of packaging

6.1 Demographic profile of the respondents

The demographic profile of the consumers revealed the packaging & labelling affects the buying decision of customers, the age group 21-40 years comprising 60 per cent of the total respondents. This age group clearly concerns with packaging of cooking oil followed by 36 per cent were from the age group of 40 to 60 years and only 4 per cent of respondents were over the age of 60 years. Gender distribution was that the 58 per cent of the respondents were female and 42 per cent were males. In terms of education, the data shows well-educated consumers deeply check the packaging & labelling with the majority of 60 per cent respondents are post-graduate followed by, 32 percent were under graduate and 4 percent were Secondary and only 4 per cent were higher secondary. The monthly income does not affect the consumer buying decision of cooking oils because it is necessary product in daily life. Overall demographic analysis highlights packaging & labelling play important role in young and educated consumers.

6.2 Segment the consumers on the basis of their choice of packaging & labelling

The findings of the consumers feelings about the packaging of cooking oils by five-point Likert scale. The descriptive statistics provided the responses of 100 respondents to several variables measured on a scale of 1 to 5, with each variable representing a different aspect of the participants feelings or perceptions. The variables include Important, Interesting, Relevant, Means a lot to me, Appealing and Value for money. The mean values for these variables range from 1.7700 to 2.2800, indicating the

general tendency of responses. The variable “Important” has a mean of 1.7700 and a standard deviation of 0.46829, suggesting that most participants found the item to be moderately important, with relatively low variability in responses. Similarly, “Interesting” has a mean of 1.8600 and a slightly higher standard deviation of 0.49278, indicating a comparable level of interest with a similar degree of variability. “Relevant” has a mean of 1.9900, which is close to the upper boundary of the 1-3 scale used for the first three items, indicating that respondents generally found the item to be highly relevant. However, the standard deviation for this variable is the lowest at 0.26572, showing that responses were more consistent. In contrast, “Means a lot to me” has the highest mean of 2.2800 and the highest standard deviation of 0.84184. This suggests that responses to this item were more varied, with some participants finding it highly significant and others less so. The Appealing and Value for money also shows moderate means of 2.1600 and 2.0300, respectively, with standard deviations of 0.50692 and 0.43705, indicating moderate agreement among respondents with slightly higher variability than the first three variables. The similar observation was made by Bahrainizad and Rajabi (2018) that appropriate packaging & labelling have a significant influenced on consumers perception of usability of product packaging.

Overall, the data suggest that the respondents generally found the items to be important, interesting, and relevant, with varying levels of personal significance and perceived value. The standard deviations indicate the degree of consensus among the respondents, with "Relevant" showing the highest agreement and “Means a lot to me” showing the most diverse opinions. These findings are essential for understanding the perceptions of the respondents and used to further analysis in context of the research study.

The analysis of consumer segments based on their choice packaging and labelling reveals two clusters with homogeneous relationships with each other. Convenience consumers and Health-conscious consumers. These clusters show minor differences in their objectives and influencing factors when selecting packaging. The majority, comprising 70 per cent of the total consumers are convenience consumers who prioritize packaging features such as sustainability, visual appeal and brand identification. For these consumers, convenience and visual appeal are likely the primary motivates in their buying decisions for cooking oils. On the other hand, the remaining 30 per cent of the consumers consists of health-conscious consumers who exhibit a more discerning approach. They place significant importance on packaging materials, product labelling

that includes nutritional information and health benefits and eco-friendly packaging solutions. This group is more selective, seeking detailed information and sustainable options when choosing cooking oils. This result aligns with previous study by Rokka and Uusitalo (2008) that the consumers were grouped in five clusters on the basis of similarity of their preferences for various product attributes.

Overall, the understanding these distinct consumer segments, marketers can tailor their packaging and product offerings to better meet the unique needs and preferences of each group, thereby enhancing market satisfaction and consumer engagement.

6.3 Identify the determinants of packaging & labelling affecting buying decision

The analysis shows the significant identification of determinants of packaging & labelling that affects consumers buying decision. The factor analysis was used to analyze the determinants from 20 statements for 100 consumers. Factor analysis is useful method to analyze the variability of observed statements and extract variability from statements and load that statements that are related to each other into a common determinant. This finding aligns with research by Ansari *et. al.* (2019), who found that consumer buying behaviour can be influenced by packaging features. The study proved that customers do not look the packaging material and information about the product, they are attracted by packaging graphics and colour and size & shape of the product so the manufacturers ensure that their product must be unique and attractive and sensitive to customers in competitor markets.

The determinants of packaging & labelling provide significant insights in consumers buying decision for cooking oils. The age group 21-40 years must be observed the packaging & labelling of the cooking oils before making buying decision. In the findings of the study, it is observed that the consumer buying decision of cooking oil is depends on four major determinants of packaging & labelling. The similar research by Yazdani and Masum (2018), they also find the consumer buying behaviour for cosmetic products depends on several factors and after data reduction they conclude the three major determinants that impact on consumer buying behaviour.

The KMO and Bartlett's Test results further confirmed the suitability of data for factor analysis, with KMO values 0.651, suggest that the data was suitable for analysis. The rotated component matrix identified the four determinants of packaging & labelling of cooking oils that affects the consumers buying decision. Determinant Perceived

Quality & Influence from Packaging which contains 5 statements with factor loading above 0.60 and statements with below 0.60 factor loading are rejected due to non-significant factor loading. The second determinant Packaging Appeal & Material contains factor 5 statements with factor loading above 0.60. The third determinant Product Labelling contain 2 statements and the fourth determinant Product Information contain 3 statements and one statement with below 0.60 factor loading, so we rejected that statement. The identification of these determinants is consisting with the former study by Dan and Ngoc (2022) which observe the six factors that have positive impact while customers buying the confectionery products that means they observe the packaging factors before making buying decision for the products.

Overall, the results show the determinants have strong impact on customers buying decision and customers check the packaging determinants before making buying decision, most impacting determinant is Perceived quality & influence from Packaging followed by Packaging appeal and material.

6.4 Relationship between consumer buying decision and attributes of packaging

The results of the analyzing the relationship between consumer buying decision and packaging attributes is done by the correlation analysis in SPSS 20. The packaging attributes selected as the determinants of packaging & labelling that affects consumers buying decision. The attributes of packaging, the first is Perceived Quality & Influence from Packaging followed by second determinant Packaging Appeal & Material, third is Product Labelling and the last is Product Information. These attributes are independent variables of the dependent variable that is Consumer buying decision. The mean value of descriptive statistics for consumer feeling about the product packaging is used for the dependent variable i.e. consumer buying decision. The hypothesis used in the analysis is:

1. H_0 - There is no Relationship between Consumer Buying Decision and Perceived Quality & influence from Packaging
 H_1 - There is Relationship between Consumer Buying Decision and Perceived Quality & influence from Packaging
2. H_0 - There is no Relationship between Consumer Buying Decision and Packaging Appeal & Material
 H_2 - There is Relationship between Consumer Buying Decision and Packaging Appeal & Material

3. H₀- There is no Relationship between Consumer Buying Decision and Product Labelling
H₃- There is Relationship between Consumer Buying Decision and Product Labelling
4. H₀- There is no Relationship between Consumer Buying Decision and Product Information
H₄- There is Relationship between Consumer Buying Decision and Product Information

This analysis is done by follow up previous study by Adam and Ali (2014) who examines the impact of packaging elements on consumer buying behaviour. The study found the positive significant relationship between packaging elements and consumer buying behaviour.

In findings of the research table 17 shows the Pearson correlation coefficient between Consumer Buying Decision and Perceived Quality & Influence from Packaging is 0.420. This value suggests a moderate positive relationship between these variables, implying that as consumers perceive higher quality and greater influence from packaging, their buying decisions are positively affected. Thus, the null hypothesis (H₁) is accepted which suggests that there is a significant relationship between Consumer Buying Decision and Perceived Quality & Influence from Packaging. The table 18 represents the Pearson correlation coefficient between Consumer Buying Decision and Packaging Appeal & Material is 0.560. This relatively higher correlation coefficient indicates a stronger positive relationship, suggesting that the more appealing and well-constructed the packaging, the more likely consumers are to make a purchase decision. The p-value is 0.040, which is also below the 0.05 normal significant value. Thus, the acceptance of the null hypothesis (H₂) is confirming that packaging appeal and material significantly impact consumer buying decisions. The findings emphasize the important role that attractive and quality packaging plays in consumer buying decisions. The table 19 showed in results of the Pearson correlation coefficient of 0.387 between Consumer Buying Decision and Product Labelling. This coefficient indicates a moderate positive relationship, suggesting that clear, informative, and appealing product labelling can positively influence consumer purchasing decisions. The p-value is 0.000, below the 0.01 significance level, indicating that the relationship is highly statistically significant. Therefore, the null hypothesis (H₃) is accepted which suggests a significant relationship between Consumer Buying Decision and Product Labelling and the last table no. 20

shows the Pearson correlation coefficient between Consumer Buying Decision and Product Information is 0.396. This value indicates a moderate positive relationship, suggesting that detailed and accurate product information plays a role in influencing consumer buying decisions. The p-value of 0.000 is significantly below the 0.01, confirming the statistical significance. This result supports the acceptance of the null hypothesis (H_4), highlighting that consumers are more likely to make buying decisions when they are provided with comprehensive product information. This finding emphasizes the importance of transparency and carefulness in conveying product information to potential consumers. The similar research was made by Abdullah *et. al.* (2013) who, reveals seven attributes were find out and selected as independent variables and consumer buying decision as a dependent variable. These attributes have massive correlation to the consumers buying decision.

The overall results indicate the various attributes of packaging significantly influence consumers buying decision of cooking oils. These findings have important implications for marketers and cooking oil manufacturing industries who should consider these attributes when designing packaging of the product and labelling strategies to enhance consumer engagement and sales determination.

SUMMARY AND CONCLUSION

7.1 SUMMARY

The study entitled **“Study the role of packaging and labelling in consumer buying decision of cooking oils”** was conducted in Jammu urban during the year 2023-2024. A total sample of 100 consumers from Jammu urban. The main objective of the study is segmenting the consumers on the basis of their choice of packaging, identifying the determinants of packaging & labelling and its relationship with consumer buying decision. This chapter contains summary and conclusion of the final analysis of research data.

The demographic analysis of 100 consumers revealed a diverse range of characteristics. The majority of respondents 60 per cent were aged between 21-40 years whereas 36 per cent were from the age group of 40-60 years and as it only 4 per cent of respondents were over the age of 60 years, with a fairly balanced gender distribution, as 58 per cent were female and 42 per cent male. Educational attainment was high, with 60 per cent field postgraduate degrees and 32 per cent being undergraduate's and 4 per cent were Secondary and only 4 per cent were higher secondary. The marital status was equally split, with 50 per cent of respondents married and 50 per cent unmarried. On the basis of Occupation, 32 per cent were students, another 32 per cent were employees, 14 per cent were engaged in their own businesses, 12 per cent were retired and 10 per cent were housewives.

In terms of monthly income, 42 per cent of respondents earned below Rs. 30,000 monthly, while 24 per cent fell into the Rs.30,000-Rs.60,000 range and 14 per cent of the consumers felled in income ranges from Rs. 60000 to Rs. 90000 and 10 per cent of the consumers are having income ranges from Rs. 90000 to Rs. 120000 and 10 per cent of consumers having income above Rs. 120000. Household sizes mainly had 2-4 members is 54 per cent, 30 per cent of 4-6 household members, 10 per cent 0-2 household members and only 6 per cent above 6 household members. The 62 per cent consumers travelled a short distance of 0-2 kilometres to purchase cooking oil, 22 per cent consumers travel between 2-4 kilometres to buy cooking oil, smaller group 14 per cent travels even further, between 4-6 kilometres and only a very small segment of the consumers 2 per cent travel the furthestmost distance of 6-8 kilometres. Monthly cooking oil consumption was modest, with 42 per cent of households using 0-2 litres and another 42 per cent

consuming 2-4 litres, 14 per cent of the respondents consume between 4-6 litres of cooking oil and only 2 per cent of the respondents consume more than 6 litres of cooking oil per month. These insights provide a comprehensive overview of the demographic, economic and consumption patterns of the surveyed respondents.

7.2 Segment the consumer on the basis of their choice of packaging & labelling

The descriptive statistics and cluster analysis used to analyze consumer preferences for cooking oil packaging shows clear trends in the relative values that different groups place on different aspects of the packaging. According to the descriptive statistics of Likert scale for feelings of consumers about the packaging of cooking oil is moderate to high. The feature “Means lot” had the greatest mean 2.2800 and variability, reflecting a range of perspectives regarding its individual relevance. The respondent’s significant agreement is indicated by the constant ratings for qualities like Important and Relevant, but the consumers varying preferences are reflected in the variability of other attributes like Appealing.

The cluster analysis further used for segments consumers on basis of their choice of packaging & labelling, the results represent the two consumer clusters based on their packaging & labelling preferences. Cluster 1(Convenience consumer cluster), which comprises 70 per cent of the respondents, shows a preference for larger cooking oil packs, visually appealing, eco-friendly, and convenient packaging. This group values clear and readable product information, indicating a preference for informed purchasing decisions. On the other hand, Cluster 2(Health-conscious consumer cluster), representing 30 per cent of respondents, favors smaller packs and places higher importance on packaging durability, recyclable materials and detailed health and quality information. The moderate distance between the clusters suggests some relationship in preferences, but also highlights key differences that marketers can use to changes packaging designs and product features to meet the specific needs of each segment effectively.

7.3 Identify the determinants of packaging & labelling affecting buying decision

The study aimed to identify the determinants of packaging & labelling that affects the consumer buying decision of cooking oils. The SPSS 20(Statistical Package for Social Services, version 20) is used for factor analysis that identified the four determinants of packaging & labelling that affects buying decision. The analysis employed the KMO(Kaiser-Meyer-Olkin) measures Adequacy which is 0.651 and the Bartlett's test of Sphericity has a significance value of 0.00 which indicates that factor

analysis is appropriate for identifying the determinants. Further the determinants are concluded in Rotated Component Matrix of factor analysis.

The first determinant Perceived Quality & Influence from Packaging: The determinant primarily captures how visual and design aspects of packaging, such as packaging changes, materials, colour and design, significantly impact consumer choices. Statements such as being influenced by packaging changes, perceiving quality based on packaging materials and the impact of packaging design on purchase decisions load heavily on this component. The second determinant Packaging Appeal & Material: It dominated by statements related to promotions and certifications, such as special offers on packaging, certifications (e.g., organic, fair trade) and the importance of packaging reflecting brand values. This determinant indicate that consumers are influenced by external confirmations and promotional indication when making buying decisions. The third determinant Product Labelling: This determinant centred around the trust and reliability of the product, as reflected by factors such as the accuracy of expiration dates and the importance of manufacturing and expiry dates being clearly visible. This suggests that consumers place significant importance on clear and accurate information for product trust. The last determinant Product Information: This determinant highlights the role of detailed label information in consumer decision-making. Statements such as reading product information before purchase, examining packaging closely and the inclusion of allergen information load onto this determinant. This indicates that consumers who examine labels and packaging information are influenced by the level of detail provided, affecting their trust and ultimately their buying decisions.

7.4 Relationship between consumer buying decision and attributes of packaging

The results represented the relationship between consumer buying decision and attributes of packaging with correlation analysis in SPSS 20. The findings of the Pearson correlation analysis provide insight into the relationships between consumer buying decisions and various packaging-related factors. The analysis reveals that there is a statistically significant positive correlation between consumer buying decisions and four key determinants: Perceived quality & influence from packaging, Packaging appeal & material, Product Labelling and Product information. The Pearson correlation coefficients for these relationships are 0.420, 0.560, 0.387 and 0.396, respectively. Each attributes relationship with consumer buying decisions is statistically significant, with p-values below the common alpha levels of 0.05 and 0.01. The strongest correlation is with packaging appeal & material ($r=0.560$,

$p=0.040$), suggesting that how a product is packaged can greatly influence a consumer's decision to purchase. The next strongest correlation is with perceived quality & influence from packaging ($r=0.420$, $p=0.030$), indicating that consumers are likely to make buying decisions based on their perceptions of quality derived from packaging. Product information ($r=0.396$, $p=0.000$) and product labelling ($r=0.387$, $p=0.000$) also have significant but slightly weaker correlations, emphasizing the importance of clear, informative and appealing packaging in influencing consumer behaviour. These findings suggest that companies should pay close attention to packaging design and information to positively impact consumer buying decisions.

7.5 Conclusion

- On the basis of choice of packaging, we identify the consumers in two segments, Convenience consumers & Health-Conscious consumers. In first cluster 70% of all consumers, these consumers are influenced by packaging attributes like sustainability, visual appeal & brand recognition. In other cluster 30% of all consumers were Health-conscious, they check packaging material, advanced labelling (e.g. health benefits, nutritional facts) & eco-friendly packaging of cooking oils.
- The major determinants that influence buying decision includes Perceived Quality & Influence from Packaging, Packaging Appeal & Material, Product Labelling and Product Information of cooking oils.
- These determinants have significant relationship with consumer buying decision.

7.6 Recommendations

- The recommendation is that cooking oil manufacturing industries provides clear, informative and transparent product labelling that highlights health benefits and nutritional facts.
- Use non-toxic materials and promote the eco-friendly packaging.
- The graphics and visuals on the packaging that tell a story, such as images of the farmers, the landscapes where the ingredients are sourced or the production process.
- To enhance consumer trust, satisfaction and ultimately drive buying decisions use educational content across various channels to inform and engage consumers about the product's origins, ingredients and benefits.

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Sher-e-Kashmir University of Agricultural Sciences and Technology, Jammu

Division of Agricultural Economics and ABM

Study the Role of Packaging and Labelling in Consumer Buying Decision of Cooking Oils

QUESTIONNAIRE/SCHEDULE

Section –I

Demographic Profile

For consumers

Name of the Purchaser-

Age -

Mobile No. –

Address -

1. Gender:

a) Male ()

b) Female ()

2. Age Group:

a) Below 20-year ()

b) 21–40-year ()

c) 41–60-year ()

d) above 60 years ()

3. Qualification:

a) Secondary ()

b) Higher Secondary ()

c) Under graduate ()

d) Post-Graduate ()

e) Literate ()

f) Illiterate ()

4. Marital status:

a) Married ()

b) Unmarried ()

5. Occupation:

a) Student ()

b) House-wife ()

c) Employee ()

d) Own Business ()

e) Retired ()

6. Monthly Income:

- a) Below Rs 30000 () b) Rs 30000-Rs 60000 ()
c) Rs 60000-Rs 90000 () d) Above 90000-120000 ()
e) Above Rs 120000 ()

7. How far do you travel to buy cooking oil?

- a) 0-2 km ()
c) 4-6 km ()
e) Above 8 km ()
- b) 2-4 km ()
d) 6-8 km ()

8. Number of members in your household?

- a) 0-2 () b) 2-4 ()
c) 4-6 () d) Above 6 ()

9. What is the monthly consumption of the cooking oil in your home?

- a) 0-2 Litres () b) 2-4 Litres ()
- c) 4-6 litres () d) Above 6 Litres ()

SECTION -II

Please rate your opinion on 5-point scale for each feeling you have about packaging of cooking oils.

a. Important	1	2	3	4	5	Unimportant
b. Interesting	1	2	3	4	5	Boring
c. Relevant	1	2	3	4	5	Irrelevant
d. Means lot to me	1	2	3	4	5	Means nothing
e. Appealing	1	2	3	4	5	Not appealing
f. Value for money	1	2	3	4	5	Worthless

SECTION -3

Objective 1: Segment the consumer on the basis of their choice of packaging & labelling

S. no	Statement	HIGHLY DISAGREE	DISAGREE	NEUTRAL	AGREE	HIGHLY AGREE
1. 1.	Do you usually buy large cooking oil packs.					
2. 2.	Do you prefer to buy cooking oil pack that are placed in front of rack.					
3. 3.	Do you usually buy smaller pack of cooking oil.					
4. 4.	The visual appeal of product packaging is important to you when making a buying decision.					
5. 5.	Do you prefer products with environmentally friendly packaging materials.					
6. 6.	Packaging convenience (e.g., easy opening, reseal ability) influences your buying decisions.					
7. 7.	Do you prefer to buy cooking oil with value offers.					
8. 9.	The size and shape of packaging affect your perception of the product.					
9. 10.	Packaging durability is an important factor in your buying decisions.					
10. 11.	Do you read information about quality of the cooking oil.					
11. 12.	Do you prefer cooking oil pack which mention the nutritional information.					
12. 13.	Ingredient list help you to make decision for purchase of cooking oil.					
13. 15.	Clear and readable product information on packaging is essential to you.					
14. 16.	If the cooking oil do not show information clearly, you will definitely not buy them.					

15. 17.	Do you pay attention to the design and colours used on product packaging.					
16. 20.	Do you likely to choose a product with minimal packaging over one with excessive packaging.					
17. 21.	Colour of packaging influences your perception of the product's freshness.					
18. 22.	Do you consider switching brands if you are dissatisfied with the packaging of a product.					
19. 23.	Attractiveness of packaging influencing your buying decisions.					
20. 24.	Do you engage with supplementary information provided on cooking oil packaging, such as cooking tips, recipes or nutritional information.					
21. 25.	Do you trust cooking oil brands more if their packaging includes detailed information about health benefits, certifications or quality standards.					
22. 26.	Do you prefer cooking oil packaging with clear and easy-to-read front labels.					
23. 27.	Font style and size on the front of the packaging influence your buying decision.					
24. 28.	Do you prefer cooking oil with recyclable packaging material.					
25. 29.	Do you prefer package with manufacturing and expiry dates clearly visible.					

Objective 2: Determinants of packaging & labelling affecting buying decision

Objective 3: Relationship between consumer buying decision and attributes of packaging

S. no	Statement	HIGHLY DISAGREE	DISAGREE	NEUTRAL	AGREE	HIGHLY AGREE
1.	Do you influenced by packaging changes when deciding to purchase a product.					
2.	Certain packaging materials indicate a higher quality product to you.					
3.	The packaging of a product can influence your perception of its healthiness.					
4.	Do you chosen a product solely based on its packaging design.					
5.	Colour of the packaging impact on decision to purchase.					
6.	Complicated labels of cooking oil do not influence your buying decision.					
7.	Do you likely to recommend a product solely based on its packaging.					
8.	Labelling on pack of cooking oil influence to buying.					
9.	Packaging material influence your buying decision.					
10.	Special offers or promotions on packaging influence your buying behaviour.					
11.	The presence of certifications (e.g., organic, fair trade) on product packaging influences your buying decisions.					
12.	Different packages size of cooking oil influences your buying decision.					
13.	It is important for you that the packaging reflects the brand's values and identity.					
14.	Do you usually buy cooking oil packet with attractive colour, logo & design.					
15.	The accuracy of product expiration date and batch information is crucial for your trust in the product.					

16.	Do you prefer package with manufacturing and expiry dates clearly visible.					
17.	Do you regularly read the information provided on product labels before making a purchase.					
18.	Do you closely examine the packaging before making a buying decision.					
19.	Minimal or no information on the label affects your trust in a product.					
20.	Inclusion of allergen information on product labels affects your buying decision.					

VITA

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Title of Master's Project : STUDY THE ROLE OF PACKAGING AND LABELLING IN CONSUMER BUYING DECISION OF COOKING OILS

CERTIFICATE- IV

Certified that all necessary corrections as suggested by the external examiner and advisory committee have been duly incorporated in the project entitled “**STUDY THE ROLE OF PACKAGING AND LABELLING IN CONSUMER BUYING DECISION OF COOKING OILS**”, submitted by **Mr. Karandeep Atttri**, Registration No. **J-22-M-102-ABM**.

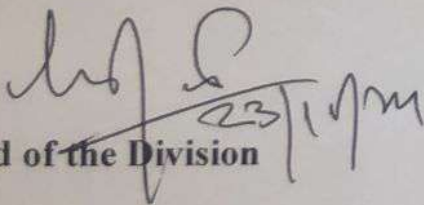

23.8.2024

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