

## ADOPTION OF ECO-FRIENDLY PRODUCTS AND PRACTICES [A CASE STUDY OF PHAGWARA CITY]

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### ABSTRACT

*The term 'eco-friendly' is used to describe activities which are good for the environment. There are a range of ways in activities can be eco-friendly, ranging from products which are constructed in an environmentally friendly way to make lifestyle changes which are designed to benefit the environment. In this paper, an attempt has been made to throw light on the awareness level of public of Phagwara city towards eco-friendly products and practices. An effort has been made to make people aware and educated to save environment. This research paper aims at to know the awareness regarding EFP among people to know the various reasons for less use of eco-friendly products, to study the relationship between age and awareness about eco-friendly practices, to study the awareness practices initiated by various organisations and to study the views of people towards seriousness of government in implementing eco-friendly practices.*

**Keywords:** Eco-Friendly, Environment, Awareness, Product, Government, Environment, Public, People.

The term “eco-friendly” is used to describe activities which are not harmful to the environment. It is a shortening of “ecologically friendly.” and you may also hear terms like “environmentally friendly” or “green” used to describe the similar activities. The term “eco-friendly” is used to describe a range of activities which can be eco-friendly, ranging from products which are constructed in an environmentally friendly way to making lifestyle changes which are designed to benefit the environment. People engage in eco-friendly activities because they are concerned about the health of the environment. Environmental issues were first pushed to the forefront in the late 1900s, when people realized that their activities were having negative impact on the environment. Pollution rampant use of natural resources and other activities were questioned in light of information about how these activities hurt the environment. And people began to look into more eco-friendly ways of living and doing business. Many savvy companies realized that investing in green product development would pay off and lines of eco-friendly products can be found in many regions of the world today as a result. These products are usually made in factories which are environmentally friendly, such as facilities

built from recycled materials which use solar panels for power and they are made from components which are also good for the environment like plant-sourced ingredients for soaps. Or recycled metal for electronics. Product packaging, Advertisements and other materials may also be eco-friendly. Products are not the only thing which can be eco-friendly. Activities can also be friendly to the environment, as in the case of things like carpooling, gardening, composting, and recycling, can be called as eco-friendly practice. Some more example can be water and electricity saving, energy saving and arranging food for birds so on and so forth, which can easy starts. Some people think that eco-friendly are only the first step and that people who are really committed to the environment also need to modify their life Styles, reducing the amount of resources.

The term eco-friendly is often nothing more than a marketing play. For example, a product that contains 50% cycled paper in the packaging could be considered eco-friendly, even though they are manufactured in dirty factories in China. In fact, most products labelled eco-friendly are manufactured or sourced overseas. Almost all of these overseas factories would fail to meet even our nation’s most

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lax pollution, clean water, and environment safety regulations. A consumer should evaluate the total ecological impact of a product to decline whether it is “eco-friendly”.

As Phagwara is known for tobacco, sugar and auto parts production. And every production process creates pollution in environment, a need is felt to check the awareness among public of Phagwara city towards Eco friendly products and practices. Through this study, an effort is made to aware and educates people to save environment.

### Objectives of the study:

1. To know the awareness regarding EFP among people.
2. To know the various reasons for less use of Eco- friendly products.
3. To study the relationship between age and awareness about Eco-friendly practices.
4. To study the awareness regarding eco-friendly practices initiated by various organizations.
5. To study the views of people towards seriousness of Govt. in implementing the Eco-friendly practices in Phagwara city.

### Hypotheses of the study

1. There is no significant relationship between occupation of respondents and awareness regarding eco- friendly products.
2. There is significant relationship between occupation and awareness regarding eco-friendly products.

### Method

The study is intended to know and analyse the awareness and adoption of eco-friendly products and practices among general public. The area is limited to Phagwara city, Punjab. Phagwara lies on the NH-44. It's a typical Doaba city.

### Sample

The present study was carried out in Phagwara city by selecting the respondents of graduate and post-graduate level. A sample of 100 respondents was selected for gathering primary data. The study was taken during the period of December 2020 to January 2021. To carry out the study in more

accurate way, stratified random sampling method was used. The categories chosen for sample are:

- Professionals including Doctors, Architects and others.
- Servicemen
- Businessmen
- Students
- Other including housewives & pensioners etc.

### Measures

Both Primary and Secondary data have been used to draw appropriate conclusions. The Primary data were collected by using a structured questionnaire. The Secondary data were mainly drawn from the books and referred Journals. Information had also been drawn from available literature pertaining to the field of knowledge.

### Statistical Techniques

The collected data had been analysed by using

- (a) Percentage analysis
- (b) Chi-square test
- (c) Correlation Analysis.

### Results and Discussions

**Table 1: General Profile of Respondents**

Income (Monthly in Rs.)	Classification	No. of Respondent	Percentage (%)
Occupation	No income	25	25%
	Less than 20,000	28	28%
	20,000-30,000	19	19%
	30,000-40,000	13	13%
	Above 40,000	15	15%
	Professionals	20	20%
	Businessman	20	20%
	Serviceman	30	30%
	Students	20	20%
	Others	10	10%
Age (In Years)	Less than 20	2	2%
	20-30	46	46%
	30-40	30	30%
	40-50	13	13%
	Above 50	09	09%
Gender	Male	53	53%
	Female	47	47%

Inference: Reference to the personal profile of respondents in the above table shows that 28% respondents are having income less than Rs. 20,000, 30% respondents are servicemen, 46% are in the age group of 20-30 years and 53% are male respondents.

**Table 2: Showing awareness of Eco-friendly products**

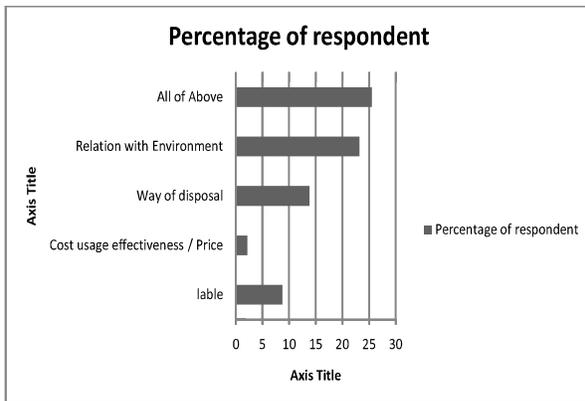
Awareness	No. of respondents	%
Yes	95	95%
No	05	5%

Inference: The above table shows that 95% respondents are aware about eco-friendly products.

**Table 3: Showing views of Respondents Regarding Eco-friendly Products**

Factors	No. of respondents	%
Labels	12	8.75
Cost usage effectiveness / Price	03	2.18
Way of disposal	19	13.86
Relation with Environment	32	23.25
All of Above	35	25.54

Interpretation: From the above it is clear that 23.35% respondents are of the view that eco-friendly products are Judged from their relationship or influence on environment while 25.54% are of the view that EFP's are Judged from all the factors like labels, usage, cost effectiveness, way of disposal and relation with environment.



**Table 4: Table showing usage of eco-friendly products**

Usage	No. of respondent	%
Person using eco-friendly products	77	77%
Person not using eco-friendly products	23	23%
Total	100	100%

Inference: The above table reveals that among 100 respondents, 77% respondents are using eco-friendly products.

**Table 5: Table showing source of knowledge of respondents are using eco-friendly products.**

Source of knowledge	No. of Respondents	%
Education Institution	19	3.28 %
Newspapers and Magazines	40	7.97 %
Internet	19	3.28 %
Friends and Relatives	22	5.38 %
Seminar / Lectures/ Conference	13	9.09 %
T.V	30	0.97 %
Any Other	00	00
Total	143	100%

Inference: From the above table, It can be Inferred that 27.697% respondents got knowledge about EFP's from newspapers and magazines and just 9.09% got knowledge about EFP's from seminar/ Lecture/Conference.

**Table 6: Showing adoption of Eco-Friendly products at reasonable prices.**

Adoption	No. of respondents	%
Yes	96	96%
No	4	4%
Total	100	100%

Inference: it can be noted from the above table that among 100 respondents, 96% are of the view that they are ready to adopt eco-friendly products if these are made available at reasonable prices.

**Table 7: Table showing reasons for less use Eco-friendly Product**

Reason	F	%
Less Availability	19	14.18%
Non- Compulsion by state Govt.	22	16.42%
Non-Awareness	61	45.52%
Resistance to change old Practices	12	8.96%
Price Factor	20	14.92%
Total	134	100

Inference: The above table reveals that 45.52% respondents have opinion that non-awareness is the main reason for less use of eco-friendly products.

**Table 8: Table showing Awareness of Respondents regarding Eco-friendly Practices**

Awareness	No. of Respondents	%
Yes	83	83%
No	17	17%
Total	100	100%

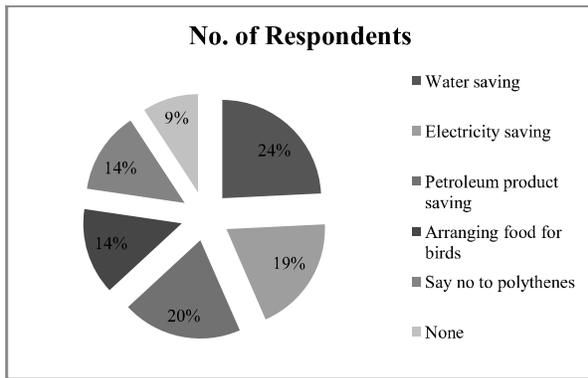
Inference: The above table shows that 83%

respondents are aware about eco-friendly practices.

**Table 9: Table showing Eco-friendly Practices followed by respondents**

E.F.P Practices	No. of Respondents	%
Water saving	63	24.04%
Electricity saving	50	19.08%
Petroleum product saving	51	19.46%
Arranging food for birds	37	14.12%
Say no to polythenes	35	13.35%
None	24	9.16%
	02	0.76%
	262	100 %

Inference : the above table reveals that only 24.04% respondents do water saving , followed by 19.08% electricity saving while 0.765% respondents are not following any E.F.P Practice.



**Table 10: Table showing awareness regarding various campaigns started by different institutions.**

Campaigns	No. of respondents	%
1. Nanhichaan by HarsimratkaurBadal	41	15.95%
2. Save Birds by DainikBhaskar	37	14.39%
3. Save water by different organisations	68	26.98%
4. Save electricity & Petroleum by Ministry of Petroleum & Natural Gasses	61	24.20%
5. Recycling campaigns by various mobile companies	49	19.06%
6. None	01	0.39 %
<b>Total</b>	<b>257</b>	<b>100%</b>

Inference: it can be noted from the above table that 26.78% respondent are Aware about the campaigns ‘saving water’ followed by 24.20% ‘save electricity & Petroleum’.

**Table 11: Table showing view of respondents regarding Role Played by Govt. towards adoption of EFP & Ps.**

Role of Government	No. of respondents	Percentage
Yes	17	17%
No	56	56%
Can't say	27	27%
<b>Total</b>	<b>100</b>	<b>100%</b>

Inference: 56% respondents are of the view that Govt. is not playing any serious role towards adoption of EFP & Ps.

**Table 12: Table showing view of respondents regarding replacement of diesel Auto Rickshaw with LPG**

Views	No. of respondents	Percentage
Yes	98	98%
No	1	1%
Can't say	1	1%
<b>Total</b>	<b>100</b>	<b>100%</b>

Inference: It is very clear from the above table that 98% respondents agree with replacement of diesel auto rickshaws with LPG and CNG.

**Statistical Analysis**

**Table No. 1: Chi-square test (association of difference between occupation and awareness regarding eco-friendly products)**

Null hypothesis (Ho): there is no significant relationship between occupation and awareness regarding eco-friendly products.

**Alternative Hypothesis (Ha):**

There is significant relationship between occupation and awareness regarding eco-friendly products.

Occupation of respondents	Awareness		
	Yes	No	Total
Business	20	00	20
Service	27	03	30
Student	18	02	20
Professional	20	00	20
Other	10	00	10
<b>Total</b>	<b>95</b>	<b>05</b>	<b>100</b>

**Calculates chi-square value = 13.36**  
**For degree of freedom 4, table vale = 9.49**

**Result:** The table value for 4 degrees of freedom @ 5% level of significance is 9.49. Since the calculated value of chi-square is higher than the table value of chi-square, the difference is significant. So, we reject the null hypothesis. Hence there is significant relationship between occupation status and awareness regarding eco-friendly products.

**Table 2: Coefficient of Co-relation (Relationship between age of respondent and awareness about eco-friendly practices)**

Age (in year)(X)	No. of award persons (Y)
Less than 20	0
20-30	36
30-40	25
40-50	14
Above 50	08

**Value of coefficient of co-relation = -0.067**

**Result:** From the correlation Analysis it is inferred that of respondents and awareness level of eco-friendly practice are negatively correlated. It reflects that people of age group are not as much aware as young generation regarding eco - friendly practices.

**Conclusion**

**(a) Percentage Analysis**

- 95% respondents are aware about EFPS.
- 23.35% respondents are of the view that EFPS are judged from their relationship or influence on Environment while 25.54% are of the view that EFP’s are judged from all the factors like labels usage, cost effectiveness way of disposal and relation with environment.
- 77% respondents are using eco-friendly products.
- 27.97% respondents got knowledge about EFP’s from newspapers and magazines and just 9.09% from seminars/lectures/conferences.
- 96% respondents are ready to adopt EFP’s if these are made available at reasoonable Prices.
- 45.52% respondents have opinion that non-awareness is the main reason for less use of EFP.

- 83% respondents are aware about EF Practices.
- 24.04% respondents do water saving activity, followed by 19.08% electricity saving.
- Only 26.98% respondents are aware about the campaign of save water.
- 56% respondents are of the view that Govt. is not playing any serious role towards adoption of Er& Ps.
- 98% respondents agree with replacement of diesel auto-rickshaw’s with LPG’s and CNG

**(b) Chi-Square Analysis:**

There is significant relationship between occupational status of respondents and awareness about Eco friendly products.

**(c) Correlation Analysis:**

From the correlation analysis it is inferred that age of respondents and awareness of eco-friendly practices are negatively correlated.

**Educational Implications:**

- (1) Educational institutions and Government should organize programs and Seminars to increase awareness of eco-friendly products and practices among the masses.
- (2) Like Himachal Govt., other state Govt. should also take steps to ban the use of polythene and to promote such other practices.
- (3) As Delhi, other states should also promote CNG taxis and auto-rickshaws,
- (4) Schools and Colleges should encourage students to follow more and more eco-friendly practices like water and electricity savings and follow up should also be taken.
- (5) Energy saving equipment’s should be made available at reasonable prices. Govt. should provide subsidies to such industries to reduce prices of such products.
- (6) Big Retail Chain should have one separate counter for eco-friendly products with specialized persons to convince and motivate the public to use such products.

To conclude eco-friendly products still have an impact on the environment, but the impact is greatly reduced when compared to conventionally produced

products. In some cases, eco-friendly products may even have a positive benefit depending on how the company does business. Many such products are also aimed at lifestyle changes which benefit the environment, so even if the product itself is not totally neutral, the actions undertaken by the consumer after buying the product are beneficial. For example, eco-friendly light bulbs require energy and resources to make, but they save energy.

During the summer break it is the perfect time for parents and educators to discover greener and more energy efficient alternatives and activities that our schools can do. Not only can it save money, but it is good for our environment. Finding Eco-friendly alternatives and activities the whole community can get involved, it means everyone wins.

As with most Eco-friendly practices, going green in our schools is healthier for our kids. Eco-friendly changes we make in schools also teach our next generation Eco-Responsible habits and thinking. Surely, sometimes the “green thing” may cost more, but often it saves money, whether one is talking about homes, business, or schools. Either way. Things that are good

for environment are also good for our children.

Eco-friendly products are not always as good environment as they claim. The government has not establish standard or laws that clearly define what constitutes an eco-friendly product or process.

### Referneces

- Aggarwal, S.L. (2018). *Business Mathematics and Statistics* 1<sup>st</sup> Edition. Delhi : Kalyani Publishers.
- Boot, C.G. & Erwin, D. C. (1979). *Statistical Analysis of Managerial Decision*. 15<sup>th</sup> edition, New Delhi : Pearson.
- Eco-friendly Products\_wikipedia, the free encyclopedia.mht
- Elhance, D.N. (2018). *Elements of statistics*. 59<sup>th</sup> edition, New Delhi : Kitab Mahal Publisher.
- Gupta, S.P. (2021). *Statistical Methods*. 46<sup>th</sup> Revised Edition, Chand & Sons, Publishers.
- Kothari, C.R. (2004). *Research Methodology*. New Age International Publishers.
- Kumaresan, A.(2010). *Indian Journal of Marketing*, 40, 41-42.
- Rahman, A. (2010). *Indian Journal of Marketing*, 40, 44-45.

