

Awareness and Usage of Star Rated Electronic Appliances by the Home Makers Residing in Vadodara City



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Abstract

All energy efficient equipment have ISEER (star rating) label on them. One can see Indian Seasonal Energy Efficiency Ratio (ISEER) on the equipment like, Air- conditioner, LED Television, Water heater and Refrigerator available in Indian market. The objectives of the study were to find out the Awareness and usage of star rated electronic appliances by the home makers residing in Vadodara city. In the study sample size of 72 home makers were selected for the study. The 72 home makers were residing in Vadodara city. The data were collected by personal interviewing the home makers. The major findings of the present study revealed that the home makers had awareness regarding star rated electronic appliances and Lights. The questionnaire also contained questions concerning their family income, number of family members and type of family. All the home makers were aware about star rating electric equipment purchased in their homes. The home makers were favoring to buy star rated equipment for their homes.

Keywords: Electronic, Appliances, Star Rated, Home Makers.

Introduction

Electricity is everywhere; it is used in order to live relaxed, productive and pleasant living. When it gets dark outside, immediately lights are switched on and in summers when temperature rises, instant air conditioners are switched on immediately. The electricity used in homes comes from the burning of fossil fuels such as oil or coal. These fuels are needed to power the turbines that produce electricity. These resources are not unlimited or renewable; the faster they are used and the more electricity that is consumed, the faster they will be depleted. An emergency may emerge during very hot winters due to increased consumption of energy.¹

One of the biggest motivators people have for conserving electricity in their homes is the additional savings in their energy bills at the end of the year. Conserving electricity and not putting as great a demand on power plants lessens the need for more nuclear power plants. Turn off appliances completely when not in use, use energy saving light bulbs such as LEDs and appliances, and insulate your establishment properly to help lower the heating and cooling costs. Hence it is important to conserve energy². In today's world, annual expenses are reaching the sky. For a situation like this cutting down on the bills have become a requirement. LEDs use almost 90% less energy than a traditional incandescent, making them the most energy-efficient type of lighting³.

Aim of the Study

To find out the awareness and usage of star rated electronic appliances by the home makers of Vadodara city.

Delimitations of the Study

1. The study was limited to home makers of Vadodara city.
2. The study was limited to home makers who were using star rated electronic appliances in their homes.

Review of Literature

The residential establishments are considered to be one of the largest consumers of electricity in India. Continuous commercialization and the growth of the population results in increasing power consumption in buildings. The researcher had collected information from various sources. The sources of collecting literature are magazines/books on interior-design covering electricity as one of an aspect, architects and lighting journals and related websites on interiors.

In today's time various types of electronic equipment are available in the market having Star Rating on them. The more the stars the electronic equipment is consuming less energy and it saves more money for the family. One can see Indian Seasonal Energy Efficiency Ratio (ISEER) on the equipment like, Air- conditioner, LED Television, Water heater and Refrigerator. The equipment have (ISEER) label on front or back side showing the star rating of the equipment.

Indian Seasonal Energy Efficiency Ratio (ISEER)

Ratio of the total annual amount of heat that the equipment can remove from the indoor air when operated for cooling in active mode to the total annual amount of energy consumed by the equipment during the same period. For the purpose of this schedule, the purpose of star labeling, the term Indian Seasonal Energy Efficiency Ratio (ISEER) is used in this paper.

Table

**Star Rating Plan – Voluntary Phase
(Valid from 29/06/2015 to 31/12/2017)**

Star Rating	Minimum ISEER	Maximum ISEER
1 Star	3.10	3.29
2 Star	3.30	3.49
3 Star	3.50	3.99
4 Star	4.00	4.49
5 Star	4.50	

The ISEER is star rating parameters for energy efficient electronic equipment. The star rating parameters for ISEER shall be as given in Table. There is no negative tolerance for the Star Rating Bands⁴. All tested products must meet the minimum threshold for each Star rating Band. The more stars the electronic equipment has the better the electronic equipment in using less energy. The researcher had collected information of only star rated electronic equipment.

The consumer market is not yet aware of the new technologies like star-rated equipment and LED Light. They are gaining popularity step by step. The researcher did not come across a study regarding the star-rated equipment in residential, regarding its usage and knowledge. The need to conserve electricity has become more important. Thus, the present study was undertaken.

The findings of the present study is an attempt to find out the awareness and usage among home makers to choose energy efficient electronic equipment and lights that decreases the usage of electricity, save money, to consume less watts and to reduce the usage of electricity. The findings of the present study will also guide the interior designing students and architects and interior designers in choosing the best energy efficient electronic equipment and lights for the residential establishments.

Methodology

Research Design

The research design of the present study is descriptive in nature.

Sample Size

The study was conducted on home makers of Vadodara city. Questioner was prepared by the

researcher. 72 home makers were the respondents in the present study.

Sampling Method

The researcher collected the data in person via interview method. The data were collected personally by the investigators on a pre-validated interview schedule. The data of the present research were based on the subjective responses of the home makers.

The questionnaire also contained questions concerning their family income, number of family members and type of family. The data were analyzed by applying descriptive statistical tests. Descriptive statistics (percentages, frequencies and means and standard deviations) were utilized to analyze the data statistically.

Locale of the Study

The locale of the study was Vadodara city of Gujarat state.

Findings of the Study

The finding section throws a light on the awareness and usage possessed by the home makers. The researcher had also collected personal information of the home makers. The researcher collected information regarding type of family, number of family members and family income. The researcher had also collected information about which type of lights, and how many stars rating does the electronic equipment does the home maker have in their home.

The researcher found out that nearly (78.00 per cent) were belonging to nuclear family. Only (22.00 per cent) of home makers were from Joint family. Two members was the smallest size of nuclear family and nine members were the largest family size in this present study. The majority (36.00 per cent) of home maker were belonging to four family member families in present study. A minor of (3.00 per cent) of home makers were belonging to nine member family. Almost half of the home makers were having total monthly family income between Rs. 50,000/- to Rs. 1,00,000/- reported by the researcher.

Awareness and usage of Energy Efficient Lights

All the home makers were aware about LED lights. Majority (78.00 per cent) of the home makers were using CFLs and LEDs in the homes. Only a small (about 6 per cent) number of home makers were still using bulbs.

Awareness and usage of Star Rating Refrigerator

The home makers were using refrigerator of various brands. They were Haire, LG, Penasonic, Samsung and whirlpool. All the refrigerators brands had Indian Seasonal Energy Efficiency Ratio (ISEER) star rating. The majority of home makers were using refrigerators of LG (33.00 per cent), Samsung (36.00 per cent) and Whirlpool (22.00 per cent) brand. A small per cent (9.00 per cent) of home makers were using Haire and Penasonic (9.00 per cent) company refrigerators. Nearly (67.00 per cent) of the star rating Refrigerators were having 3 Star rating.

And other home makers were having 4 Star rating Refrigerators (17.00 per cent) and about 5 Star rating Refrigerators (17.00 per cent). All home makers were aware about star rating Refrigerators available in

the market. Below is shown a Bar Graph reflecting Refrigerators Star Rating.



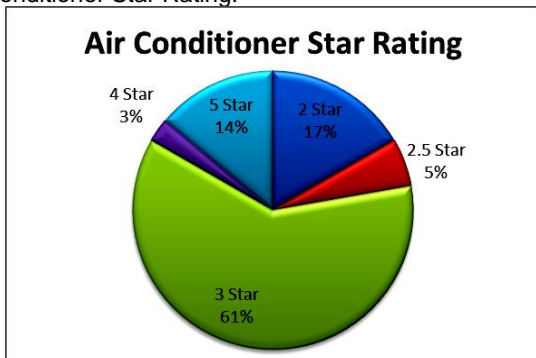
Awareness and usage of Star rating Television

The researcher observed that the home makers owned Televisions of various brands namely, Aiwa, Akai, Challenger, Croma, LG, Micromax, Onida, Penasonic, Philips, Salora, Samsung, Sony, Sony and Vediocon. Only companies with LED type Television were having star rating of 5 Stars. The Televisions of various brands namely, Croma, LG, Micromax, Onida, Penasonic, Philips, Samsung, Sony and Vediocon were having LED television. All the LED television was having 5 Stars Rating.

Awareness and usage of Star Rating Air Conditioner

The home makers were using Air Conditioner of various brands. The companies names were Daikin, Hitachi, LG, Penasonic, Samsung, whirlpool, Re-connect, Onida and Loid. All the refrigerators brands had Indian Seasonal Energy Efficiency Ratio (ISEER) star rating. The majority of home makers were using Air Conditioner of LG (28.00 per cent), Samsung (22.00 per cent) and Penasonic (19.00 per cent) brand. A small per cent (12.00 per cent) of home makers were using Daikin, Loid and Re-connect company Air Conditioners. Nearly (61.00 per cent) of the star rating Air Conditioner were having 3 Star rating.

Other home makers were having 2 Star rating Air Conditioner (17.00 per cent) 2.5 Star rating Air Conditioner (5.00 per cent) 4 Star rating Air Conditioner (4.00 per cent) and about 5 Star rating Air Conditioner (15.00 per cent). All home makers were aware about star rating Air Conditioners available in the market. Below is shown a pie graph reflecting Air Conditioner Star Rating.



Awareness and usage of Star Rating Water Heater

The home makers were having local and branded water heaters like, Bajaj, Benchmark, Bestmen, Clearhot, Clifton, Haier, Lightrod, Ranold, Raone, Spearot and Vinus. Around (36.00 per cent) of home makers were using Gas Water Heater. A small per cent (6.00 per cent) of home makers were having Solar Water Heater. Majority of home makers had Bajaj Water Heater having 3 Star Rating. Haier and other local Water Heater brands also had 3 Star Rating. The majority of home makers had Electric Water Heater with 3 Star rating at their homes.

All the home makers were aware about star rating electric equipment purchased in their homes. The home makers were favoring to buy star rated equipment for their homes. The researcher asks the reason for buying such equipment. All the home makers answered the main reason was to save money is the priority. Other home makers were interested in consumption of less energy and environment protection. The difference in bill amount experienced by the home makers were around Rs.500/- to Rs.1000/- Indian rupees.

Recommendations

A similar kind of a study can be undertaken with a large number of sample size. A comparative study can also be planned between the usage of star rated electronic equipment among residential and commercial establishments users.

Conclusion

The findings of the present study will help the home makers, students, Architects to wisely choose and buy star rated equipment for their homes and have knowledge regarding LEDs lights and other energy efficient equipment. The findings of the study will enrich the database energy efficient equipment available in Indian market.

Footnotes

1. <http://www.edisontechcenter.org/LED.html>, retrieved on 2016.
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