

Research Article



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Understanding Consumer Behavior Toward Electric Appliances: A Social Perspective

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Purpose–The purpose of this study is to examine the factors influencing consumer behavior towards eco-friendly electric appliances. **Design and Methodology**–The study is conducted on the basis of primary data collected from 300 consumers of eco-friendly electric appliances in Coimbatore District. The sample respondents have been selected on the basis of systematic random sampling from the list of customers obtained from the dealers of eco-friendly electric appliances. The statistical tools like percentage analysis, ANOVA, and multiple regression analysis have been employed to analyze the data using SPSS 22. **Findings**–The findings of the study indicated that consumer behavior towards eco-friendly electric appliances has been influenced positively and significantly by environmental concern, cultural and social factors, and product experience. However, consumer awareness has made a significant influence on consumer behavior. **Implications**–The results of the study have indicated the factors influencing consumer behavior towards eco-friendly electric appliances. The manufacturers of eco-friendly electric appliances could draft suitable policies for the product design and marketing of these products. **Originality**–The present study is conducted among the consumers of eco-friendly electric appliances in Coimbatore District. This study contributes to the available literature in the field of consumer behavior.

INTRODUCTION

In recent years, the demand for electric appliances that are eco-friendly has been on the rise. With the looming threat of global warming, environmental degradation, and other ecological imbalances, people across the world have started to adopt a more sustainable and eco-friendly lifestyle. This has led to the growing popularity of eco-friendly appliances, especially among urban populations. Eco-friendly electric appliances help in saving energy and water consumption, and they have been designed to reduce the negative impact on the environment. Eco-friendly electric appliances are built with natural materials or recycled waste. Such eco-friendly appliances are free from toxic materials and hence do not endanger the environment after being discarded. Additionally, these appliances do not emit any harmful gases while

operating, making them completely safe for indoor use. The recent advancement in technology has allowed manufacturers to produce electric appliances that consume very little energy while delivering effective performance. Since these appliances are made from natural or recycled materials, they help in conserving nature by reducing the demand for crude natural resources. Overall, the use of electric appliances has increased people's dependence on energy sources, which generates a lot of waste and pollution. However, the use of eco-friendly electric appliances can help in maintaining a more sustainable and healthier lifestyle.

REVIEW OF LITERATURE

Environmental Concerns (EC)

Shinta, Sebastian, Aleena, Joshy. (2024) pointed out that due to increasing concerns among consumers

regarding sustainability, their purchase decisions of eco-friendly products have been determined by environmental concerns. Gaurav, Joshi, Sahil, Pratap, Singh. (2021) indicated that social appeal and environmental friendliness have influenced consumer behavior towards eco-friendly electric appliances. Zafar, A., Zafar, M. H., Liaquat, R., & Nasim, I. (2024) mentioned that environmental knowledge and consciousness have contributed to the commitment to purchase eco-friendly products. Malhotra, R., Garg, V., Aggarwal, P., Aggarwal, A., Bansal, O., & Tusnial, B. (2024) highlighted that environmental consciousness has positively influenced consumer attitudes towards eco-friendly products. Yalley, A. A., & Twum, K. K. (2021) indicated that consumers are more environmentally conscious regarding the purchase of products. Pathange, M. R., Parcha, M. R., Ara, I., Anusha, I., Fatima, I., & Fathima, J. (2024) concluded that the purchase decisions of consumers towards eco-friendly electric appliances have been influenced by perceived environmental impact. Srinivas, D. (2023) indicated that environmental responsibility plays a vital role in the purchase of eco-friendly electric appliances. Jia, Y., Nadeem, M., Hameed, I., Waris, I., & Akram, U. (2024) explored that environmental concern and subjective norms have influenced consumer behavior towards eco-friendly electric appliances. Shafiq, A., Khan, A., & Tahir, S. A. (2024) identified that there was a significant relationship between environmental responsibility and purchase intention towards green products.

Consumer Awareness (CA)

Shinta, Sebastian, Aleena, Joshy. (2024) observed that brand awareness has been one of the key determinants of the purchase decision-making of consumers towards the purchase of eco-friendly products. Malhotra, R., Garg, V., Aggarwal, P., Aggarwal, A., Bansal, O., & Tusnial, B. (2024) found that a lack of awareness has affected the purchase decisions of consumers towards eco-friendly electric appliances. Pathange, M. R., Parcha, M. R., Ara, I., Anusha, I., Fatima, I., & Fathima, J. (2024) indicated that consumer awareness is crucial in determining the purchase of eco-friendly electric appliances. Srinivas,

D. (2023) emphasized that consumer awareness has influenced the purchase decisions of eco-friendly electric appliances. Waris, I., Dad, M., & Hameed, I. (2021) revealed that consumer awareness has influenced consumer behavior towards energy-efficient appliances. Lin, C.-C., & Dong, C.-M. (2023) disclosed that consumer behavior has been significantly influenced by consumer awareness.

Cultural and Social Factors (CS)

Shinta, Sebastian, Aleena, Joshy (2024) found that cultural factors have significantly influenced the purchase of eco-friendly products. Judijanto, L., Ardhiyansyah, A., & Santoso, R. K. (2024) suggested that psychological and social factors have influenced the consumption of sustainable products. Lin, C.-C., & Dong, C.-M. (2023) observed that social and emotional factors did not make any significant impact on the purchase intention of consumers towards eco-friendly products. Nombulelo Dilotsotlhe & Inseng, H. D. (2020) divulged that emotional values have significantly influenced the adoption of eco-friendly electric appliances.

Product Experience (PE)

Gaurav, Joshi., Sahil, Pratap, Singh. (2021) identified that the inclination of Indian millennials towards green products has been influenced by product experience. Srinivas, D. (2023) found that the purchase of eco electric appliances has been deterred by high costs and limited availability. Jia, Y., Nadeem, M., Hameed, I., Waris, I., & Akram, U. (2024) made it clear that perceived consumer effectiveness has made an impact on the purchase decision towards eco-friendly electric appliances. Choudhary, N., Ul Islam, S., Philip, P. J., & Kumar, R. (2016) observed that there was a significant influence of green manufacturing and consumer behavior towards green electric products.

Tanya Pahwani (2024) identified that consumers are showing a positive tendency towards eco-friendly items due to rising environmental consciousness and benefits that they perceive in Mumbai city. To properly foster sustainable consumption habits, it is necessary to solve issues with cost and infrastructure as well as to inform customers about the benefits of eco-friendly

items. The findings of the research say that consumers are becoming more prepared to pay a premium for environmentally friendly items as their awareness of environmental concerns grows. This tendency is more prominent in the younger population and indicates a desire to make purchases that are environmentally sensitive.

Objectives

1. To identify the impact of environmental concerns on consumer behavior towards eco-friendly electric appliances.
2. To examine the influence of consumer awareness on consumer behavior towards eco-friendly electric appliances.
3. To study the effect of cultural and social factors on consumer behavior towards eco-friendly electric appliances.
4. To analyze the impact of product experience on consumer behavior towards eco-friendly electric appliances.

Conceptual Model and Hypotheses Development

Consumer behaviour has been influenced by various factors. From the literature reviewed, the factors most influencing the consumer behaviour towards eco friendly electric appliances have been selected for this study. Accordingly, environmental concerns, consumer awareness, cultural and social factors and product experience have been selected as the determinants of consumer behaviour. The following hypotheses have been formulated and tested:

1. H1: Environmental concern (EC) has a significant impact on consumer behaviour (CB) towards eco-friendly electric appliances.
2. H2: Consumer awareness (CA) has a significant impact on consumer behaviour (CB) towards eco-friendly electric appliances.
3. H3: Cultural and social factors (CS) have a significant impact on consumer behaviour (CB) towards eco-friendly electric appliances.
4. H4: Product experience (PE) has a significant impact on consumer behaviour (CB) towards eco-friendly electric appliances.

METHODOLOGY

Coimbatore, Salem, and Dharmapuri Districts are major industrial districts in Tamil Nadu. Since a large number of industries are functioning in these districts, energy consumption is high. People in these districts intend to consume eco-friendly electric appliances. These appliances are used by consumers for various purposes. These products are sold by dealers of manufacturers of eco-friendly electric appliances. For the purpose of this study, 300 consumers have been selected from the list of customers obtained from the dealers of eco-friendly electric appliances on the basis of the systematic random sampling method. The primary data required for this study have been collected from the sample respondents using a structured questionnaire. The researchers have used a 5-point Likert scale. The responses have been obtained as strongly agree, agree, neutral, disagree, and strongly disagree.

The demographic profile discussed in this study included age, gender, education, monthly income, and nature of family. These variables have been categorized into subgroups. The demographic variables have been analyzed using percentage analysis. The influence of environmental concerns, consumer awareness, cultural and social factors, and product experience on consumer behavior towards eco-friendly electric appliances has been analyzed using multiple regression analysis. In this analysis, the factors influencing consumer behavior have been considered as predictors, and consumer behavior has been regarded as the dependent variable.

It is divulged that the highest proportion of 56 percent of the respondents belonged to the age category of 20 to 40 years, followed by 17 percent of them pertaining to the age group of 40 to 60 years. The least proportion of 12.7 percent of the respondents was found to be less than 20 years of age. Among the consumers participating in this survey, 59 percent of them were male consumers while 41 percent of them were female consumers. Out of the total respondents, the highest fraction of 41.3 percent of them has completed UG level education, whereas the lowest proportion of 9.3 percent of them has completed PG level education. The monthly income earned by the

Table 1: Demographic variables

Demographic variables	Categories	Frequency	Percent
Age	Up to 20 years	38	12.7
	20 to 40 years	168	56
	40 to 60 years	51	17
	Above 60 years	43	14.3
Gender	Male	177	59
	Female	123	41
Education	School Level	102	34
	UG Level	124	41.3
	PG Level	28	9.3
	Others	46	15.3
Monthly Income	Up to Rs. 15000	85	28.3
	Rs. 15001 to Rs. 30000	104	34.7
	Rs. 30001 to Rs. 45000	60	20
	Above Rs. 45000	51	17
Nature of family	Joint	137	45.7
	Nuclear	163	54.3
	Total	300	100

Source: Primary Data

highest proportion of 34.7 percent of the respondents was found to be Rs. 15,001 to Rs. 30,000, and the lowest proportion of 17 percent of them has stated that their monthly income was above Rs. 45,000. It is evinced that 54.3 percent of the respondents were living in nuclear families and 45.7 percent of them belonged to joint families.

Since the people with age category 20-40 are high in number which definitely indicates the consumer buying behaviour as they buy products regularly.

RESULTS AND DISCUSSION

The results of ANOVA implied that the predictors environmental concern; consumer awareness; cultural and social factors; and product experience have influenced the consumer behaviour towards eco

friendly electric appliances significantly as indicated by the p value of 0.000 ($p < 0.01$).

The R square value of 0.95 indicates that consumer behavior towards eco-friendly electric appliances has been influenced by the selected predictors to the extent of 95 percent. Hence, there are other factors that could influence consumer behavior towards eco-friendly electrical appliances to the extent of 5 percent.

The results indicated that environmental concern has positively and significantly influenced consumer behavior towards eco-friendly electric appliances. The influence of environmental concern has been found to be significant by Shinta, Sebastian, Aleena, Joshy (2024) and Gaurav, Joshi, Sahil, Pratap, Singh (2021). The results of Zafar, A., Zafar, M. H., Liaquat, R., &

Table 2: Factors influencing consumer behaviour - ANOVA

Model		Sum of Squares	DF	Mean Square	F	Sig.
1	Regression	4175.832	4	1043.958	1411.95	0.000
	Residual	218.115	295	0.739		
	Total	4393.947	299			

Dependent Variable: CB

Predictors: (Constant), PE, AW, EC, CS

Table 3: Consumer behaviour towards eco friendly electrical appliances – Multiple Regression

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-0.498	0.138		-3.607	0.000
	EC	0.128	0.036	0.123	3.522	0.000
	AW	-0.099	0.027	-0.099	-3.721	0.000
	CS	0.278	0.035	0.277	7.88	0.000
	PE	0.726	0.035	0.691	20.844	0.000

R = 0.975; R square = 0.95

Nasim, I. (2024); Malhotra, R., Garg, V., Aggarwal, P., Aggarwal, A., Bansal, O., & Tusnial, B. (2024); and Yalley, A. A., & Twum, K. K. (2021) also indicated the same. Pathange, M. R., Parcha, M. R., Ara, I., Anusha, I., Fatima, I., & Fathima, J. (2024); Srinivas, D. (2023); Jia, Y., Nadeem, M., Hameed, I., Waris, I., & Akram, U. (2024); Shafiq, A., Khan, A., & Tahir, S. A. (2024) have also observed similar findings.

The impact made by consumer awareness on consumer behaviour towards eco-friendly electric appliances was found to have a significant impact. Shinta, Sebastian, Aleena, Joshy, 2024 observed a positive influence of awareness on consumer behaviour, whereas a negative influence was observed by Malhotra, R., Garg, V., Aggarwal, P., Aggarwal, A., Bansal, O., & Tusnial, B., 2024. Pathange, M. R., Parcha, M. R., Ara, I., Anusha, I., Fatima, I., & Fathima, J., 2024 and Srinivas, D., 2023 observed a positive influence of awareness on the purchase decisions of eco-friendly electric appliances. Waris, I., Dad, M., & Hameed, I., 2021 and Lin, C.-C., & Dong, C.-M., 2023 also disclosed that consumer awareness has significantly influenced consumer behaviour.

According to the results of this study, the cultural and social factors have made a significant influence on consumer behavior towards eco-friendly electric appliances. Shinta, Sebastian, Aleena, Joshy, 2024; Judijanto, L., Ardhiyansyah, A., & Santoso, R. K., 2024) suggested that these factors have influenced. Lin, C.-C., & Dong, C.-M., 2023; and Nombulelo Dilotsotlhe & Inseng, H. D. (2020) also indicated similar results.

The impact made by product experience on consumer behavior towards electric appliances has been

found to be positive and significant, as also disclosed by Gaurav, Joshi, Sahil, Pratap, Singh, 2021; and Srinivas, D., 2023; Jia, Y., Nadeem, M., Hameed, I., Waris, I., & Akram, U., 2024; as well as Choudhary, N., Ul Islam, S., Philip, P. J., & Kumar, R., 2016, who observed a positive and significant impact of product experience on eco-friendly electric appliances.

CONCLUSION

Eco-friendly electric appliances are used by consumers to a greater extent. Consumers are highly concerned about the environmental impact of electric appliances. The lack of consumer awareness has affected the consumption of sustainable, eco-friendly electric appliances. Cultural and social factors have made a significant impact on the purchasing decisions of consumers regarding eco-friendly electric appliances. Product experience has motivated consumers to use eco-friendly electric appliances.

Consumer behavior is often contrary to expectations because it is influenced by a complex interplay of psychological, social, cultural, and personal factors that are difficult to predict. While logical assumptions may suggest consumers will act in their best economic interest, emotional impulses, trends, biases, and external influences like advertising or social proof often steer decisions unpredictably. Additionally, consumers may prioritize convenience, identity, or values over price or quality. Changes in technology, societal norms, and market conditions further complicate forecasts. This unpredictability underscores the need for businesses to conduct continuous research, adapt strategies, and embrace flexibility in responding to consumer preferences.

Cost and accessibility are significant barriers to adopting eco-friendly appliances, deterring consumer behavior. Many sustainable options come with higher upfront costs, making them less attractive despite potential long-term savings. For budget-conscious buyers, this initial expense can outweigh environmental considerations. Accessibility issues, such as limited availability in certain regions or a lack of variety, further discourage adoption. Additionally, insufficient awareness about benefits, confusing labels, or a lack of government incentives can create hesitation. Overcoming these barriers requires addressing affordability through subsidies, tax breaks, or financing options, and improving accessibility by expanding distribution channels and educating consumers about the value of sustainable choices.

While the current study results focus on the cultural and social impact, the majority of the literature shows that consumer buying behavior has changed because people tend to use more sustainable products.

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