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A Study on Customer Awareness Towards Sustainable Packaging and Its Utilization

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Abstract: ***"Sustainable packaging is a comprehensive approach to packaging design and production that seeks to minimize environmental impact while still meeting the functional needs of packaging." This includes the use of renewable, recyclable, or biodegradable materials to minimize overall packaging waste. The use of recycled paper, cardboard, bioplastics, and compostable materials can be utilized to achieve this goal, along with innovative design methods like lightweighting and right-sizing to minimize packaging. The circular economy is a fundamental principle of sustainable packaging, where materials are recycled or composted after their lifetime. The process involves collaborating from raw material suppliers to manufacturers, retailers, and consumers. Consumers have increasingly called for sustainable packaging in recent years due to growing awareness of the harmful effects of packaging waste. Businesses have increasingly adopted sustainable packaging as a strategy to decrease their environmental impact and enhance brand image, which has also been observed. Nonetheless, the application of sustainable packaging solutions can be problematic due to the high cost associated with research and development initiatives, as well as changes in infrastructure and processes. Sustainability may require balancing other factors like cost, performance, and shelf life. Despite these obstacles, the advantages of sustainable packaging are evident. This method not only reduces waste that goes to landfill and conserves resources, but also results in reduced material and transportation expenses for businesses. Ultimately, it is imperative to make packaging more sustainable and contribute to the environment and social responsibility. Businesses can reduce their environmental impact and meet consumer demands for more sustainable products by adopting sustainable practices.***

Keywords: sustainable, sustainable packaging, eco-friendly, environment, customer awareness, packaging solutions

I. INTRODUCTION

"A Study on customer's awareness towards sustainable packaging and its utilization."

In recent years, the global concern for environmental sustainability has led to a significant shift in the way products are packaged. Sustainable packaging solutions have emerged as a crucial component in reducing the environmental impact of the packaging industry. This paradigm shift is driven by the need to address issues such as climate change, resource depletion, and pollution caused by traditional packaging materials.

Sustainable packaging is any type of eco-friendly material used to wrap, store, ship or shelve products.

1) What is Sustainable Packaging?

Sustainable packaging refers to the use of materials and design principles that minimize the environmental impact throughout a product's lifecycle. It aims to reduce the depletion of natural resources, minimize pollution, and promote the overall well-being of ecosystems.

2) What are Key Components of Sustainable Packaging Solutions?

a) Material Selection:

- Biodegradable Materials: Packaging materials made from biodegradable substances can break down naturally without harming the environment. Examples include compostable plastics and plant-based materials.
- Recycled Materials: Utilizing recycled content, such as recycled paper, cardboard, or plastic, reduces the demand for virgin resources and lowers energy consumption.
- Bio-based Plastics: Derived from renewable resources like corn, sugarcane, or potato starch, bio-based plastics offer an alternative to traditional petroleum-based plastics.

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b) Minimalist Design:

- Streamlining packaging design to use the least amount of material necessary reduces waste and environmental impact.
- Lightweight packaging can lower transportation emissions and energy use.

c) Reusable Packaging:

- Encouraging the use of packaging that can be reused for multiple cycles significantly reduces the amount of waste generated.
- Reusable containers and packaging systems help create a circular economy, where materials are kept in use for as long as possible.

d) Recyclability and Closed-Loop Systems:

- Designing packaging that is easily recyclable helps ensure that materials can be recovered and reused in the production of new items.
- Closed-loop systems aim to create a circular economy by collecting, recycling, and reintroducing materials into the manufacturing process.

3) What is its Impact on the Environment?

a) Reduction in Greenhouse Gas Emissions:

- Sustainable packaging solutions often involve the use of materials with a lower carbon footprint, reducing overall greenhouse gas emissions associated with production and disposal.

b) Conservation of Resources:

- By promoting the use of recycled and renewable materials, sustainable packaging helps conserve natural resources and reduces the environmental impact of raw material extraction.

c) Waste Reduction:

- Packaging designed with a focus on sustainability minimizes waste generation, leading to a reduction in landfill space and decreasing the environmental burden.

d) Preservation of Ecosystems:

- Sustainable packaging aims to minimize the impact on ecosystems by avoiding the use of harmful chemicals and materials that can harm wildlife and biodiversity.

4) PESTLE analysis

a) Political:

- Regulations and Policies: Government regulations promoting sustainability, waste reduction, and eco-friendly practices can significantly influence the adoption of sustainable packaging.
- Political Support: Government initiatives and support for companies adopting sustainable practices can create a favorable political environment.

b) Economic:

- Cost Implications: Economic factors, such as the cost of raw materials and production, can impact the feasibility of adopting sustainable packaging solutions.
- Consumer Spending Patterns: Economic conditions influence consumer spending behavior, which, in turn, affects their willingness to pay for products with sustainable packaging.

c) Social:

- Consumer Awareness: Increasing environmental consciousness and awareness of ecological issues drive demand for sustainable packaging solutions.

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- Changing Lifestyles: Shifts in consumer lifestyles and preferences can influence the types of products and packaging they find appealing.

d) Technological:

- Innovation: Advances in technology play a crucial role in the development of new and more sustainable packaging materials and manufacturing processes.
- Recycling Technologies: Technological advancements in recycling and waste management contribute to the effectiveness of sustainable packaging solutions.

e) Legal:

- Regulatory Compliance: Adherence to environmental laws and regulations regarding packaging materials and waste disposal is a critical aspect for companies implementing sustainable practices.
- Liabilities: Legal implications may arise if companies fail to comply with sustainability-related regulations or if the environmental impact of their packaging is deemed harmful.

f) Environmental:

- Resource Depletion: Sustainable packaging aims to reduce the depletion of natural resources, addressing environmental concerns related to deforestation, fossil fuel use, etc.
- Carbon Footprint: The environmental impact of transportation and manufacturing processes is a key consideration in sustainable packaging solutions.

g) Conclusion:

A PESTLE analysis provides a comprehensive understanding of the external factors influencing sustainable packaging solutions. By considering the political, economic, social, technological, legal, and environmental aspects, businesses can develop strategies that align with broader environmental goals and navigate the complex landscape of sustainable packaging. This analysis helps organizations proactively respond to external influences and make informed decisions to drive positive environmental impact.

5) World Market

The global sustainable packaging market size was valued at USD 244.30 billion in 2022. It is projected to reach USD 476.28 billion by 2031, growing at a CAGR of 7.70% during the forecast period (2023-2031). The development and usage of packaging that improves sustainability are known as sustainable packaging.

How big is the packaging market in the world?

As per Precedence Research, the global packaging material market size was valued at USD 1.13 trillion in 2022 and it is expanding around USD 1.76 trillion by 2032. Ottawa, May 18, 2023 (GLOBE NEWSWIRE) -- The global packaging material market is expected to reach a CAGR of 4.52% from 2023 and 2032.

Which country is best for packaging?

China produced 79.07 million metric tons of paperboard and packaging paper in 2022, making it the top producer worldwide. The United States was the second-largest producing country, with an output of nearly 48.83 million metric tons.

6) Indian Market

The sustainable packaging market in India is expected to grow at a CAGR of 7.36% from 2023–2028. In 2022, the market was valued at 5.46 million metric tonnes.

What is the size of sustainable packaging market in India?

The Sustainable packaging market in India was valued at 5.46 million metric tonnes in 2022 and is expected to reach 8.22 million metric tonnes by 2028, expanding at a CAGR of ~7.36% during the 2023- 2028 period.

What packaging is most sustainable?

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Eco-friendly packaging includes recyclable materials, such as PET or HDPE plastic, cardboard and paper wrappings. These materials, once sorted correctly for recycling, can be shredded, pulped, or melted down and remolded to begin anew as raw material for new packaging or other uses.

What is the future of packaging industry in India?

GlobalData's intelligence values the India packaging market size at 413 billion units in 2022. The market is anticipated to register a CAGR of more than 6% by 2027.

7) Benefits of Sustainable Packaging

a) Increase Brand Loyalty & Revenue

- A study shows 70% of US consumers think of sustainability as “Somewhat Important” while 47% of them would still pay 25% more for brands that pledge sustainability.

b) More Storage – Lower Costs

- Implementing sustainable packaging into your system means reducing packaging materials and minimizing waste. This, in turn, will result in efficient free storage with lower costs.

c) Decreased Carbon Footprint

- By using fluting and liner made with virgin fiber sourced from the forest, you can minimize the impact on the environment while also using strong packaging to protect your products for far and long shipping journeys.

d) Lower Shipping Costs

- Switching to smaller, eco-friendly packaging not only benefits the environment, it removes the burden of shipping cost from your shoulders.

e) Sustainable packaging and it's impact on environment

- Sustainable packaging plays a crucial role in mitigating environmental impact, offering a responsible approach to the entire product life cycle. In a world grappling with escalating environmental concerns, the choice of packaging materials has far-reaching consequences. Traditional packaging, often derived from non-renewable resources, contributes significantly to pollution and resource depletion. In contrast, sustainable packaging aims to minimize these adverse effects through various eco-friendly practices.
- The primary environmental benefit of sustainable packaging lies in its reduced carbon footprint. Materials like recycled paper, cardboard, and bioplastics, derived from renewable resources, require fewer energy-intensive processes compared to conventional alternatives. This results in lower greenhouse gas emissions during production. Additionally, sustainable packaging helps alleviate the burden on landfills by promoting the use of materials that can be recycled or composted.
- Recycling is a cornerstone of sustainable packaging strategies. By encouraging the collection and recycling of packaging materials, we divert substantial amounts of waste from landfills, conserving valuable resources and reducing environmental degradation. Consumers, businesses, and governments must collaborate to establish effective recycling systems and educate the public on the importance of responsible waste disposal.
- Biodegradable materials are gaining prominence in sustainable packaging solutions. These materials break down naturally over time, minimizing the persistence of packaging waste in the environment. However, it's crucial to strike a balance, as some biodegradable materials may require specific conditions to decompose effectively, and improper disposal can still lead to environmental harm.
- Innovative designs and lightweight materials are integral to sustainable packaging. Optimizing packaging designs reduces the overall material usage, cutting down on resource extraction and transportation-related emissions. Moreover, lightweight materials decrease energy consumption during transportation, further lowering the environmental impact.
- Choosing locally sourced and renewable materials is another aspect of sustainable packaging that merits attention. This approach minimizes the ecological footprint associated with transportation and promotes regional economic development. Companies embracing sustainable packaging not only contribute to global environmental goals but also demonstrate corporate responsibility and earn the trust of environmentally conscious consumers.

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- While sustainable packaging holds immense promise, challenges persist. The availability and cost of eco-friendly materials, consumer awareness, and infrastructure for recycling and composting are significant hurdles that need to be addressed. Collaborative efforts across industries, governments, and communities are essential to creating an environment conducive to the widespread adoption of sustainable packaging practices.
- In conclusion, sustainable packaging is a pivotal component in the pursuit of a greener, more environmentally responsible future. Its impact extends beyond the reduction of waste and carbon emissions, influencing consumer behavior and fostering a holistic approach to environmental stewardship.

II. INTRODUCTION TO THE COMPANY

"AMBA Multiprints"

Amba Multiprint is a leading offset printing & packaging solution company in India, delighting customers with innovative and sustainable packaging, print.
Amba Multiprint is known as, "The house of 360° printing & packaging solutions.

A. About Company

With over 25 years of experience, Amba Offset, now Amba Multiprint, has established itself as a leader in providing comprehensive printing solutions across Packaging, Labels, and Commercial Printing Divisions. The organization's commitment to understanding client needs and fostering long-lasting relationships underscores its dedication to excellence in the field.
The team of creative professionals at Amba Multiprint endeavors to offer innovative solutions tailored to meet each client's unique requirements. From its humble beginnings, the company has evolved into a 'one-stop' Production House, serving a diverse clientele of esteemed corporations.
Believing that complete in-house facilities are integral to success in a competitive industry, Amba Multiprint ensures personalized attention to every order, regardless of the client's stature. With a focus on precision and quality, orders are executed on well-maintained, high-precision machines by experienced craftsmen, ensuring timely delivery and the highest standards of design and printing.
In summary, Amba Multiprint's unwavering dedication to customer satisfaction and its commitment to delivering exceptional printing solutions continue to distinguish it as a trusted partner in the industry.

B. History of amba multiprint

1) 1998

- Amba is founded.
- We started production in 1998 from a small, rented premise of 2000 square feet located in Ahmedabad.

2) 1999-2004

- Amba's journey of turning less into more
- As our journey as a Commercial Printing company had just begun, it was full of ups and downs owing to limited resources and less industry knowledge. But with the arrival of advanced binding machines & a Dominant 2-colour offset printing machine, we turned less into more. We printed more Commercial Print with more clarity.

3) 2005-10

- Amba expands rapidly.
- The period between 2005-2010 witnessed the rapid expansion of Amba's printing businesses. In-house commercial printing facilities were now available after we brought in several state-of-the-art printing machines.

4) 2011-15

- Amba develops further.
- We began our establishment as one of the leading offset printing presses in Ahmedabad. Our combined capacity exponentially increase as the binding unit was moved during this time to another rented facility of 2000 square feet.

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5) 2015-16

- Amba's terrific evolution
- In the year 2015, we purchased new land in GIDC (Gandhinagar) to expand our operations. An 18,000 square feet property with all the state-of-the-art facilities one can imagine.
- With the move to our new facility in 2016, we had a complete in-house set-up for world-class commercial printing, equipped with all the latest technology.

6) 2017-20

- Amba explores different verticles.
- In the years 2017 and 2018, Amba started two new divisions respectively- the Carton Packaging division and the Labels & Shrink Sleeves division. During the subsequent years, to ensure smooth and productive operation and to meet the incoming increasing demands in both divisions, we kept upgrading our facility & workforce consistently.

7) 2021-22

- Amba establishes a humongous facility
- By the year 2021, Amba grew to be a renowned name in the printing industry and projects flooded us one after another.
- Due to the surge in demand from the customers, we shifted our base of operations to Chattral and began the establishment of a humongous and contemporary plant that stretches across 1,70,000 square feet.

8) 2023

- Amba's meteoric growth
- The avant-garde facilities and equipment at our Chattral plant have pushed us to be one of the biggest & technologically-advanced packaging & label converters in INDIA. We became one of the most popular packaging solutions companies across the industry.
- Due to new machines being highly efficient and faster in productivity our entire production capacity increased by more than 20 percent, meaning we are now capable of delivering on your demands. No matter how big they are.

C. Vision And Mission

1) Vision

- Maximize customer satisfaction through superlative service, leading-edge state of art technology and excellence. Collaborating the customers by providing a diverse range of innovative printing solutions to attain their goals.

2) Mission

- Provide a great experience to the customers through creative solutions, perfect service quality, 'on-time' delivery and cordial relationship. Maintain utmost purity and highest standard of Ethical practices in processes, communications and environmental aspects. Create congenial working environment through Employee empowerment & open communication.

D. Infrastructure

World-class infrastructure to deliver world-class services.

We have the solutions for all your printing & packaging needs, under one massive roof. With a state-of-the-art plant spread across 1,70,000 sqft of land, we are equipped with the latest printing technology to satisfy your printing and packaging demands, no matter how massive they are.

Our leading-edge manufacturing unit is the focal point that keeps us ready to deliver global quality services for you, always.

E. Strengths

Amba Multiprint boasts a team of over 250 professionals renowned in the printing and packaging industry for their expertise and dedication. Believing them to be instrumental in the company's outstanding success, Amba Multiprint invests in continuous learning and improvement through tailored training sessions and workshops.

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The workforce at Amba Multiprint embodies the company's unwavering commitment to excellence. With meticulous attention to detail, each project is meticulously managed by skilled professionals to ensure timely and successful completion, consistently exceeding clients' expectations.

For Amba Multiprint, perfection lies in the intricacies of every detail, reflecting their relentless pursuit of excellence in every endeavor.

F. Products

1) Carton Packaging

- Mono Carton

It is used for compact packaging of products, and are highly customizable. This kind of packaging facilitates have a large number of applications across industries. Mono carton packaging is customizable and we provide various options for it to our clients as per their need and product. Our mono carton packaging ensures highly secure and protective packaging solution with numerous printing alternatives to upgrade the packaging standard. Also our unique Foil Stamping, Drip Off, Spot UV, Metallic Printing, Matt UV, Dew Drop UV and many other effects are good to be explored to create your perfect brand.

- Rigid Box

This type packaging is a popular choice for certain types of products, mainly due to the support and luxury feel it offers. It is also known as premium packaging due to its weight and feel. A rigid box, also known as a gift box, is highly favoured to pack up high-end items or luxury products. It tend to be made with thick paperboard for the best product protection. For this reason, many businesses choose this type of packaging material for their delicately designed items.

- Litho Laminated Carton

Manufacturers usually use Litho Laminated Cartons packaging for packaging and advertising solutions. The quality printed sheet is laminated on the corrugated liners to create custom printed boxes for packaging use. Various brands opts for Litho Laminated Cartons to give texture of Good Visual + Strength to their packaging.

2) Commercial Printing

Commercial offset printing often gets overlooked by big companies, but Amba still consider it one of their main streams. They print everything from custom calendars to diaries and corporate gift packaging.

a) Print & Expand

- Brochure

A brochure is an informative paper document for advertising, which can be folded into a template, pamphlet, or leaflet. Brochures are promotional documents, primarily used to introduce a company, organization, products, or services and inform potential customers. We have wide range of brochure like hard bound, perfect bind, loop pin, center pin, center stitching and various others. We create brochure with much care as we are aware that it is your brand symbol.

- Flyers

A Flyer is usually a single, unfolded printed sheet that is used to draw attention to an event, service, product or idea. A flyer usually contains a very simple message that can be conveyed quickly. We create highly innovative flyers which are full of effects.

- Inserts

The company offers a comprehensive solution for inserts, employing various folding techniques to meet diverse needs. With a focus on building trustworthy relationships with consumers, it provides inserts in a range of paper options, catering to both single-color and multicolor printing requirements. This approach ensures versatility and quality in meeting the insert needs of clients across different industries and sectors.

- Calendars

The company boasts extensive experience in printing customized calendars tailored to diverse needs and styles. By integrating multiple effects and utilizing high-grade materials, it specializes in creating masterpieces that resonate with clients.

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Whether it's a Wall Calendar, Table Top-Calendar, Reference Calendar, Dashboard Calendar, Greeting Card Calendar, or any other type, the company ensures a meticulous approach to deliver outstanding results. With a commitment to excellence and attention to detail, it caters to a wide range of calendar requirements in a manner that reflects quality and style.

- Diaries

The company provides a diverse array of diary printing and binding services for clients to leverage. From wire diaries to hard-bound diaries to perfect bind diaries, it offers a comprehensive range of options to suit various preferences and needs.
Utilizing avant-garde papers, cardboard, and other premium materials, the company crafts diaries that exude a sophisticated and premium appearance. With a commitment to quality and innovation, it ensures that each diary is meticulously designed and produced to meet the highest standards, delivering both functionality and aesthetic appeal to its clients.

- Office Stationaries

The company provides a comprehensive range of customized office stationery printing services, offering unique effects and high-quality papers to meet diverse needs.
With advanced technology and extensive expertise, it specializes in producing high-grade office stationeries such as letterheads, visiting cards, challan books, and more. These products are designed to facilitate day-to-day operations and enhance professionalism in various business settings.
The company's commitment to quality and innovation ensures that its office stationery solutions meet the highest standards, catering to the requirements of modern workplaces effectively.

G. Machineries

The company prioritizes technology to deliver the ultimate packaging and printing solutions, distinguishing itself as a top offset printing and packaging company.
Amba invests in the latest printing technologies and contemporary packaging machines, ensuring it stays at the forefront of innovation in the industry. By continuously collaborating with market leaders for the development of state-of-the-art machinery, Amba remains committed to its vision of providing uncompromised printing and packaging solutions. This dedication to technology and innovation enables Amba to meet the evolving needs of its clients while maintaining the highest standards of quality and efficiency in its services.

1) Carton Packaging Divisons

- Printing + Post effect machines
- Dummy + Concept maker
- Packaging post pack machines
- Inspection & QC

H. Flawless Testing Equipment

The company doesn't rely on luck; instead, it meticulously scrutinizes the finished product from every angle, considering every minute detail. This thorough process ensures that only the highest quality products are delivered to customers.
Amba adheres to a double-checking protocol to guarantee the excellence of its offerings. This commitment to quality assurance is a cornerstone of the company's operations.
The prominence of Amba as a leading offset printing and packaging company in the industry isn't merely a stroke of luck. It's a result of the company's dedication to delivering exceptional products through meticulous attention to detail and quality control measures.

I. Helping Brands

Amba has played a pivotal role in transforming numerous prestigious brands by offering flawless packaging and printing solutions, ranging from contemporary packaging designs to corporate brochures. With Amba's expertise, these brands have elevated the way they present themselves to their audiences.

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Customers consistently choose Amba because they recognize that superior printwork begins with Amba. The company's commitment to excellence, coupled with its innovative approach to packaging and printing, has earned it a reputation for delivering exceptional results. Amba's dedication to quality and customer satisfaction has made it the preferred choice for brands seeking to make a lasting impression through their printed materials.

J. Careers

Amba is dedicated to producing the classiest prints and packaging, driven by a relentless pursuit of perfection. The successful execution of this vision relies on the dependable shoulders of its team.

To maintain its high standards, Amba recruits the brightest minds in the industry. By assembling a team of top talent, the company aims to set new benchmarks for excellence within the industry. Despite the pursuit of perfection, Amba believes in fostering a work environment where team members can also enjoy the journey and find fulfillment in their roles.

K. Why work at AMBA ?

1) Holistic Growth

The company strives to produce the classiest prints and packaging, driven by an unwavering pursuit of perfection. It acknowledges that the execution of its plans relies heavily on the reliable shoulders of its team.

To uphold its standards and set new benchmarks in the industry, the company recruits the brightest minds in the field. By fostering a culture of collaboration and innovation, it ensures that its team members not only meet but exceed expectations while enjoying the journey along the way. This commitment to excellence and camaraderie underscores the company's ethos as it continues to excel in delivering top-notch prints and packaging solutions.

2) Highly Supportive

The company's first nature is to be cooperative and supportive, extending its assistance beyond the thresholds of the organization. With a commitment to fostering a supportive environment, the company stands with its team members like a family, prioritizing their well-being and success. This culture of support and cooperation strengthens bonds within the team, fostering collaboration and a sense of belonging among its members.

3) Competitive Salary

Amba prioritizes the happiness and satisfaction of its employees, recognizing the importance of equal efforts and contributions across the organization. As a result, the company is committed to rewarding the dedicated efforts of its team members with the growth and opportunities they rightfully deserve. This approach ensures that employees feel valued, motivated, and empowered to achieve their full potential within the organization. At Amba, the ethos of fairness and recognition underscores every aspect of employee engagement and development.

4) High Transparency

The company places a strong emphasis on maintaining equality and fairness within its team, striving to create an environment where every individual's integrity is upheld, and transparency is valued among team members.

By fostering a culture of equality and fairness, the company ensures that all team members feel respected and valued. This commitment to creating a transparent and supportive work environment enables individuals to collaborate effectively, share ideas openly, and work towards common goals with integrity. Such principles underscore the company's dedication to nurturing a positive and inclusive workplace culture.

III. OBJECTIVES

To Study the packaging used for products right now.

1) This objective involves conducting surveys, interviews, and observational studies to understand the current packaging practices employed by businesses across various industries.
2) Researchers will analyze the types of materials, design elements, and packaging formats commonly used for different products, ranging from food and beverages to electronics and personal care items.
3) Insights gathered from this study will provide a baseline understanding of existing packaging trends and highlight areas where improvements can be made to enhance sustainability.

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4) To Study accessibility and availability of alternative environmentally friendly packaging materials.
5) Building upon the first objective, this step focuses specifically on the accessibility and availability of alternative environmentally friendly packaging materials.
6) Researchers will assess the distribution channels, supply chains, and market penetration of sustainable packaging options, identifying any barriers or challenges hindering their widespread adoption.
7) Strategies to improve accessibility, such as incentivizing producers to switch to sustainable materials, enhancing consumer education, and investing in infrastructure for recycling and composting, will be explored.

By addressing these objectives in detail, the study aims to provide valuable insights into consumer perspectives towards sustainable packaging solutions and their impact on the environment.

IV. RESEARCH METHODOLOGY

A. Objectives Of The Study

1) Primary objective

The main objective is to study consumer's perspective about sustainable packaging solutions and their effect on environment

2) Secondary objective

To study accessibility and availability of alternative environmentally friendly packaging materials.

B. Scope Of The Study

1) This study will investigate about how consumers perceive and value sustainable packaging terms of environmental impact.
2) This study will also evaluate the perceived effectiveness of sustainable packaging solutions in mitigating environmental concerns from consumer's standpoint
3) This study analysis if there are variations in attitudes and preferences based on demographics such as age and education.
4) This study will explore the influence of marketing and communication strategies on consumer's perceptions of sustainable packaging.
5) This study will also identify any obstacles or concerns that consumer may have regarding the adoption of sustainable packaging.
6) By that, study will also assess the level of awareness among consumers regarding the environmental consequences of different packaging choices.

C. *Need Of The Study*

1) This research study will let us know more about consumer's interest towards sustainable and environment friendly packaging and their perception towards the same.
2) To get clear picture about their satisfaction level after the usage of environment friendly and sustainable packaging.
3) To also know about the awareness of the different sustainable packaging solutions.

D. *Research design*

Descriptive Research method was used for this research. Descriptive research is a research method describing the characteristics of population or phenomenon studied. The descriptive methodology focuses more on the "what" of the research subject than the "why" of the research subject. The descriptive research method primarily focuses on describing the nature of a demographic segment without focusing on "why" a particular phenomenon occurs. In other words, it "describes" the subject of research without covering "why" it happens.

1) Sources of data

- primary data is used for the study. The primary data are directly collected from the respondent's using questionnaire and survey method of primary data collection by circulating structured questionnaire.
- Secondary data is collected from previous research papers.

E. Data collection method

"Data collection" can be done through tests, questionnaires, inventories, interview schedules or guides, rating scales and survey plans or any other forms which are used to collect information on substantially identical items from 150 respondents.
The above methods of data collection, method of questionnaire and surveys have been used for this research.

F. Sampling Design

Population: consumer purchasing packaging products
Element: single consumer
Sampling frame: consumers from Ahmedabad
Sampling size: 150 and above
Sampling method: Non probability convenience sampling method

G. Limitations Of Study

1) This study focused only on respondents from Ahmedabad city.
2) The project does not involve a high level of technical analyses for responses collected.
3) It gives insight into perception of consumers from Ahmedabad only.
4) The study covers both present problems and prospects of the packaging solutions only in Ahmedabad city and not in the whole country and there is different factor which affects different states due to demographic as well as geographic diversity.
5) Therefore, there are only limited factors taken into consideration for the research.

V. DATA ANALYSIS & INTERPRETATION

1) Question 1

Graph-1.1

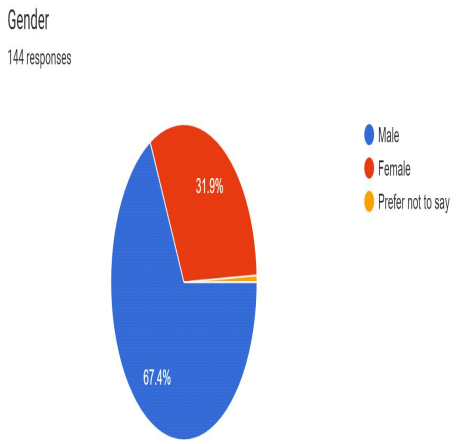


Table-1.1

Gender					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	46	31.9	31.9	31.9
	Male	97	67.4	67.4	99.3
	Prefer not to say	1	.7	.7	100.0
	Total	144	100.0	100.0	

From the above data it can be seen that 31% of the population is female, 67% of population is male.

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2) Question 2

Graph-1.2

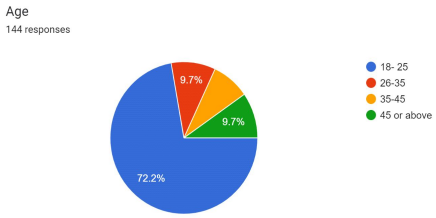


Table-1.2

Age					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18- 25	103	71.5	71.5	71.5
	26-35	14	9.7	9.7	81.3
	35-45	12	8.3	8.3	89.6
	45 or above	15	10.4	10.4	100.0
	Total	144	100.0	100.0	

From the above data it can be seen that 71% of the population is aged between 18 to 25, 9% of population is aged between 26 to 35, 8% of population is aged between 35 to 45, 10% of population is aged between 45 or above.

3) Question 3

Graph-1.3

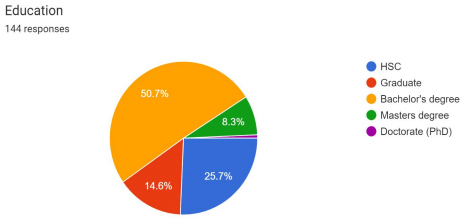


Table-1.3

Education					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bachelor's degree	73	50.7	50.7	50.7
	Doctorate (PhD)	1	.7	.7	51.4
	Graduate	21	14.6	14.6	66.0
	HSC	37	25.7	25.7	91.7
	Masters degree	12	8.3	8.3	100.0
	Total	144	100.0	100.0	

The data include population in which 50% had done Bachelor's degree,1% had done Doctorate (PhD), 14% had done graduation, 25% had done HSC and 8% had done Master's degree.

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4) Question 4

Graph-1.4

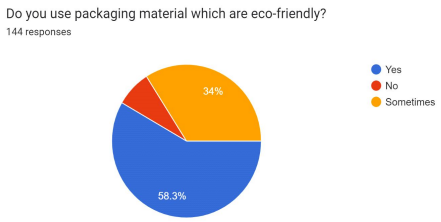


Table-1.4

Do you use packaging material which are eco-friendly?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	11	7.6	7.6	7.6
	Sometimes	48	33.3	33.3	41.0
	Yes	85	59.0	59.0	100.0
	Total	144	100.0	100.0	

From the above data it can be known 7% of the population do not use eco friendly packaging material,33% of the population sometimes uses eco friendly packaging material and 59% of the population use eco friendly packaging material

5) Question 5

Graph-1.5



Table-1.5

How frequently do you purchase products that come in packaging material?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Daily	36	25.0	25.0	25.0
	Monthly	26	18.1	18.1	43.1
	Occasionally	28	19.4	19.4	62.5
	Weekly	54	37.5	37.5	100.0
	Total	144	100.0	100.0	

From the above data it can be seen 25% of the population daily purchases product that comes in packaging, 18% of the population monthly purchases product that comes in packaging, 19% of the population occasionally purchases product that comes in packaging, 37% of the population weekly purchases product that comes in packaging.

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6) Question 6

Graph-1.6

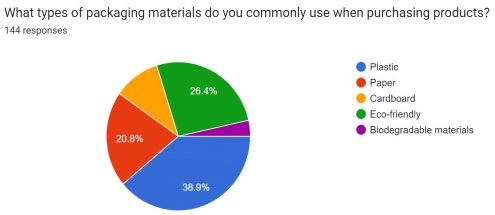


Table-1.6

What types of packaging materials do you commonly use when purchasing products?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Biodegradable materials	5	3.5	3.5	3.5
	Cardboard	14	9.7	9.7	13.2
	Eco-friendly	38	26.4	26.4	39.6
	Paper	31	21.5	21.5	61.1
	Plastic	56	38.9	38.9	100.0
	Total	144	100.0	100.0	

From the above data, it can be seen that 3% of the population uses biodegradable materials, 9% of the population uses cardboard, 26% of the population uses eco-friendly material, 21% of the population uses paper, and 38% of the population uses plastic when purchasing product as a packaging material.

7) Question 7

Graph-1.7

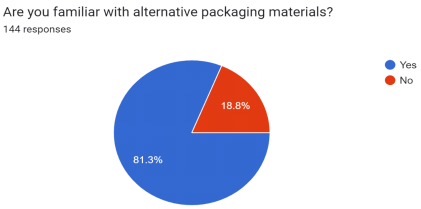


Table-1.7

Are you familiar with alternative packaging materials?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	27	18.8	18.8	18.8
	Yes	117	81.3	81.3	100.0
	Total	144	100.0	100.0	

From the above data, it can be seen that 18% of the population are not familiar with alternative packaging materials, while 81% of the population is familiar with alternative packaging materials.

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8) Question 8

Graph-1.8

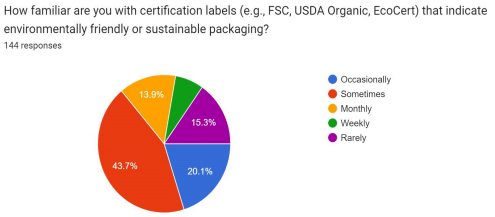


Table-1.8

How familiar are you with certification labels (e.g., FSC, USDA Organic, EcoCert) that indicate environmentally friendly or sustainable packaging?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Monthly	20	13.9	13.9	13.9
	Occasionally	29	20.1	20.1	34.0
	Rarely	22	15.3	15.3	49.3
	Sometimes	63	43.8	43.8	93.1
	Weekly	10	6.9	6.9	100.0
	Total	144	100.0	100.0	

From above it can be seen that majority people with 43% are familiar sometimes familiar with certification label. Whereas 20% knows occasionally , 15% rarely knows about labels and 13% monthly knows about it.

9) Question 9

Graph1.9

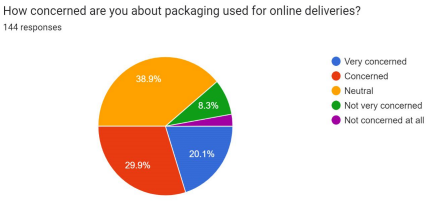


Table-1.9

How concerned are you about packaging used for online deliveries?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Concerned	44	30.6	30.6	30.6
	Neutral	55	38.2	38.2	68.8
	Not concerned at all	4	2.8	2.8	71.5
	Not very concerned	12	8.3	8.3	79.9
	Very concerned	29	20.1	20.1	100.0
	Total	144	100.0	100.0	

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The above data shows that 30% of the population is concerned, 38% of the population is neutral, 2% of the population is not concerned at all, 8% of the population not very concerned, 20% of the population is very concerned with the packaging used for online deliveries.

10) Question 10

Graph-1.10



Table1.10

Have you made changes in your purchasing behavior due to environmental concerns?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	20	13.9	13.9	13.9
	Yes	124	86.1	86.1	100.0
	Total	144	100.0	100.0	

The above data shows that 13% of the population have made no changes in purchasing behavior due to environmental concern and 86% of the population have made changes in purchasing behavior due to environmental concern.

11) Question 11

Graph-1.11

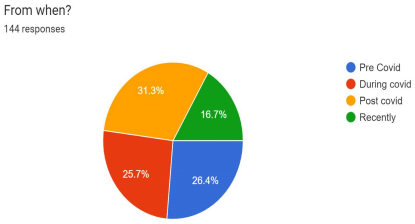


Table-1.11

From when?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	During covid	37	25.7	25.7	25.7
	Post covid	44	30.6	30.6	56.3
	Pre Covid	39	27.1	27.1	83.3
	Recently	24	16.7	16.7	100.0
	Total	144	100.0	100.0	

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30% people have made changes in their purchasing behaviour after covid, where as 27% have made changes before covid and 25% have made changes during covid while purchasing everything online from their places.16% have recently made changes to their purchasing behaviour

12) Question 12

Graph-1.12

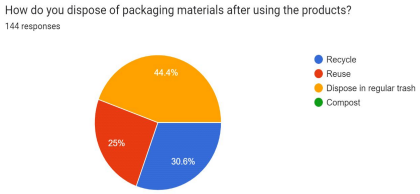


Table-1.12

How do you dispose of packaging materials after using the products?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Dispose in regular trash	63	43.8	43.8	43.8
	Recycle	44	30.6	30.6	74.3
	Reuse	37	25.7	25.7	100.0
	Total	144	100.0	100.0	

From the above data, it can be seen that how population dispose of packaging materials after using products. It can be seen that 43% of the population disposes it in regular trash, 30% of the population recycles the packaging materials after using the product, and 25% of the population reuse the packaging materials.

13) Question 13

Graph-1.13

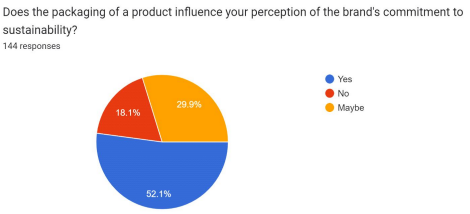


Table-1.13

Does the packaging of a product influence your perception of the brand's commitment to sustainability?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Maybe	42	29.2	29.2	29.2
	No	26	18.1	18.1	47.2
	Yes	76	52.8	52.8	100.0
	Total	144	100.0	100.0	

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The above data shows the packaging of product influence perception of the brand's commitment to sustainability. It can be seen that 29% of the population may influence by the packaging. 18% population do not get influenced by the packaging. 52% of the population gets influenced by the packaging.

14) Question 14

Graph-1.14

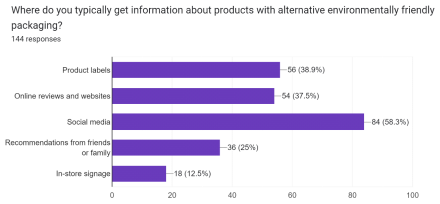


Table-1.14

Where do you typically get information about products with alternative environmentally friendly packaging?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	In-store signage	4	2.8	2.8	2.8
	Online reviews and websites	21	14.6	14.6	17.4
	Online reviews and websites, Recommendations from friends or family	1	.7	.7	18.1
	Online reviews and websites, Social media	6	4.2	4.2	22.2
	Online reviews and websites, Social media, Recommendations from friends or family	6	4.2	4.2	26.4
	Product labels	19	13.2	13.2	39.6
	Product labels, In-store signage	3	2.1	2.1	41.7
	Product labels, Online reviews and websites	5	3.5	3.5	45.1
	Product labels, Online reviews and websites, Social media	6	4.2	4.2	49.3
	Product labels, Online reviews and websites, Social media, Recommendations from friends or family	3	2.1	2.1	51.4
	Product labels, Online reviews and websites, Social media, Recommendations from friends or family, In-store signage	7	4.9	4.9	56.3

	Product labels, Recommendations from friends or family	2	1.4	1.4	57.6
	Product labels, Social media	5	3.5	3.5	61.1
	Product labels, Social media, In-store signage	2	1.4	1.4	62.5
	Product labels, Social media, Recommendations from friends or family	3	2.1	2.1	64.6
	Product labels, Social media, Recommendations from friends or family, In-store signage	1	.7	.7	65.3
	Recommendations from friends or family	6	4.2	4.2	69.4
	Social media	37	25.7	25.7	95.1
	Social media, In-store signage	1	.7	.7	95.8
	Social media, Recommendations from friends or family	6	4.2	4.2	100.0
	Total	144	100.0	100.0	

Furthermore, respondents utilize multiple channels simultaneously, such as a combination of product labels, online reviews, social media, and recommendations from friends or family, showcasing a comprehensive approach to gathering information.

15) Question 15

Graph-1.15

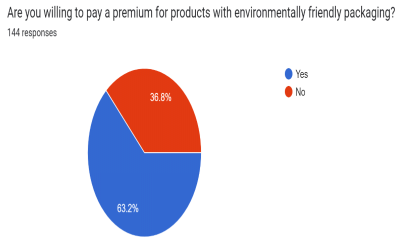


Table-1.15

Are you willing to pay a premium for products with environmentally friendly packaging?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	53	36.8	36.8	36.8
	Yes	91	63.2	63.2	100.0
	Total	144	100.0	100.0	

The above data shows that 36% of the population are not willing to pay premium for the products with environmentally friendly packaging and 63% of the population are willing to pay a premium for products with environmentally friendly packaging.

16) Question 16

Graph-1.16

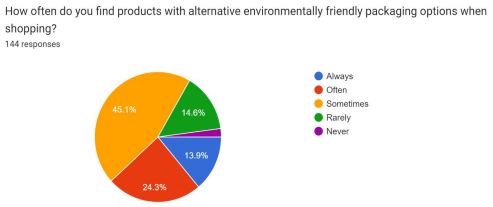


Table-1.16

How often do you find products with alternative environmentally friendly packaging options when shopping?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	20	13.9	13.9	13.9
	Never	3	2.1	2.1	16.0
	Often	36	25.0	25.0	41.0
	Rarely	21	14.6	14.6	55.6
	Sometimes	64	44.4	44.4	100.0
	Total	144	100.0	100.0	

The above data shows how often consumers find products with alternative environmentally-friendly packaging options when shopping.It can be seen that 13% always find alternatives, 2% never find alternatives, 25% often find alternatives, 14% rarely find alternatives, 44% sometimes find alternatives while shopping.

17) Question 17

Graph-1.17



Table-1.17

Do you tend to find a wider variety of products with alternative environmentally friendly packaging when shopping online compared to in-store?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	38	26.4	26.4	26.4
	Yes	106	73.6	73.6	100.0
	Total	144	100.0	100.0	

The above data shows 73% of the population tend to find wider variety of product with alternative environmentally friendly packaging when shopping online compared to in stores and 26% of the population do not tend to find wider variety of the products.

18) Question 18

Graph-1.18

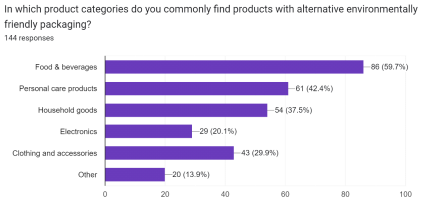


Table-1.18

In which product categories do you commonly find products with alternative environmentally friendly packaging?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Clothing and accessories	6	4.2	4.2	4.2
	Electronics	5	3.5	3.5	7.6
	Electronics, Other	1	.7	.7	8.3
	Food & beverages	24	16.7	16.7	25.0
	Food & beverages, Clothing and accessories	5	3.5	3.5	28.5
	Food & beverages, Clothing and accessories, Other	1	.7	.7	29.2
	Food & beverages, Electronics	2	1.4	1.4	30.6
	Food & beverages, Electronics, Clothing and accessories	2	1.4	1.4	31.9
	Food & beverages, Household goods	5	3.5	3.5	35.4
	Food & beverages, Household goods, Clothing and accessories	3	2.1	2.1	37.5
	Food & beverages, Household goods, Electronics	1	.7	.7	38.2
	Food & beverages, Household goods, Electronics, Clothing and accessories	1	.7	.7	38.9
	Food & beverages, Other	3	2.1	2.1	41.0
	Food & beverages, Personal care products	10	6.9	6.9	47.9
	Food & beverages, Personal care products, Clothing and	5	3.5	3.5	51.4

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	accessories				
	Food & beverages, Personal care products, Clothing and accessories, Other	1	.7	.7	52.1
	Food & beverages, Personal care products, Electronics, Clothing and accessories	1	.7	.7	52.8
	Food & beverages, Personal care products, Household goods	7	4.9	4.9	57.6
	Food & beverages, Personal care products, Household goods, Clothing and accessories	3	2.1	2.1	59.7
	Food & beverages, Personal care products, Household goods, Electronics	2	1.4	1.4	61.1
	Food & beverages, Personal care products, Household goods, Electronics, Clothing and accessories	2	1.4	1.4	62.5
	Food & beverages, Personal care products, Household goods, Electronics, Clothing and accessories, Other	4	2.8	2.8	65.3
	Food & beverages, Personal care products, Household goods, Other	1	.7	.7	66.0
	Food & beverages, Personal care products, Other	2	1.4	1.4	67.4
	Household goods	14	9.7	9.7	77.1
	Household goods, Clothing and accessories	3	2.1	2.1	79.2
	Household goods, Electronics, Clothing and accessories	1	.7	.7	79.9
	Other	6	4.2	4.2	84.0
	Personal care products	12	8.3	8.3	92.4
	Personal care products, Electronics	2	1.4	1.4	93.8
	Personal care products, Electronics, Clothing and accessories	2	1.4	1.4	95.1
	Personal care products, Household goods	3	2.1	2.1	97.2
	Personal care products,	1	.7	.7	97.9

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	Household goods, Clothing and accessories				
	Personal care products, Household goods, Electronics	1	.7	.7	98.6
	Personal care products, Household goods, Electronics, Clothing and accessories	2	1.4	1.4	100.0
	Total	144	100.0	100.0	

The data shows varying frequencies in finding products with alternative environmentally friendly packaging options when shopping. Sometimes, respondents encounter such products most frequently (46.7%), followed by often (23.3%), rarely (13.3%), always (14.0%), and a small percentage (2.7%) never finding products with alternative packaging options. This distribution indicates that while there is a notable frequency of encountering such products, there is still room for improvement in availability and accessibility in the market.

19) Question 19

Graph-1.19

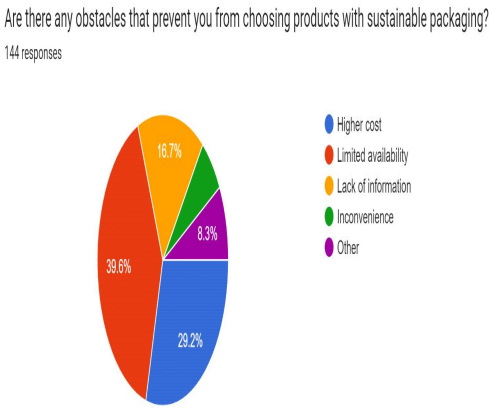


Table-1.19

Are there any obstacles that prevent you from choosing products with sustainable packaging?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Higher cost	42	29.2	29.2	29.2
	Inconvenience	9	6.3	6.3	35.4
	Lack of information	23	16.0	16.0	51.4
	Limited availability	58	40.3	40.3	91.7
	Other	12	8.3	8.3	100.0
	Total	144	100.0	100.0	

The above data shows the obstacles that prevent the consumer from choosing products with sustainable packaging.It can be seen that 29% of the population have barrier of higher cost, 6% of the population have barrier of inconvenience, 16% of the population have barrier of lack of information, 40% of the population have barrier of limited availability, and the rest of 8% goes with others.

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20) Question 20
Graph-1.20

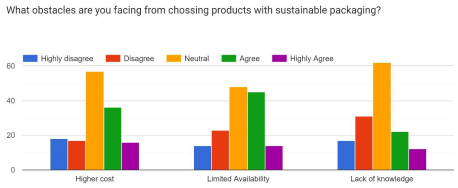


Table-1.20.1

What obstacles are you facing from chossing products with sustainable packaging? [Higher cost]					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	36	25.0	25.0	25.0
	Disagree	17	11.8	11.8	36.8
	Highly Agree	16	11.1	11.1	47.9
	Highly disagree	19	13.2	13.2	61.1
	Neutral	56	38.9	38.9	100.0
	Total	144	100.0	100.0	

Table-1.20.2

What obstacles are you facing from chossing products with sustainable packaging? [Limited Availability]					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	44	30.6	30.6	30.6
	Disagree	24	16.7	16.7	47.2
	Highly Agree	14	9.7	9.7	56.9
	Highly disagree	14	9.7	9.7	66.7
	Neutral	48	33.3	33.3	100.0
	Total	144	100.0	100.0	

Table-1.20.3

What obstacles are you facing from chossing products with sustainable packaging? [Lack of knowledge]					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	21	14.6	14.6	14.6
	Disagree	31	21.5	21.5	36.1
	Highly Agree	12	8.3	8.3	44.4
	Highly disagree	18	12.5	12.5	56.9
	Neutral	62	43.1	43.1	100.0
	Total	144	100.0	100.0	

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Respondents demonstrate diverse views on the obstacle of lack of knowledge when selecting products with sustainable packaging. Approximately 14.7% agree, 22.0% disagree, 8.0% highly agree, and 13.3% highly disagree with the notion that a lack of knowledge hinders their choices. A significant portion, 42.0%, remains neutral on the impact of knowledge limitations, emphasizing the need for improved awareness and information dissemination on sustainable packaging options.

21) Question 21

Graph-1.21

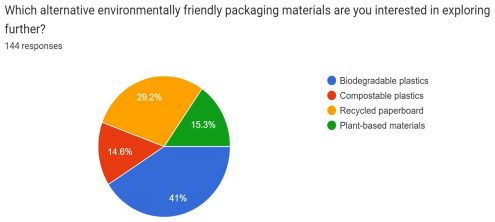


Table1.21

Which alternative environmentally friendly packaging materials are you interested in exploring further?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Biodegradable plastics	60	41.7	41.7	41.7
	Compostable plastics	21	14.6	14.6	56.3
	Plant-based materials	22	15.3	15.3	71.5
	Recycled paperboard	41	28.5	28.5	100.0
	Total	144	100.0	100.0	

From the above data, it can be seen that 41% of the population for biodegradable plastics, 14% of the population for compositable plastics, 15% of the population for plant-based material, 28% population for the recycled paper board are interested in exploring further for alternative environmentally friendly packaging materials.

22) Question 22

Graph-1.22

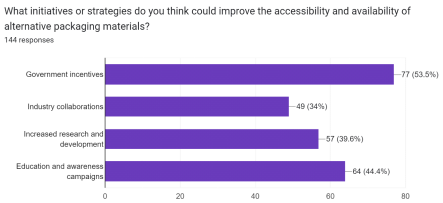


Table-1.22

What initiatives or strategies do you think could improve the accessibility and availability of alternative packaging materials?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Education and awareness	20	13.9	13.9	13.9

	campaigns				
	Government incentives	31	21.5	21.5	35.4
	Government incentives, Education and awareness campaigns	10	6.9	6.9	42.4
	Government incentives, Increased research and development	2	1.4	1.4	43.8
	Government incentives, Increased research and development, Education and awareness campaigns	6	4.2	4.2	47.9
	Government incentives, Industry collaborations	7	4.9	4.9	52.8
	Government incentives, Industry collaborations, Education and awareness campaigns	2	1.4	1.4	54.2
	Government incentives, Industry collaborations, Increased research and development	3	2.1	2.1	56.3
	Government incentives, Industry collaborations, Increased research and development, Education and awareness campaigns	16	11.1	11.1	67.4
	Increased research and development	18	12.5	12.5	79.9
	Increased research and development, Education and awareness campaigns	8	5.6	5.6	85.4
	Industry collaborations	16	11.1	11.1	96.5
	Industry collaborations, Education and awareness campaigns	2	1.4	1.4	97.9
	Industry collaborations, Increased research and development	2	1.4	1.4	99.3
	Industry collaborations, Increased research and development, Education and awareness campaigns	1	.7	.7	100.0
	Total	144	100.0	100.0	

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Respondents highlight diverse initiatives and strategies to enhance the accessibility and availability of alternative packaging materials. Key suggestions include government incentives (22.0%), increased research and development (14.0%), and education and awareness campaigns (12.7%). The data also indicates a recognition of the potential impact of combined efforts, with responses suggesting that a comprehensive approach involving government support, industry collaborations, and heightened research and development, along with education and awareness campaigns, could effectively address the challenges

23) Question 23

Graph-1.23

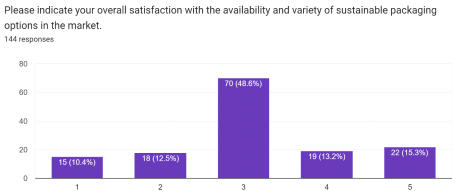


Table-1.23

Please indicate your overall satisfaction with the availability and variety of sustainable packaging options in the market.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	15	10.4	10.4	10.4
	2	18	12.5	12.5	22.9
	3	71	49.3	49.3	72.2
	4	18	12.5	12.5	84.7
	5	22	15.3	15.3	100.0
	Total	144	100.0	100.0	

The above data indicates overall satisfaction with the availability and variety of sustainable packaging options in the market. It can be seen that 10% of the population is satisfied at scale 1, 12% of the population is satisfied at scale 2, 49% of the population is satisfied at scale 3, 12% of the population is satisfied at scale 4, 15% of the population is satisfied at scale 5.

24) Question 24

Graph-1.24

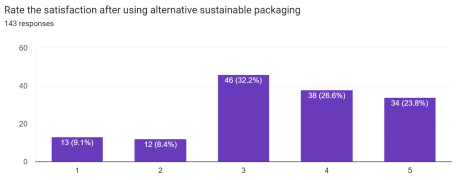


Table-1.24

Rate the satisfaction after using alternative sustainable packaging					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	13	9.0	9.1	9.1
	2	12	8.3	8.4	17.5

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	3	47	32.6	32.9	50.3
	4	37	25.7	25.9	76.2
	5	34	23.6	23.8	100.0
	Total	143	99.3	100.0	
Missing	System	1	.7		
Total		144	100.0		

The above data shows the satisfaction after using Alternative Sustainable Packaging of the population. It can be seen that 9% of the population is satisfied at the scale of 1, 8% of the population is satisfied at the scale of 2, 32% of the population is satisfied at the scale 3, 25% of the population is satisfied at the scale 4, 23% of the population is satisfied at the scale 5.

VI. FINDINGS

A. *Demographic Insights:*

1) Age Distribution: The majority of respondents fall within the 18-25 age group, constituting 72.7% of the total. This skew towards younger individuals suggests a heightened environmental consciousness among the youth, potentially driven by increased awareness campaigns and education on sustainability.
2) Gender Distribution: Male respondents dominate the survey at 66.7%, reflecting a potential gap in gender representation. The higher male participation could be indicative of varying levels of environmental awareness across gender lines.
3) Educational Background: 52.0% of respondents hold a bachelor's degree, indicating a relatively educated sample. This educational diversity suggests that environmental concerns and preferences for sustainable packaging are not limited to specific educational backgrounds.

B. *Packaging Material Usage:*

1) Eco-Friendly Packaging Adoption: A notable 59.3% of respondents actively use eco-friendly packaging materials, showcasing a positive trend towards sustainable practices. This may indicate a growing consumer demand for environmentally conscious products.
2) Frequency of Purchase: 36.0% of respondents purchase products with packaging materials weekly, reflecting a consistent demand for packaged goods. The frequency emphasizes the need for sustainable packaging solutions to address the environmental impact of high-volume consumption.
3) Commonly Used Packaging Materials: Plastic emerges as the most common packaging material at 36.7%, signifying a prevalent yet environmentally challenging choice. This data underscores the necessity for promoting alternative materials to mitigate plastic-related environmental issues.

C. *Consumer Awareness:*

1) Familiarity with Alternative Packaging Materials: 83.3% of respondents are familiar with alternative packaging materials, showcasing a widespread awareness. This could be attributed to increasing media coverage, environmental initiatives, and heightened consumer education.
2) Certification Labels: Respondents exhibit diverse familiarity with environmentally friendly certification labels, emphasizing the importance of clear and standardized labeling for effective communication of a product's sustainability credentials.

D. *Environmental Concerns and Purchasing Behavior:*

1) Concerns about Online Delivery Packaging: 21.3% of respondents express high concern about packaging for online deliveries. This concern highlights the need for e-commerce companies to adopt sustainable packaging practices to align with consumer values.
2) Changes in Purchasing Behavior: 86.0% of respondents have altered their purchasing behavior due to environmental concerns, indicating a significant influence of eco-consciousness on consumer choices.
3) Timing of Behavior Changes: Changes in purchasing behavior occurred at different stages, with 31.3% occurring post-COVID. This shift suggests a potential correlation between the global pandemic and heightened environmental awareness.

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E. Disposal Practices:

1) Disposal Methods: 42.7% of respondents dispose of packaging in regular trash, emphasizing the importance of educating consumers on proper disposal practices to enhance sustainability efforts.

F. Brand Perception:

1) Packaging Influence on Brand Commitment: 54.0% of respondents believe that packaging influences a brand's commitment to sustainability. This finding underscores the pivotal role packaging plays in shaping consumer perceptions and brand loyalty.

G. Information Sources:

1) Channels for Gathering Information: social media emerges as a predominant channel (27.3%) for information on products with alternative packaging. This highlights the need for brands to strategically utilize social media platforms to communicate their sustainable practices effectively.
2) Combined Information Sources: Respondents utilize multiple channels simultaneously, reinforcing the importance of a comprehensive communication strategy involving product labels, online reviews, social media, and recommendations from friends or family.

H. Willingness to Pay Premium:

1) Consumer Willingness: 64.7% of respondents are willing to pay a premium for products with environmentally friendly packaging. This willingness signifies a potential market for sustainable products, provided the added cost is justifiable and transparent.

I. Product Availability:

1) Frequency of Finding Products: While 46.7% sometimes find products with alternative packaging, the varying frequencies (2.7% never, 14.0% always) suggest room for improvement in the market's consistency in offering sustainable options.
2) Online vs. In-Store: 73.3% of respondents find a wider variety of products with alternative environmentally friendly packaging when shopping online. This emphasizes the importance of online platforms in promoting and providing access to sustainable choices.

J. Product Categories:

1) Commonly Found Categories: Food & beverages (15.3%) and personal care products (8.7%) are commonly associated with alternative environmentally friendly packaging. Brands in these categories may benefit from emphasizing and expanding their sustainable packaging options.

K. Obstacles to Sustainable Choices:

1) Main Obstacles: Limited availability (38.7%) and higher cost (30.7%) emerge as primary obstacles, suggesting a need for increased market accessibility and pricing strategies to encourage sustainable choices.
2) Consumer Perspectives on Obstacles: Respondents' varied perspectives on obstacles highlight the need for tailored solutions, addressing factors like limited availability, higher costs, and lack of knowledge to promote sustainable choices effectively.

L. Interest in Exploring Alternatives:

1) Preferred Materials: Interest in biodegradable plastics (42.7%) and recycled paperboard (28.7%) signals a demand for specific alternative materials. Brands could capitalize on this interest by focusing on developing products with these preferred materials.

M. Strategies for Improvement:

1) Initiatives and Strategies: Government incentives (22.0%), increased research and development (14.0%), and education and awareness campaigns (12.7%) are identified as potential strategies. A holistic approach involving multiple initiatives could contribute to overcoming existing challenges.

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N. Satisfaction Levels:

1) Overall Satisfaction: 48.7% express moderate satisfaction with the current availability and variety of sustainable packaging options.

2) This suggests that while progress has been made, there is room for enhancement in meeting consumer expectations.

3) Satisfaction after Use: 58.0% report being very satisfied or extremely satisfied after using alternative sustainable packaging. Positive experiences indicate the potential for consumer loyalty and advocacy for brands adopting sustainable practices.

VII. LIMITATIONS

1) This study focused only on respondents only from Ahmedabad city.

2) The project does not involve a high level of technical analyses for responses collected.

3) It gives insight into perception of consumers from Ahmedabad only.

4) The study covers both present problems and prospects of the packaging solutions only in Ahmedabad city and not in the whole country and there is different factor which affects different states due to demographic as well as geographic diversity.

5) Therefore, there are only limited factors taken into consideration for the research.

6) The sample size of our research is small, so it does not show the whole picture.

VIII. CONCLUSION

1) Moving towards the conclusion as observed from the graph of age, it can be seen that people from age group 18 to 25 is having highest frequency with 109 and72.2 percentage and lowest from the age group of 35 to 45 with frequency of 12 and approximately eight percentage.

2) Moving forward about the gender it has been observed that female having less frequency of 49 and male having equivalent higher proportions with frequency, 100 and frequency of 1 followed by prefer not to say option.

3) Post that come education, it has been observed that bachelor degrees is having higher proportions with frequency 78 and percentage approximately 52% and the lowest is PHD doctrine which frequency to and percentage 1.3 .

4) Post that it is observed from the graph it has been observed that people are frequently using the eco-friendly material with 89 frequency out of 150 and 59% followed by sometime users with frequency of 51 out of 150 and percentage 34% followed by no or don't use eco-friendly material with frequency 10 and 6.7%.

5) After that, It has been observed from the graph that people commonly use plastic as their packaging material with the frequency of 55 and 36 percentage and lowest for biodegradable material with frequency 5 and 3.3 percentage.

6) It can also be observed that the people are familiar with alternative option with the frequency of 125 and 83.3 percentage followed by the people which are not aware with 25 frequency and 16.7%.

7) After that, it could be observed that people sometimes see the certification label like FSC, USDA on ecO CERT With frequency of 67 and 44.7%.

8) Looking forward towards how concern are the people for online deliveries. It's shown that many of the people are neutral with frequency of 59 and 39%, but very less or not concerned at all with only four and 2.7%.

9) It's been a good thing to notice that people are ready to change their purchasing behaviour looking towards environment and behaviour. Looking forward at figures. It is 129 with frequency and 86% of people which are ready to change their behaviour of buying for environmental concern.

10) From the graphical data, it is clearly observed that after Covid era, the people have changed their buying behaviour and looking towards more environmental friendly packaging. It has been observed that people regularly disposed that trash.

IX. ACKNOWLEDGMENT

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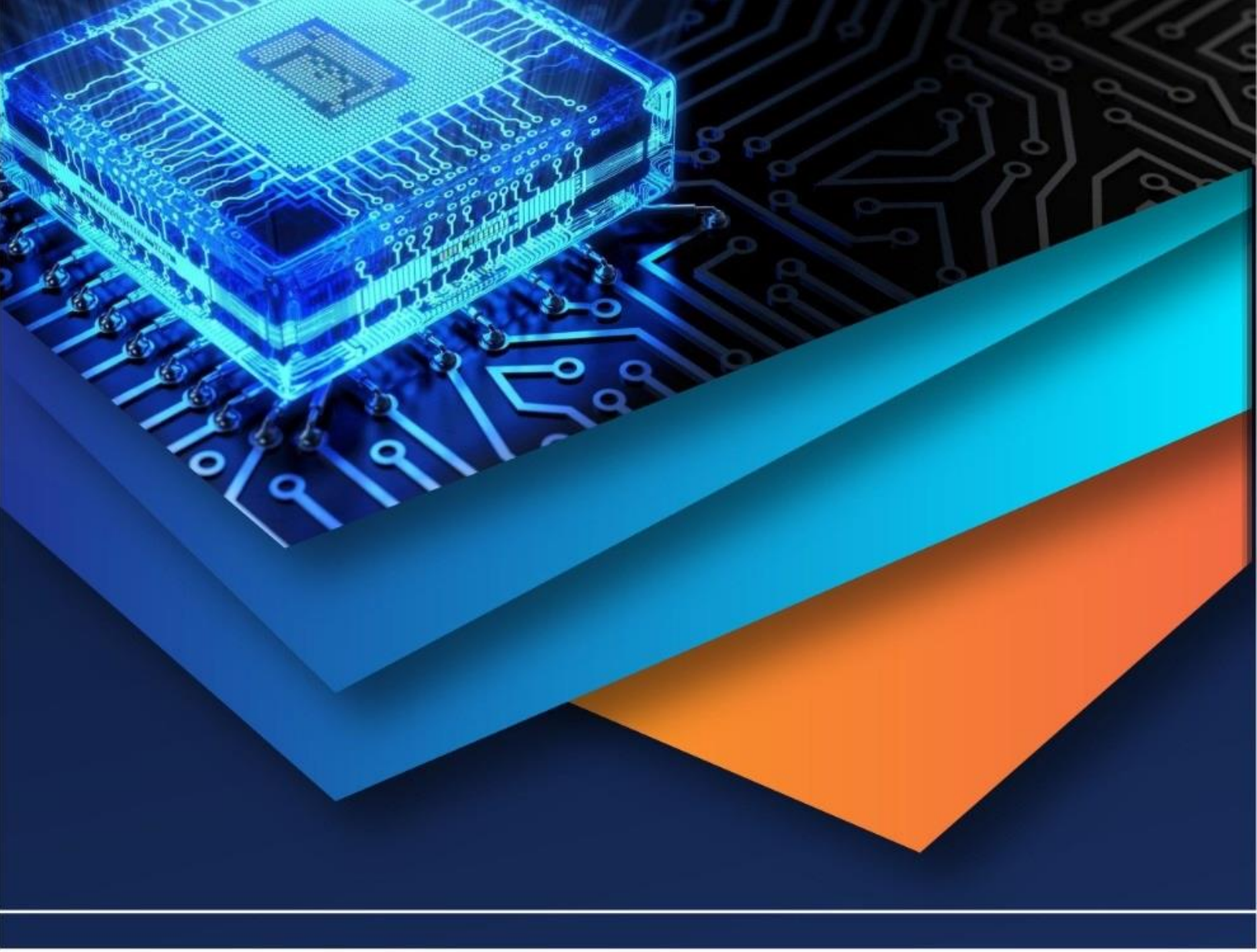
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Finally, we would like to convey our deepest regard to everyone who have directly or indirectly helped us in accomplishing this project.

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