

Assessment of College Student's Awareness in Relation to Solar Energy Products in Coimbatore District

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Abstract--- *Solar energy is become popular renewable energy around the worldwide and now it is becoming more popular for generating electricity. Solar products are easily installed and easily maintained. Solar products will help in control in electricity bill. Still we able to see many households have not utilizing solar products benefits due to major factor of awareness, cost etc. This study focuses on awareness among the college students. This study is descriptive in nature. 200 samples are collected from various colleges from Coimbatore districts. Through this study student's awareness towards solar products have been analysed and provide the proper suggestion and conclusion.*

Keywords--- *Renewable, Solar Energy.*

I. INTRODUCTION

Solar energy is one of the important sources of renewable energy. Solar energy is 100 percent free energy from sun where we can use solar energy to convert electricity power. Now a day due to increase in demand in electric energy in the world, Solar energy is one of the best solution to cope the demand. Industries using solar panel to generate electric power energy, Households are moving towards to access solar energy like Rooftop solar panel and solar products and Government agencies installed solar park etc. In India Both the Central Government and State Nodal Agencies (SNAs) offer subsidy schemes to the households to install rooftop PV systems. This promotes people to use solar energy and to cut their electricity bill.

II. STATEMENT OF THE PROBLEM

In present scenario, the world is facing high demand in electrical energy on the other side world wants to move towards eco-friendly products to stop global warming. The solar energy products are renewable energy products and eco-friendly products. Due to advancement of technology solar energy products cost are dramatically decreasing year by year. In modern world still awareness of solar products was very low. Teenagers are the future generation of the country. In this point of view, the study focuses on awareness among college students in respect of solar products.

III. OBJECTIVES OF THE STUDY

- To measure the awareness among students towards solar energy products.
- To study the students intention to purchase solar product in future.

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IV. REVIEW OF LITERATURE

Vikas Kumar and Bikramjit Singh Hunda and Kulwinder Kaur (2019)¹ in their study confirmed that consumer buying behaviour is significantly determined by cost, performance and government initiatives dimensions. Mrs.P. Kalpanadevi, and Dr.S. Vasantha (2018)² in their study find that respondents got awareness about solar water heater mostly through television, radio and other media.

Government must take various actions to make aware of solar water heater products among people and it's time to shift to eco-friendly products. Dr.R. Mohanasundari and Nirmala Devi (2018)³ in their study found that majority of the respondent has moderate awareness on Solar Energy Products and Government subsidies.

V. METHODOLOGY

This study was conducted based on primary and secondary data. In this research 200 college students selected from Under Graduate and Post Graduate from Commerce and Management stream from various colleges at Coimbatore district. Questionnaire was used to collect data. Convenience sampling techniques was applied as research design. Percentage analysis and Chi-Square tools were used to analyse and interpretation of data.

VI. ANALYSIS AND INTERPRETATION

Table 1: Gender

<i>S. No.</i>	<i>Gender</i>	<i>Frequencies</i>	<i>Percentage</i>
1	Male	107	53.5
2	Female	93	46.5
	Total	200	100

Source: Primary Data

Out of 200 students, Highest (53.5%) respondents are Male and to the next lowest (46.5%) respondents are Female.

Table 2: Age Group

<i>S. No.</i>	<i>Age Group</i>	<i>Frequencies</i>	<i>Percentage</i>
1	17 – 18 Years	54	27
2	19 – 20 Years	48	24
3	21 – 22 Years	57	28.5
4	Above 22 Years	41	20.5
	Total	200	100

Source: Primary Data

Out of 200 students, Highest (28.5%) respondents fall under age group of 21 to 22 years and least (20.5%) respondents fall under age group of Above 22 years. The researcher had taken care on collecting questionnaire from students to balance and to cover I year, II year and III year students from Under Graduates and I year and II year from Post Graduates students.

Table 3: Education Qualification (Under Pursing)

<i>S. No.</i>	<i>Qualification</i>	<i>Frequencies</i>	<i>Percentage</i>
1	Under Graduates	110	55
2	Post Graduates	90	45
	Total	200	100

Source: Primary Data

Out of 200 students, Highest (55%) respondents are pursuing under graduates and the next to lowest (45%) respondents are pursuing Post Graduates.

Table 4: Source of Awareness about Solar Products

<i>S. No.</i>	<i>Sources of Awareness</i>	<i>Frequencies</i>	<i>Percentage</i>
1	Family Members	24	12
2	Relatives	8	4
3	Friends	64	32
4	Advertisement	104	52
	Total	200	100

Source: Primary Data

Out of 200 students, Highest (52%) respondents selected Advertisement as their source of awareness of solar products and the least (12% & 4%) respondents select family and relatives respectively as their source of awareness of solar products.

This shows that Solar Company and Government agencies are making advertisement mostly through social media, various internet websites which is not more effective to reach households. So, Government and Solar Companies can concentrate in various techniques to attract household people.

Table 5: Chi-Square Computation - Gender of the respondents Vs. Awareness of solar products

H₀: There is no significant relationship between Gender of the respondents and awareness of solar products.

<i>Gender</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>
Aware	85	60	145
Not Aware	22	33	55
Total	107	93	200

Source: Primary Data

	<i>Value</i>	<i>DF</i>	<i>P-Value</i>	<i>Significant</i>
Chi- Square	5.5575	1	.018402	The result is significant at p < .05

Chi-Square Test Result (APA Format)

$$X^2 (1, N = 200) = 5.5575, p = .018402.$$

Chi-square tests of independence conclude that there is significant association between Gender and awareness of solar products. Hence null hypothesis rejected. This is due to difference in taste and preference among male and female students.

Table 6: Chi-Square Computation - Age Group of the respondents Vs Awareness of solar products

H₀: There is no significant relationship between Age of the respondents and awareness of solar products.

<i>Age</i>	<i>17 – 18 Years</i>	<i>19 – 20 Years</i>	<i>21 – 22 Years</i>	<i>Above 22 Years</i>	<i>Total</i>
Aware	33	30	49	33	145
Not Aware	21	18	8	8	55
Total	54	48	57	41	200

Source: Primary Data

	<i>Value</i>	<i>DF</i>	<i>P-Value</i>	<i>Significant</i>
Chi- Square	12.416	3	.006086	The result is significant at p < .05

Chi-Square Test Result (APA Format)

$$X^2 (3, N = 200) = 12.416, p = .006086.$$

Chi-square tests of independence conclude that there is significant association between age group and awareness of solar products. Hence null hypothesis rejected. Even though age group class interval is less, Post Graduateage group students will have more aware than Under Graduate students about solar products.

Table 7: Chi-Square Computation - Education Qualification of the respondents vs. Awareness of solar products

H₀: There is no significant relationship between education qualification of the respondents and awareness of solar products.

<i>Education Qualification</i>	<i>UG</i>	<i>PG</i>	<i>Total</i>
Aware	68	77	145
Not Aware	42	13	55
Total	110	90	200

Source: Primary Data

	<i>Value</i>	<i>DF</i>	<i>P-Value</i>	<i>Significant</i>
Chi- Square	13.989	1	.000184	The result is significant at p < .05

Chi-Square Test Result (APA Format)

$$X^2 (1, N = 200) = 13.989, p = .000184.$$

Chi-square tests of independence conclude that there is significant association between education qualification and awareness of solar products. Hence Null Hypothesis rejected. This shows that due less experience and interest in societal factors Under Graduate students will have less interest or low awareness among solar product than Post Graduate students.

Table 8: Interest to Purchase solar product in future?

<i>S. No.</i>	<i>Gender</i>	<i>Frequencies</i>	<i>Percentage</i>
1	Yes	92	63.45
2	No	53	36.55
	Total	145	100

Source: Primary Data

Out of 145 students, Majority as 63.45% of the respondents selected the option “Yes” for interest to buy solar product in future and to the next side the 36.55% of the respondent selected the opinion “No”. This indicate that Solar company and Government agencies must check availability of solar products in the market, Service centres, Cost, After sales services etc., These factors can affect the interest to purchase of solar products.

VII. SUGGESTION AND CONCLUSION

Solar energy products are Eco-friendly for nature. The future is on the hand of today youth generation. We should concentrate to create awareness and interest among the students is necessary to promote the importance of solar products in forth-coming future. This study shows that awareness among students is satisfied but still some lacking in awareness. This study also identify that there is significant association between age group, gender factors and education qualification vs awareness of solar products. The Government and Solar companies want to concentrate more to create awareness and interest to buy solar product in future. Due to advancement in technology solar products cost are decreasing year by year. Advertisement and New policies from Government and solar companies will create a new clean world.

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