



# CONSUMER ANALYSIS OF SUSTAINABLE COSMETICS CHOICES AMONG YOUTH IN KERALA

**Divina Maria Alex**

*Research Associate, International Centre for Technological Innovation*

## ABSTRACT

*With an emphasis on gender influences, this study explores Kerala, India's Generation Z's sustainable cosmetics usage. Tests of gender-related sustainability awareness hypotheses are conducted by examining factors that impact choices and adoption barriers. 80 respondents between the ages of 15 and 35 were surveyed. The results show that respondents are overwhelmingly aware of sustainability, have a similar gender distribution, and favour online shops. Influential elements like organic ingredients and brand reputation have a big influence on decisions even though they have no correlation with gender. The study highlights the need to address affordability, accessibility, and knowledge exchange in order to promote the use of sustainable cosmetics. It recommends investigating innovative ways to encourage environmentally friendly decisions.*

**KEYWORDS:** *sustainable cosmetics, gender, young generation, kerala, green cosmetics*

## INTRODUCTION

The term "cosmetics" refers to a very diverse range of products, including styling gels, fragrances (cologne, perfume etc.), colour cosmetics (lipstick, blush, compact powder etc.), and personal care items (creams, oils, shampoos, soaps, cleansers, and even toothpaste). Many goods, including soap, toothpaste are necessary for daily hygiene. The beauty market, valued over \$430 billion in 2022, includes skincare, fragrance, cosmetics, and haircare<sup>1</sup>. In the contemporary world, beauty is advancing across all categories. It has demonstrated its resilience in the face of major economic downturns and macroeconomic disruptions<sup>2</sup>.

On the other hand, the cosmetics industry faces challenge of an increasing global population driving up product demand and the stark reality of finite, overused natural resources. In the face of this pressure, sustainability emerges as an urgent necessity. This industry is known for its high consumption of natural resources and environmental footprint such as energy intensive manufacturing and production of plastic packaging. A long-term, sustainable vision is required for the cosmetics sector. When it comes to cosmetics, "green" and "sustainable" refer to the use of natural compounds derived from renewable sources rather than harmful ones present in popular products<sup>3</sup>. These substances harm both the environment and human health. Key facets of this vision include resource efficiency, green chemistry, circular economy transition, reduced packaging waste, ethical sourcing, consumer education, regulatory compliance, and stakeholder collaboration<sup>4</sup>. Generation Z (individuals born between 1997- 2012) and Generation Y (individuals born between 1982-1996) consumers, crave details about the products they buy, such as the origin, the ingredients, the method of production, the ethical and environmental impact, the after effects, etc., due to the rise in education levels, concern for environment and animal welfare, widespread use of internet technologies and they are growing up in a world of climate change, pollution, and plastic waste<sup>5,7</sup>. The consumerism has undergone significant shift. Consumers are using more and more cosmetic goods and services not only look good but also feel good and to express their real selves rather than meeting particular societies expectations.

The Indian market for sustainable cosmetics, particularly in Kerala, is booming because to a number of causes, including the long tradition of herbal and Ayurveda medicine, the rise in the number of working women, and rising middle-class and upper-middle-class income per capita expenditures<sup>6</sup>. Due to this, there is now a wider market for cosmetics, including green and sustainable products. Kerala is the most consumerist state in India<sup>8</sup>. Kerala barely makes up 2.5 percent of India's total population, yet it consumes roughly 10% of the nation's product<sup>9</sup>. Many studies have examined various aspects of green cosmetics; however, the focus of this paper is on the purchasing behaviour of youngsters in Kerala.



### SIGNIFICANCE OF THE STUDY

The relationship between gender, sustainability, and cosmetics choices is an evolving area of study. Historically, women have shown a higher inclination towards eco-friendly behaviours in various domains, including cosmetics<sup>10</sup>. However, there is relatively limited research on gender gaps and preferences in the cosmetics industry within the younger generations in the context of Kerala. This paper investigates whether gender gaps persist in the preferences of the younger generation, Generation Z, within the cosmetics industry in Kerala. It also aims to uncover the factors influencing their choices and any barriers they face when opting for sustainable cosmetics. By shedding light on these aspects, we can better understand the evolving dynamics of sustainability in the cosmetics market and promote inclusivity and eco-consciousness in the industry.

### OBJECTIVES OF THE STUDY

- Analyse the factors that influence the decision to purchase sustainable cosmetics.
- Investigate whether gender influences perceptions of sustainable cosmetics.
- Identify the barriers to choosing sustainable cosmetics

### HYPOTHESIS

The following hypothesis have been tested in the study:

H<sub>01</sub>: There is no association between generation Z's gender and the awareness in the importance of sustainable cosmetics consumption

H<sub>02</sub>: There is no association between generation Z's gender and the frequency of sustainable cosmetics purchase.

H<sub>03</sub>: there is no significant influence in the given factors in decision to buy sustainable cosmetics

### METHODOLOGY AND DATA SOURCE

The population of the study is young generation of Kerala, aged between 15 and 35. The analysis encompasses both primary and secondary data sources. Primary data were gathered from 80 respondents through a questionnaire distributed via Google Forms. The study was carried out through survey method. Respondents were selected through a combination of convenience and snowball sampling methods. Secondary data were sourced from scholarly articles, academic journals, and online resources.

Software tools like Excel and SPSS were used to analyse primary data. A variety of statistical methods were used, such as factor analysis, percentages, Chi-square tests, Cronbach's Alpha reliability analysis, and correlation. Additionally, the data was visually represented using pie charts and bar graphs.

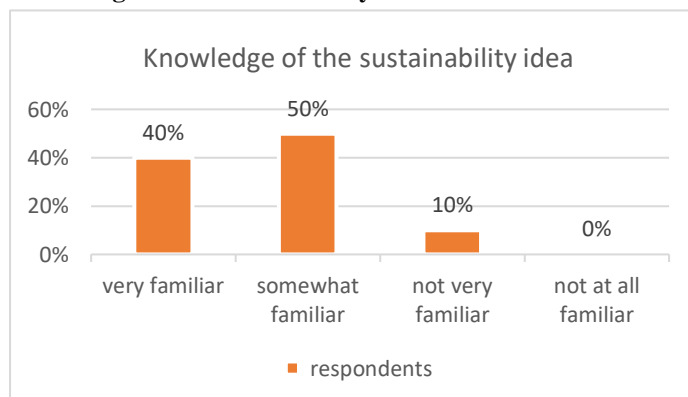
### LIMITATION OF THE STUDY

Limitations faced during the study are:

- The sample size is only 80 individuals, as it does not represent entire population.
- There was a lack of depth and detailed information as the data was collected using online survey method.
- The study duration was brief.

### DATA ANALYSIS AND INTERPRETATION

#### Knowledge of the Sustainability Idea

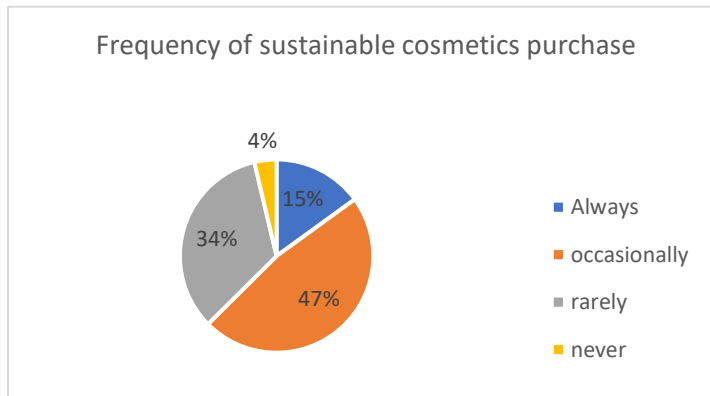


#### Interpretation

Among the sample, 50% had a "somewhat familiar" understanding of sustainability, while 40% claimed to be "very familiar." Only 10% were "not very familiar," with none in the "not at all familiar" category.

(Source: primary data)

### Frequency of Sustainable Cosmetics Purchase

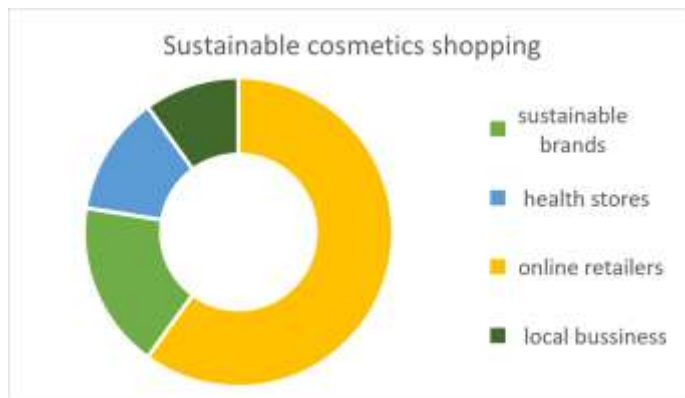


#### Interpretation

A 15% buys sustainable cosmetics "always," while 47.50% does "occasionally". 33.70% rarely purchase sustainable cosmetics, and only 3.70% never do.

(Source: primary data)

### Sustainable Cosmetics Shopping

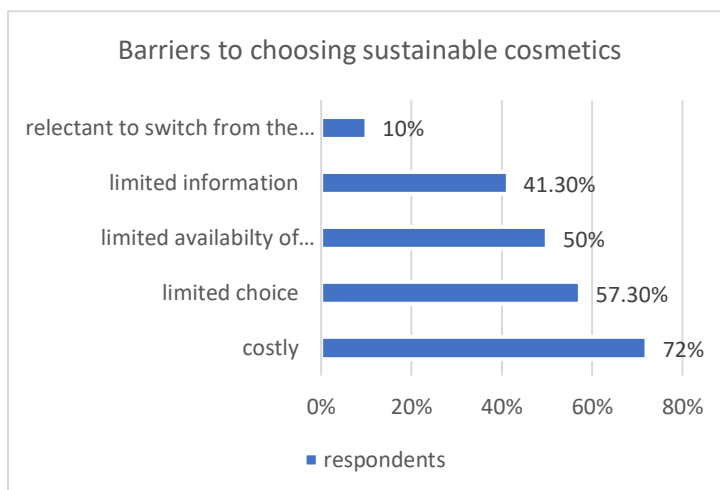


#### Interpretation

The data shows that the 60% of respondents purchase sustainable cosmetics from online retailers. 17.50% favor sustainable cosmetics brands, 12.50% opt for specialty health stores, and 10% support locally made products, reflecting a diverse range of choices.

Source: primary data

### Barriers to Choosing Sustainable Cosmetics

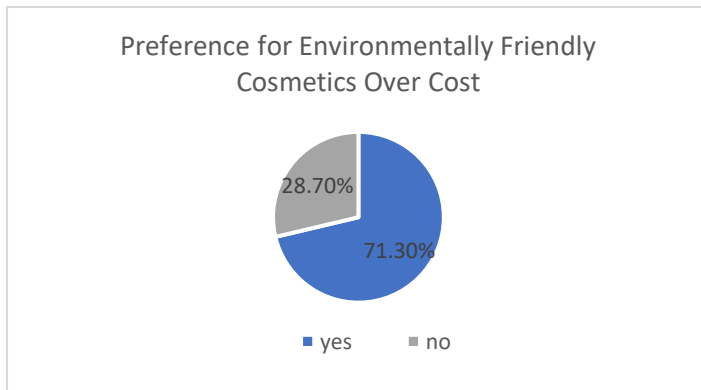


#### Interpretation

The data exposes multiple barriers hindering respondents from choosing sustainable cosmetics. Cost is the most significant concern at 72%, followed by limited product choices at 57.30% and limited availability of sustainable stores at 50%. Additional concerns include insufficient information at 41.30% and brand loyalty at 10%.

(Source: primary data)

**Preference for Environmentally Friendly Cosmetics Over Cost**

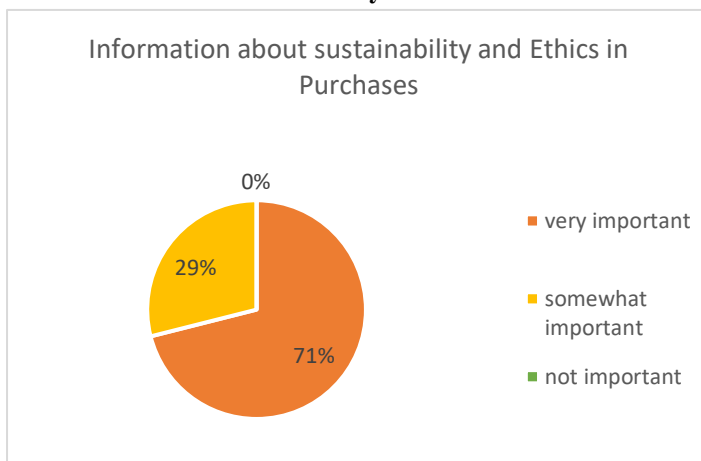


**Interpretation**

71.30% of respondents indicating their willingness to choose sustainability over price. A smaller proportion, 28.70%, opts for more budget-friendly options.

(Source: primary data)

**Information about Sustainability and Ethics in Purchases**



**Interpretation**

The data shows that a significant majority (66.30%) of respondents find it very important to have detailed information about a product's sustainability and ethical practices. An additional 27% consider this information somewhat important. Importantly, no respondents indicated that this information is not important.

(Source: primary data)

**HYPOTHESIS TESTING**

Hypothesis 1:

H0: there is no association between generation Z's gender and the awareness in the importance of sustainable cosmetics consumption

H1: there is association between generation Z's gender and the awareness in the importance of sustainable cosmetics consumption

Chi-Square Tests			
	Value	df	Asymp. Sig (2 sided)
Pearson Chi-Square	240.000 <sup>a</sup>	237	.433
Likelihood Ratio	178.399	237	.998
Linear-by-Linear Association	.253	1	.615
N of valid cases	80		

This hypothesis test if there is any association between the generation Z's gender and awareness in the importance of sustainable cosmetics consumption.  $P > 0.05$  which indicates that the level of concern about sustainable cosmetics consumption appears to be unrelated to whether a person is a man or women in this age group. Therefore, null hypothesis is accepted.

**HYPOTHESIS 2:**

H0: there is no association between generation Z's gender and the frequency of sustainable cosmetics purchase.

H1: there is association between generation Z's gender and the frequency of sustainable cosmetics purchase.



Chi-Square Tests			
	Value	df	Asymp. Sig. (2 sided)
Pearson Chi-Square	240.000 <sup>a</sup>	237	.433
Likelihood Ratio	180.463	237	.997
Linear-by-Linear Association	3.531	1	.060
N of valid cases	80		

This hypothesis test if there is any association between the generation Z's gender and the frequency of sustainable cosmetics purchase.  $P > 0.05$  which indicates that whether someone is male or female in Generation Z doesn't seem to influence how frequently they purchase sustainable cosmetics. Therefore, null hypothesis is accepted.

### HYPOTHESIS 3

H0: there is no significant influence in the given factors in decision to buy sustainable cosmetics

H1: there is significant influence in the given factors in decision to buy sustainable cosmetics

The instrument had 8 items, asking respondents about the various factors they consider while making sustainable cosmetics purchase. These items were put on a four point likert scale. The respondents were asked to rate them between 1 and 4, where, 1 being 'very influential' and 4 being 'not influential'.

**Table 1: Reliability Statistics**

Reliability Statistics	
Cronbach's Alpha	N of Items
.873	8

Reliability is a measure of internal consistency of the items given. Cronbach's Alpha is used for checking the reliability of scale. The Cronbach's Alpha value  $> 0.70$ , therefore this scale is reliable.

**Table 2: Factorial Validity by KMO and Bartlett's Test**

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.807
Bartlett's Test of Sphericity	Approx. Chi-Square	332.659
	df	28
	Sig.	.000

Measure of Kaiser-Meyer-Olkin is to measure the appropriateness of data for factor analysis. The value of KMO  $> 0.5$ , which indicates that the sample taken for factor analysis was statistically significant. The Bartlett's Test  $< 0.001$ , therefore we can reject the null hypothesis.

**Table 3: Factor Analysis**

A statistical technique for reducing and analysing data, factor analysis aims to explain relationships between several outcomes as the product of one or more underlying explanations, or factors. In order to represent a group of variables by a smaller number, the technique involves data reduction.

Statements	Factor Loadings
Organic Ingredients	.881
Health And Skin Consciousness	.814
Cruelty Free Certificate	.797
Sustainable Packaging	.842
Brand Reputation	.783
Personal Beauty Needs and Preferences	.793
Friends/Family Recommendation	.663
Online Review And Influencer Recommendation	.743

**Table 4: Correlation Matrix**

Correlation Matrix								
	1	2	3	4	5	6	7	8
1	1.00	.760	.602	.456	.522	.562	.431	.431
2	.760	1.00	.439	.304	.430	.610	.367	.370
3	.602	.439	1.00	.742	.582	.498	.416	.308
4	.456	.304	.742	1.00	.649	.372	.359	.270
5	.522	.430	.582	.649	1.00	.535	.519	.355
6	.562	.610	.498	.372	.535	1.00	.417	.415
7	.431	.367	.416	.359	.519	.417	1.00	.613
8	.431	.370	.308	.270	.355	.415	.613	1.00

Determinant= .012

The respondents were asked to rank factors that influence them while purchasing sustainable cosmetics products. The factors are denoted as 1 to 8 in the above table. The factors are, 1- organic Ingredients, 2- Conscious of health and skin, 3- Cruelty-Free Certification, 4- Sustainable Packaging, 5- Brand Reputation for Sustainability, 6- Personal Beauty Needs and Preferences, 7- Friends/Family recommendations and 8- Online Reviews and Influencer Recommendations

There is a high degree of correlation between the various factors that considered during sustainable cosmetics purchase and sustainable cosmetics purchase. Here the determinant > .001 and there is no multicollinearity as none of the values exceed .800. therefore, we reject the null hypothesis.

## FINDINGS

- The study focuses on Generation Z, with an equal distribution of gender. The majority fall into the 21-25 age group, with additional respondents aged 15-20, 26-30, and a smaller percentage (10%) in the 31-35 group. Students lead the demographic, followed by private sector employees. Business owners, government employees, and NGO employees constitute smaller segments of the population.
- Half of the sample had a moderate understanding of sustainability, while 40% were very familiar, reflecting strong comprehension and engagement in sustainability. None were entirely unfamiliar with sustainability, indicating a baseline awareness.
- Sustainability holds high significance for most respondents in their cosmetic choices. The majority rate it as "very important," and a substantial portion considers it "important." Importantly, no one deems sustainability as "not important," underlining its unanimous recognition in cosmetic decision-making and its growing industry importance.
- A minority "always" buys sustainable cosmetics, a larger group does so "occasionally." A minority "never" buys sustainable cosmetics. Most respondents are students, having limited budgets and sometimes prioritizing affordability over sustainability.
- The majority prefer online retailers for sustainable cosmetics due to convenience and accessibility. Some favor sustainable brands, while others opt for specialty health stores or locally made products, reflecting a growing awareness and concern for eco-friendly and socially responsible products.
- Affordability is the top barrier to choosing sustainable cosmetics, followed by limited product choices and accessibility to sustainable stores. Information gaps and brand loyalty are also concerns. These findings highlight the need to address cost, accessibility, and information dissemination to promote sustainable cosmetics adoption.
- Most respondents are open to purchasing sustainable cosmetics from their favorite brands, with only a small minority rejecting the idea, and some remaining unsure. This presents an opportunity for brands to embrace sustainability trends and address the information needs of those uncertain about making the switch.
- Most people prioritize choosing environmentally friendly cosmetics over lower-priced options, indicating a strong commitment to sustainability in their purchasing decisions, even if it means paying more.
- Consumers prioritize product transparency, valuing detailed information on sustainability and ethics, with none considering it unimportant. This underscores the growing importance of transparency and sustainability in consumer decisions.
- Some opt for upcycling and recycling used cosmetic containers, while others dispose of them as regular trash, revealing room for sustainability improvement. A noteworthy portion returns containers to the brands, indicating an interest in brand-led ecological initiatives.



- It is abundantly obvious from the empirical study that there is no relation between Generation Z's gender and the awareness of the importance of sustainable cosmetics consumption.
- From the empirical study, it is clear that there is no association between Generation Z's gender and the frequency of sustainable cosmetics purchase.
- There is a strong influence in factors such as organic ingredients, consciousness of health and skin, cruelty-free certification, sustainable packaging, brand reputation for sustainability, personal beauty needs and preferences, friend's/family recommendations, and online reviews and influencer recommendations in the decision to buy sustainable cosmetics.

## SUGGESTIONS

- Every cosmetics product should provide a refillable container option, leading to cost savings for both producers and consumers. Lotions, creams, shampoos, foundations, powders, fragrances, and other cosmetic items are among the many that can be refilled. Brands could encourage cost-effective and ecologically friendly choices by providing a refillable option, possibly through partnerships with local businesses to set up in-store refill stations.
- Cosmetics brands can adopt the Pfund system for their containers. In this system, customers pay a deposit when buying a cosmetic product and get a refund when they return the empty container, which is then refilled or recycled. This reduces waste, engages customers in sustainability, saves costs, and promotes a circular economy.
- Sustainable cosmetics brands should make their products readily accessible by offering them both online and offline. They can collaborate with retailers for in-store availability, addressing one of the major barriers to switching to sustainability—the limited availability of these products.
- Affordability is the primary barrier among youngsters, so these brands should target these customers by offering entry-level products, i.e., low-cost versions to attract price-sensitive consumers. By doing this, brands may increase consumer loyalty and generate long-term financial gains. Brands may also provide offers and reductions to students.
- Many brands are joining the sustainability trend without fully grasping it, resulting in greenwashing where products are deceptively labeled as eco-friendly to attract more customers. This raises concerns about trust and accountability, particularly from a consumer standpoint. To meet the growing demand for transparency, brands must provide comprehensive insights into their product journey. This begins with detailed product information, offering consumers a comprehensive view of the product's lifecycle, including the origins of raw materials and ethical practices. Implementing traceability platforms using QR codes or barcodes allows consumers to access real-time data, enhancing their confidence in the product's authenticity and sustainability. Additionally, sharing behind-the-scenes content through videos, blog posts, and social media humanizes the brand and showcases its commitment to sustainability. Lastly, clear displays of certifications and labels, both on packaging and online, along with easy verification options.
- Tax breaks, incentives, or subsidies may be extended by the government to cosmetics brands that uphold transparency and actively participate in sustainable practices.

## CONCLUSION

This study analysis the consumers of sustainable cosmetics among Kerala's youth using the questionnaire method among a random sample of 80 youths. The younger generation, often referred to as Generation Z, is widely recognized for their progressive approach to promoting sustainability. As this study reveals, they are actively engaged in practicing Sustainable Development Goals (SDGs) such as good health and wellbeing, decent work and economic growth, affordable and clean energy, industry innovation and infrastructure, responsible consumption and production, climate action, and life on land.

They actively challenge traditional gender norms and display a heightened openness to sustainability practices, particularly within the cosmetics industry. They are acutely aware of the necessity for sustainable practices in cosmetics. Notably, this study has found no such gender difference exists in green cosmetics among youngsters. For these younger consumers, factors such as the use of organic ingredients and a heightened consciousness of health and skin play a pivotal role in their decision-making when opting for sustainable cosmetics. Additionally, personal beauty needs and preferences influence their choices. However, addressing affordability and accessibility remains a pressing concern in the sustainable cosmetics market. The significant propensity for sustainability among this group of consumers is indicative of a larger trend in consumer awareness, and the cosmetics business needs to adjust to meet their needs and ideals.



## REFERENCES

1. Achim Berg, Sara Hudson, Kristi Klitsch Weaver, Megan Leskoa Pacchia, Imran Amed. (2023). *The beauty market in 2023: A special State of Fashion report*. McKinsey & Company.
2. Hea young lim, Ki Han Kwon. (2023). *Sustainable Assessment of the Environmental Activities of Major Cosmetics and Personal Care Companies*. sustainability.
3. *Green Cosmetics: The Push for Sustainable Beauty*. (2018, october 31). Retrieved from Acme-Hardesty: <https://www.acme-hardesty.com/green-cosmetics-sustainable-beauty/>
4. S. Bom, , J. Jorge, H.M. Ribeiro, J. Marto. (2019). *A step forward on sustainability in the cosmetics industry: A Review*. *Journal of Cleaner Production*, 1-21.
5. Muntaha Anvar, Marike Venter. (2014). *Attitudes and Purchase Behaviour of Green Products among Generation Y Consumers in South Africa*. *Mediterranean Journal of Social Sciences*, 183-194.
6. Sultana, A. (2021). *Impact of online advertising and the use of cosmetic products: a study on the influence of online advertisements and change in the purchasing behaviour of women in Kerala*. *International Journal of Communication and Society*, 112-119.
7. Rachita Kapoor, Anurupa B Singh, Richa Misra . (2019). *Green Cosmetics - Changing Young Consumer Preference and Reforming Cosmetic Industry*. *International Journal of Recent Technology and Engineering* .
8. Mannathukkaren, N. (2023). *'Enjoying life': Consumption, changing meanings, and social differentiation in Kerala, India*. *Modern Asian Studies*, 505-554.
9. P. Padma, E. V. Ramasamy, T. V. Muralivallabhan, A. P. Thomas. (2018). *Changing Scenario of Household Consumption Pattern in Kerala: An Emerging Consumer State of India*. *Social Indicators Research: An International and Interdisciplinary Journal for Quality-of-Life Measurement*, 797- 812.
10. Moharam, M. M. (2023). *Factors Affecting Females' Green Purchasing Behavior of Green Cosmetics in Bahrain*. 2047-2059.