

Awareness of Green washing amongst College Students

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Abstract: *The 21st century witnessed a tremendous increase in the environmental related awareness and also on green washing. This research investigates the Awareness of green washing amongst college students and mainly discusses its impact on the environment and public health. The objective of the study focused on students' awareness, usage of green products and impact of green washing. The study used primary data as the main source and collected the data through a questionnaire. The responses were received from both online and offline mode. It was found out from the study that the term green washing is still unknown to many and there is a need to create awareness of it among the general public.*

Key Words: Green washing, Public Health, Environment, Advertisement.

I. INTRODUCTION

Green washing refers to act of misleading consumers regarding environmental practices of companies or the environmental benefits of a product or service. Green washing is used in green marketing to make consumers believe that an organization is using environment friendly products, as we all know that the demand for green products and services have increased in recent years.

The core of the research is to provide insights about green washing and its ethnicity in advertising and consumers awareness towards the environment and public health. Over the past decades, the green initiatives is becoming popular in our society. This paper was structured to better understand awareness of green washing amongst college students and consumers. Also, how it affects the society. In order to understand the impact of green washing, one must first identify green consumers. Here, the advertisement plays a very important role. Therefore, an attempt was made to investigate how corporate green washing is misleading? Do they have a responsibility towards society? Are products purchased by consumers are green products? Does the company is ethical in Advertising or not?

A few years ago the consumers started using social media in order to campaign against green washing practices. In response to this Terrachoice company identified seven company sins related to false advertisements for the green products. The seven sins are as follows.

1. **“Sin of the hidden trade-off:** A claim where an importance is not given to other environmental issues, but their idea is to show that the product is green, when labeling a product as environmentally friendly based on a small set of attributes when other attributes not addressed.

For example, paper, is not necessarily environmentally-preferable just because it comes from a sustainably harvested forest, other important environmental issues in the papermaking process, such as greenhouse gas emission or chlorine used in bleaching may be equally important”.

2. **“Sin of no proof:** Any company which claims that the product is green with no verifiable means.

3. **“Sin of vagueness:** A claim whose real meaning is likely to be misunderstood by the consumers. Claim that poorly defines the meaning of “all natural”, for example, uranium, mercury, and formaldehyde is all naturally occurring and poisonous. All natural does not mean green”.

4. “Sin of worshipping false label: Many products that are claimed to be green on the rack of stores these days however, those "all natural" and "organic" products are likely committing at least one green washing sin. The sin of worshipping false labels are one of the most dangerous sins. A Product that, through either words or images, given the impression of third-party endorsements where no such endorsements exist”.

5. “Sin of irrelevance: A claim may be true but is not helpful for consumers who preferably buy environment friendly products. That is claims like CFC free”.

6. “Sin of lesser of two evils: The claims which are true within the product category, the risk divert consumers from the greater environmental impacts of the category as a whole. The example for this is organic cigarettes”

7. “Sin of fibbing: simply making claims that are not true and misleading. Products that falsely claim to be certified by standards like ‘Energy Star’.

Here the company examined 1018 products where the claims demonstrated as false and were misleading to the consumers. The paper mainly tries to focus on consumer’s usage of green products and various unethical practices of green washing companies. Green washing means green marketing where company’s task is to provide environment-friendly products, taking into consideration the public health. Advertising plays a major role in green washing, it is a medium where products are advertised even though the product is not environment-friendly”.

Source: “Terrachoice, The sins of green washing (Home and family edition 2010)”

II. OBJECTIVES:

The objective of this paper is –

1. To study the Awareness of green washing amongst college students.
2. To analyze the student's opinion on usage of green washing products.
3. To study the impact of green washing on environment and public.

III. REVIEW OF LITERATURE:

1Yu-Shan Chen (2015) The author’s tries to find out the negative impact of green washing on purchase intention of the consumers and also how brand image and brand loyalty had a negative relationship between green wash and green purchase intention, they also suggested that one of the ways to enhance green purchase intention is green washing.

Nadányiová, (2016) It mainly deals with characteristics of green washing, different types of green washing, also sins of green washing and also the paper discusses about how green washing effects Slovak consumers as it is an unknown issue in Slovakia and is very important to avoid it and focus on various measures to avoid green washing. It was found out that awareness was created to avoid green washing.

Larceneux, (2011) Many firms used green washing as a CSR (Corporate Social Responsibility) communication tool to enhance their corporate image.

Christopher Marquis (2012) Have contributed in order to understand how corporates manage the use of information through its symbols and in order to examine selective disclosure and also it explores the questions in the context of green washing in order to promote environmentally friendly programs.

Burbano (2011) mainly examines external (both institutional and market), organizational and individual and individual drivers of green washing they are activities, NGO and media pressure.

Richards, (2013) Tries to analyze how green advertising impacts environment, and also the trust evolved in green advertising and the consumers' willingness to purchase green products. This study also indicated how environmental enthusiasts are more skeptical in various forms of advertising whereas, the non-enthusiasts are neutral. Finally, it was found that the consumers are skeptical in green advertising.

Baker, (2011) explains how companies use green labels and messages that are good for the environment in order to advertise or publicize their products, when there is no positive or little environmental benefits for the products and how all federal government, State government, and consumers are taking initiatives, actions towards this. In order to stop Green washing all federal, State agencies, State attorney's general, competitors and consumers are increasingly using the court.

Gergely Nyilasy (2013) This study focuses on how consumers perceived green washing, green advertising, corporate environmental performance has an effect on purchase intentions and the environment, taking into account the firm's environmental performance and findings are explained by attribution theory.

Watkins, (2008) this book section mainly deals with how companies boost sales through claiming environmental products as green products and if not it is misleading in order to expose them as true. This article also gives some insights of ISO guidelines, sins of green washing, greenwash health check, and consequences of green washing.

Majláth, (2016) Contributes in order to show uncontrollable ripple effect of scandal which does not last longer than the original case, VW Scandal, its consequences on society and environmental health.

Katait, (2017) Exclusively focus on green washing related to alarming issues, forms of green washing, reasons of growing green washing and sins of green washing which helps the consumers to know about the green wash products, its advantages and disadvantages.

IV. SCOPE OF THE STUDY

The study is restricted only to 4 green products related to green washing i.e., Dairy products, laundry detergents, personal care and beauty, Breakfast cereals and covered the colleges in and around Bengaluru

V. RESEARCH METHODOLOGY

For obtaining reliable information from the respondents Primary and Secondary source of data survey was conducted amongst college students in (Bengaluru) to collect the data related to green products that were used in the study. The researcher seeks to describe the awareness of green washing, corporate green washing, environmental friendly products and ethical issues related to green washing and these were selected for the sample.

5.1 Primary Data

The primary data was collected by administering a detailed questionnaire that contained various questions of green washing and its awareness. The questionnaire was distributed to both experienced and inexperienced consumers to know the awareness of green

washing. Here, data were collected from respondents both online and paper-based questionnaire and online questions were powered by Google forms and were randomly distributed to respondents through social media. Hard copy of the questionnaire was also distributed to college students.

5.2 Secondary Data

This data was collected from the journals, conference proceedings, Annual reports of companies, Book sections.

5.3 Sample Size

The data was collected from 462 respondents from the college students from the various colleges in and around Bengaluru.

VI. DATA ANALYSIS AND INTERPRETATION

Analysis of the data was done with the help of SPSS. The collected data's were coded and entered in the Excel sheet for coding and later was uploaded in the SPSS for further analysis. The tabulated and collected data helps the researcher in arriving at the findings from where suggestions and conclusions can be arrived at. To test the hypothesis all the models includes dependent and independent variables, in order to know awareness about the green washing. The following statistical tools were applied to find out the results namely Chi-Square, and One-way ANOVA.

6.1 Chi-Square Analysis

6.1.1 TYPE OF INSTITUTION VS THE AWARENESS OF THE TERM GREEN WASHING

Null Hypothesis (H₀): There is no association between the awareness of the term green washing and the Institution type.

Alternative hypothesis (H₁): There is an association between the awareness of the term green washing and the Institution type.

Table: 1.1

Type of Institution vs. the awareness of the term green washing.

Crosstab

Count

		Institution type			Total
		private college	government college	deemed university	
Have you heard term green washing?	Yes	74	56	93	223
	No	76	66	97	239
Total		150	122	190	462

Table: 1.2

Chi-Square Tests			
	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.377 ^a	2	.828
Likelihood Ratio	.377	2	.828
Linear-by-Linear Association	.001	1	.973
N of Valid Cases	462		

- a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 58.89.

Inference: Here P-value (0.828) is not less than 5% level of significance, hence we accept the null hypothesis and conclude that the two variables institution type and the term awareness of green washing are not associated or dependent on each other. Since the significance level is 0.000 the null hypothesis is rejected thereby accepting the Alternative hypothesis.

6.1.2 LEVEL OF EDUCATION VS TERM AWARENESS OF GREEN WASHING

Null Hypothesis (H₀): There is no association between the level of education and the term awareness of green washing.

Alternative Hypothesis (H₁): There is an association between the level of education and the term awareness of green washing.

Table: 1.3

Level of Education vs. term awareness of green washing.

Crosstab
Count

		Educational Level				Total
		under graduate	post graduate	MPhil and PHD	others	
Have you bought any products from green washing company?	Yes	103	12	87	12	214
	No	115	18	107	8	248
Total		218	30	194	20	462

Table: 1.4

Chi-Square Tests			
	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.232 ^a	3	.526
Likelihood Ratio	2.236	3	.525

Linear-by-Linear Association	.003	1	.958
N of Valid Cases	462		

- a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 9.65.

Inference: Here P-value (0.063) is not less than 5% level of significance, hence we accept the null hypothesis and conclude that the two variables awareness of green washing and the level of education are not associated or dependent on each other. Since the significance level is 0.000 the null hypothesis is rejected thereby accepting the Alternative hypothesis.

6.1.3 GENDER VS PEOPLE BUYING GREEN PRODUCTS

Null Hypothesis (H0): There is a statistically significant association between people buying products from green washing companies and gender.

Alternative Hypothesis (H1): There is no statistically significant association between people buying products from green washing companies and gender.

Table: 1.5
Gender vs. people buying green products.

Crosstab Count		Gender		Total
		female	Male	
Have you bought any products from green washing company?	Yes	138	76	214
	No	129	119	248
Total		267	195	462

Table: 1.6

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	7.323 ^a	1	.007		
Continuity Correction	6.821	1	.009		
Likelihood Ratio	7.359	1	.007		
Fisher's Exact Test				.008	.004
Linear-by-Linear Association	7.307	1	.007		
N of Valid Cases	462				

- a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 90.32.

Inference: Here P – Value (0.007) is less than 5% level of significance, hence we reject the null hypothesis and conclude that the two variables gender ad people buying products from green washing companies are associated or not dependent on each other. Since the significance level is not 0.000 the null hypothesis is accepted thereby rejecting the alternative hypothesis.

6.1.4 AGE VS GREEN COMPANIES

Null Hypothesis (H0): There is no association between the people buying products from green washing companies and different age groups.

Alternative Hypothesis (H1): There is an association between the people buying products from green washing companies and different age groups.

Table: 1.7
Age vs. green companies.

Crosstab

Count

		Age			Total
		17 - 20	21 – 25	above 25	
Have you bought any products from green washingcompany?	Yes	40	121	53	214
	No	64	141	43	248
Total		104	262	96	462

Table : 1.8

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.635 ^a	2	.060
Likelihood Ratio	5.656	2	.059
Linear-by-Linear Association	5.604	1	.018
N of Valid Cases	462		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 44.47.

Inference: The sample size required for the Chi-square test of independence is satisfied. We can see here that chi-square (2) is 5.635 and p-value is $0.060 > 0.05$. This tells us that there is no significant association between people who are purchasing green products from green washing companies and age groups is not supported by this analysis.

6.2 Anova analysis

6.2.1 AGE AND PURCHASE OF ENVIRONMENT FRIENDLY PRODUCTS

Null Hypothesis (H0): There is no statistically significant association between means of different age groups and people buying few environment friendly products.

Alternative Hypothesis (H1): There is statistically significant association between means of different age groups and people buying few environment friendly products.

Table: 1.9
Age and Purchase of Environment friendly products

		Sum of Squares	Df	Mean Square	F	Sig.
I never buy them	Between Groups	13.262	2	6.631	5.305	.005
	Within Groups	573.735	459	1.250		
	Total	586.998	461			
I buy few environment friendly products	Between Groups	.519	2	.260	.236	.790
	Within Groups	504.617	459	1.099		
	Total	505.136	461			
Almost every food products I buy is environmental friendly	Between Groups	3.558	2	1.779	1.589	.205
	Within Groups	513.907	459	1.120		
	Total	517.465	461			
Every food products I buy	Between Groups	4.017	2	2.009	1.601	.203
	Within Groups	575.974	459	1.255		
	Total	579.991	461			

In order to test the third objective with a one-way ANOVA which we use to consider people buying few environment friendly products where $F (0.236)$, $p (0.790) > 0.05$ therefore, we cannot reject the null hypothesis, that the means are equivalent and it shows that there is no significant difference between means of different age groups and consumers buying few environment friendly products. However,

comparing almost every food products that the consumers buy is environment-friendly where $F(1.589)$, $P(0.205) > 0.05$ hence, there is no significant difference between almost every food products people purchasing is environment-friendly and age group.

6.2.2 EDUCATION AND PURCHASE OF ENVIRONMENT FRIENDLY PRODUCTS

Null Hypothesis (H₀): There is an association between all the food products that the consumers buy is environment friendly and means of education.

Alternative Hypothesis (H₁): There is no association between all the food products that the consumers buy is environment friendly and means of education.

Table:1.10

Education and purchase of Environment friendly products

ANOVA

		Sum of Squares	Df	Mean Square	F	Sig.
I never buy them	Between Groups	4.336	3	1.445	1.136	.334
	Within Groups	582.661	458	1.272		
	Total	586.998	461			
I buy few environment friendly products	Between Groups	8.680	3	2.893	2.669	.047
	Within Groups	496.457	458	1.084		
	Total	505.136	461			
Almost every food products I buy is environmental friendly	Between Groups	9.290	3	3.097	2.791	.040
	Within Groups	508.175	458	1.110		
	Total	517.465	461			
Every food products I buy	Between Groups	23.566	3	7.855	6.466	.000
	Within Groups	556.425	458	1.215		
	Total	579.991	461			

Further, analyzing the ANOVA test showed that every food products that the consumers buy are environment-friendly. In the above table $F(6.466)$, $P(0.000) < 0.05$ so, we reject the null hypothesis, According to the analysis of variance, there is a significant difference between means of education and every environment-friendly food products that consumers buy.

VII. FINDINGS OF THE STUDY

It was found out from the study that 231 of the 462 respondents participated in the study. In the survey 229 response out of which, 97 (57.6%) were female and 132 (42.4 %) were male respondents. Out 231 responses, Where 130 response that is (53.6%) aged 21-25 years were a majority. The reason for this may be the fact that this age group possesses the most important information about green

washing as they all are educated and so, the researcher's main thesis focused on college-going students that they are more willing to complete the questionnaire on the topic. Therefore, it can be concluded that it is not possible to apply the results of the survey to other age groups. Most UG students 109 respondents (47.2%) were more interested in filling the questionnaire. Further, the results of the survey indicated that the concept of green washing still unknown to consumers and may not have come across it yet. Only a small percentage of respondents 111 (48.3%) have heard the term green washing majority 64 respondents knew about it from the internet (37.2%). Some of the respondents who had heard the term green washing from all the mentioned sources became aware of green washing but the consumers are of the opinion that manufacturers are environment-friendly and green to a certain extent.

The result of the study indicated that sin of worshipping false labels is the most commonly committed sin. Out of 223 respondents regarding people buying products from green washing companies showed that 104 (46.6%) are green products. Misguidance is another important thing where the company commits as well as, according to the survey 148 respondents (67.9%) are not aware of unethical practices of green washing company. The overall study proved that 104 (51%) neutrally agreed products bought are environment-friendly and after realizing that it is green products the study revealed that 148 respondents (68.8%) did not buy green products even though the advertisements say that it is. Again the survey showed that 111 (52.4%) respondents thought that green washing companies act as a threat to environment and 98 response (53.8%) tells about ethical issues concerned about green washing and 115 (55.8%) respondents showed that green washing effect public health, the reason is 64 (31.5%) respondent are provided various measures to avoid green washing and awareness can be created by advertisements and exhibitions.

Further, the study was conducted through the offline questionnaire of 231 respondents in order to create an awareness of green washing amongst college students.

VIII. LIMITATION OF THE STUDY

The study covered only the few aspects of green washing:

1. The study considered only the college students from various colleges in Bengaluru.
2. The scope of the study was restricted only to 4 particular products in order to create awareness. (Dairy products, laundry detergents, Personal care and beauty, Breakfast cereals).
3. Results arrived from this research may or may not be applicable to other states, countries or other part of the world.
4. Research was conducted only to create an awareness of green washing related to college students.

IX. FUTURE RESEARCH AND CONCLUSION

FUTURE RESEARCH

The current research shows that there is a need for extensive research to be done regarding awareness of green washing. Therefore, further research should be conducted in order to broaden the scope of the study, as this could be the first step towards creating awareness of green washing amongst students. This can be done by obtaining a larger sample covering various states or the entire country benefited the study. Furthermore, one may even consider conducting surveys so that response to green washing would be clear. Additionally, future research helps in testing consumers responds to green washing products with different objectives and application of other statistical tools.

X. CONCLUSION

The study reveals that the awareness of green washing among the college students are found to be negligible or low. Therefore, lot of initiatives have to be taken by the government in order to create awareness to protect the consumers from these misleading companies. Nowadays many research has been conducted related to Green washing as it is an ongoing process. If a business wants to be successful and wants to maintain its reputation it should offer products to consumers that is environmental friendly, which is not misleading, which effects public health, ethnicity of corporates while introducing a particular product. As the result of the survey shows it is necessary in order to provide all information about awareness related to green washing and measures to avoid it. The first step should be taken by the college going students. So, that corporate become aware of it and it helps them to avoid while selling green washing products. The study also provided a better understanding of how consumers' willingness to purchase green products is affected as consumers are more willing to make green purchases. Green advertisers can use this research in order to create awareness of green products so that their business prospers. Further, the study concludes that this can be done through advertisements, conducting seminars, events, exhibitions not only in Bengaluru but further study should be conducted taking into consideration other States, Countries, so that awareness related to green washing can be created.

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