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Designers Perspective Towards Eco Friendly Materials Available In Interior Designing

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ABSTRACT

The present study aimed at assessing the "Designer's Perspective towards Eco-Friendly Materials Available in Interior Designing." The study was carried out in Mumbai and Gorakhpur.100 respondents were selected randomly from each city. The subjects (by purposive sampling technique) chosen as respondents were architects, interior designers, consultants, and contractors of both sexes. Respondent's opinion regarding awareness of eco-friendly materials and practices was found with the help of a open ended structured questionnaire. Opinions obtained from both cities were compared to each other on percentage basis. On the basis of compression it can be concluded that respondents of Mumbai city were found to be highly aware in compression to respondents of Gorakhpur. When the respondents were classified according to sex in both the cities numbers of males were higher than female counterpart. Hence it was found that the profession of architect is still male dominated.

Keywords: Eco-friendly interiors, Interior designing, Green Interiors, Green Plywood, Eco-paints.

I. INTRODUCTION

There is a wonderful line said by Mr. Henry David Thoreau i.e. *"what is the use of house if you don't have a decent planet to put it on?"*

The human impact on the environment grows dangerously with increasing population and with developing resource- thirsty technology The quality of the environment, both natural and manmade, has unlimited influence on people's behavior and their physical and psychological well being

Modern man does not experience himself as a part of nature but as an outside force defined to dominate and conquer it. He even talks of a battle with nature, forgetting that if he won the battle, he would find himself on the losing side When man was busy with a pick and shovel changing his surroundings to fit his needs, mistakes were not too serious because they were not too large or distractive. But in today's life the picture is changed. The wide spread Varity of materials which is very harmful to the environment and for our mother Earth, so it is tremendously important to think that "**what we are doing?" and "why we are doing?"**

This is the peak time to think about some eco-friendly technologies and eco-development to avoid the destruction of environment. In building construction and housing we need design and technologies which should reduce dependence on backed earth bricks, timber, cement, solvent based paints and steel, which should minimize the consumption and use of energy. Such technologies are being called as "eco- technology" they will be alone sustainable and can harness our finite natural resources more judiciously and efficiently with minimizing of waste generation.

Meaning & concept of eco-development and sustainable development

Eco-development is defined as- "Limited rural development, designed with the participation of local people, for the purpose of reconciling genuine human needs with the specific aim of protected area management."

Definition of sustainable development-"Sustainable development is a development strategy that manages all assets, natural resources and human resources, as well as

financial and physical assets, for increasing long term wealth and well-being. Sustainable development, as a good rejects policies and practices that support current living standards by depleting the productive base, including natural resources, and that leaves future generations with poorer prospects and greater risk than our own" **(Repetto 1986,p.15)**

Looking at the present scenario it was realized that due to growing environmental degradation, rapid urbanization and development of resources thirsty technology, it is the demand of the time to introduce sustainable products for green future. Development of sustainability is important because it is the only way in which humanity can continue to enjoy the benefits of technology along with the bounty of nature, to insure the future generation inherits a greener and cleaner earth.

In the light of this study researcher wants to make people (architect, designer. Consultant and contractor) aware and to enhance the maximum use of eco-friendly material while designing interiors. The reason behind the selection of professionals as a sample for the study because they have an unique role and responsibility as the intermediaries between client and industry. It is up to the designer to give information, wake up sensitivity, ask questions and propose solution for sustainable future. Professionals can be instrumental in creating sufficient markets for environmentally safe products. They can convince clients that environmentally sensitive design will improve the occupant's quality of life, comfort and productivity

Objective of the Study

1. To develop selection criteria for eco-friendly material available in interior designing.
2. Comparison between eco-friendly practices among professionals (designers, architects, consultants and contractors) in Mumbai and Gorakhpur.
3. Development of checklist to create awareness about eco-friendly plywood and wall paints.

II. METHODS AND MATERIAL

The study was carried out in two cities namely Gorakhpur situated in Uttar Pradesh and Mumbai situated in Maharashtra. The sampling process adopted for the present study is purposive sampling technique. The sampling process adopted for the present study is purposive sampling technique. 100 respondents were taken from each city namely Mumbai (MUM) and Gorakhpur (GKP.), comprised of architects, interior designers, contractors and consultants.

Tools for Data Collection- To fulfill the objectives of the study the researcher had to use the following tools for data collection.

1. Open ended structured questionnaire
2. Market survey.

The questionnaire consisted the following categories-

A. General Demographic Data-

In this section subject's personal information- their name, age, sex, nature of job and number of years they were attached to their job were asked.

B. Professional's Opinion-

Professional's opinion regarding the eco- friendly materials, their availability in existing market and their level of awareness about eco-friendly material were also checked

Analysis of Data

- ✓ Questionnaire was analyzed on percentage basis.
- ✓ On score-range (level of awareness) basis i.e.-

For plywood score range and level of awareness was-

- ✓ 45-90 (Least aware category)
- ✓ 91-135 (Moderate aware category)
- ✓ 136-180 (Highly aware category)

For wall paint score range and level of awareness was-

- ✓ 34-68 (Least aware category)
- ✓ 69-102 (Moderate aware category)
- ✓ 103-136 (Highly aware category)

III. RESULTS AND DISCUSSION

Table 1. Distribution of respondent's city wise according to age group and sex (N=200)

Age range(in years)	Mumbai (n=100)			Gorakhpur (n=100)			Grand Total(N=200)
	Male	Female	Total	Male	Female	Total	

20-29	29	12	51	15	27	42	93(46.50 %)
30-39	18	9	27	28	2	30	57(28.50 %)
40-49	15	4	19	18	-	18	37(18.50 %)
50-59	3	-	3	8	-	8	11(5.50 %)
60-69	-	-	-	2	-	2	2(1%)

On the basis of the table it is found that as the age advances the number of respondent in this professional field declines When the age- group and sex were considered city wise it was observed that 51% of the respondents from the Mumbai belonged to the youngest age group. Whereas only 42% of the respondents from Gorakhpur took up this profession.

Table 2. Distribution of respondent's city wise according to Job Experience and sex. (N=200)

Job Experience	**Mumbai(n=100)**			**Gorakhpur (n=100)**			**Grand Total(N=200)**
	Male	**Female**	**Total**	**Male**	**Female**	**Total**	
Less than 5 years	18	13	31	8	26	34	65(32.50%)
5 years	15	7	22	7	2	9	31(5.50 %)
More than 5 years	41	6	47	55	2	57	104(52 %)

From the above table it was concluded that in both the cities majority of the respondents had job experience more than 5 years and very small number of respondents i.e. 5.50% had job experience of 5 years When the job experience and sex of the respondent were considered city wise it was observed that in both the cities number of male respondents were higher in all three category of job experience in compression to female respondents excepting 26% of female respondents had job experience of less than 5 years.

Table 3. Distribution of respondent's city wise according to Nature of Job and sex. (N=200)

Nature of job	**Mumbai (n=100)**			**Gorakhpur (n=100)**			**Grand Total(N=200)**
	Male	**Female**	**Total**	**Male**	**Female**	**Total**	
Architect	10	2	12	29	-	29	41(20.50%)
Interior designer	36	23	59	7	29	36	95(47.50%)
Consultant	9	-	9	25	-	25	34(17%)
Contractor	20	-	20	10	-	10	30(15%)

On the basis of the table number 3 it was found that, in both the cities majority of respondents were belonged to interior designer's category. It is evident that majority of the female respondents preferred to be an interior designer as compared to the other professional option.

Figure 1. Distribution of respondents according to awareness of eco-friendly plywood (N=200)

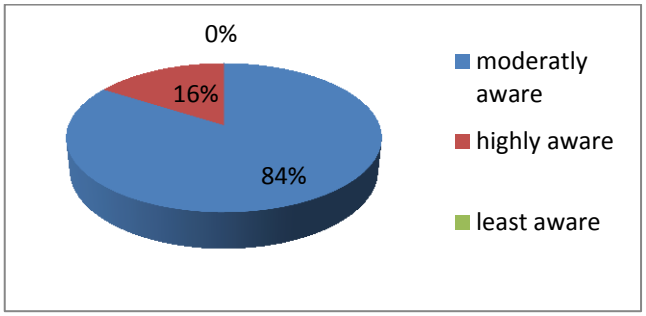

Figure 1

It is evident from the figure number 1 that in both the cities majority of the respondents i.e. 84% were **moderately aware** about eco- friendly plywood.

Only 16% of the respondents were highly aware. In both the cities no respondents were found in least aware category which is a good sign because it showed that they had at least some knowledge about eco-friendly materials.

Figure 2. Distribution of respondents according to the scores regarding level of awareness of eco-friendly wall paints. (N=200)

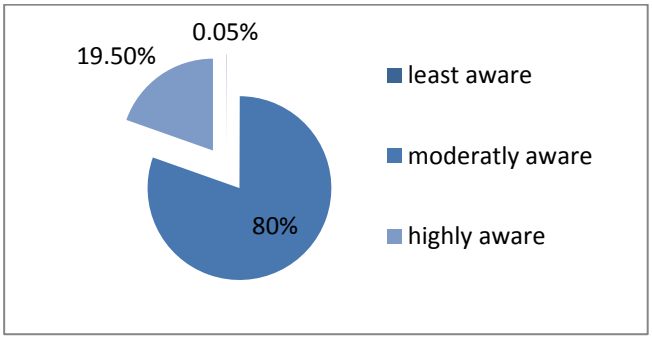

Figure 2

From the figure number 2 it was found that in reference of eco-friendly wall paint majority of the respondents **were moderately aware** and 19.50% of the respondents were highly aware.

As very small percentage of respondent (0.05%) were come in category of **least aware**.

Table 4. Distribution of respondents according to cities, awareness scores and sex of professionals regarding eco-friendly plywood. (N=200)

Score & Level Of Awareness	Mumbai (n=100)			Gorakhpur (n=100)			Grand Total (N=200)
	Male	Female	Total	Male	Female	Total	
45-90 Least Awareness	-	-	0	-	-	0	0 (0%)
91-135 Moderately Awareness	67	23	90	52	26	78	168 (84%)
136-180 Highly Awareness	8	2	10	19	3	22	32 (16%)

When the respondents were classified according to score, level of awareness and sex, in both the cities number of males were higher than the female counter part.

Table 5. Distribution of respondents according to the scores and sex regarding level of awareness of eco-friendly wall paint. (n=100)

Score & Level Of Awareness	Mumbai (n=100)			Gorakhpur (n=100)			Grand Total(N=200)
	Male	Female	Total	Male	Female	Total	
34-68 Least Awareness	-	-	0	1	-	1	1 (0.50%)
69-102 Moderately Awareness	67	19	86	52	22	74	160 (80%)
103-136 Highly Awareness	8	6	14	19	6	25	39 (19.50%)

On the basis of the table number 5, it was found that in least aware (34-68) category there were only 1% of the male respondents from Gorakhpur. From both the cities number of male respondents were high in both the category i.e. moderately aware and highly aware in comparison to female respondents

Table 6. Distribution of respondent's priority according to Eco-friendly parameters of Plywood in both the cities.

Priority	Mumbai	Gorakhpur
1	Hard wood, Eco-label	Renewable. Reusable, Eco-Label
2	Reusable	-
3	Renewable	Hard wood
4	Natural wood	Soft wood
5	Alternative of wood	Hazardous while dumping
6	-	Natural wood

7	Soft wood	Man-made material
8	-	Alternative of wood.
9	Hazardous while dumping	-

On the basis of the above table it is concluded that in both the cities professionals were liked to choose plywood having eco-label. In Gorakhpur 1st priority was given to eco-label followed by renewable and reusable parameters while in Mumbai hard wood was also choose as a 1st preference by the professionals which is not a eco-friendly practices based on review of literature because it takes a longer time to grow.

Table 7. Distribution of respondent's priority according to quality of plywood in both the cities.

Priory	Mumbai	Gorakhpur
1	Water Proof, Durability	Durability
2	Termite Proof	Water Proof
3	-	Scratch Proof
4	Unbreakable	Termite Proof
5	Scratch Proof	Unbreakable
6	Aesthetics	Aesthetics

In both the cities durability was given 1st priority, in Mumbai water proof plywood is also selected as a 1st preference because on the basis of the review of literature it is found that climate of Mumbai is moisture containing and to protect furniture from damages due to moisture it is necessary to use water proof plywood.

Table 8 : Distribution of economic parameters according to priority given by professionals in both the cities.

Priority	Mumbai	Gorakhpur
1	Brand	Brand
2	-	-
3	Prize, Durability	Prize, Durability
4	-	Quantity
5	Local, Quantity	Local

In both the cities brand was selected as a 1st priority by the professionals and locally made or unbranded paints were given least preference. On the basis of the findings it is concluded that professionals were concerned about the quality

Table 9 : Distribution of eco-friendly parameters according to priority given by professionals in both the cities.

Priority	Mumbai	Gorakhpur
1	Eco-Label	Eco-Label
2	-	Water Based
3	Water Based, Solvent Based	Solvent Based

In the both cities eco-label was given the 1st priority as selection criteria foe wall paint. From the above table it is evident that if in the market there is availability of paints with eco-label than professionals were liked to buy it for their site

IV. SUMMARY AND CONCLUSION

On the basis of findings it was concluded that as the age advances the number of respondents in this professional field declines.

- When the age-group and sex were considered city wise it was observed that in both the cities maximum number of respondents were belonged to youngest age-group i.e. 20-29years.
- When the respondents were classified according to sex in both the cities numbers of males were higher than the female respondents in this profession.
- In both the cities majority of the respondents had job experience more than 5 years.
- When job experience and sex were considered city wise it was concluded in both the cities male respondents were higher in all three categories i.e. more than 5 years, 5 years and less than 5 years.
- According to nature of job and sex in both the cities it was found that female respondents preferred to be an interior designer.
- Only 2% female architects were found in Mumbai indicating that this area is male dominated.

- None of the female professionals had taken up consultancy or been a contractor indicating that it is also a male dominated field.
- Majority of the respondents were found to have **moderate level** of awareness for eco-friendly plywood and wall paint.
- When profession and level of awareness were considered city wise in terms of eco-friendly plywood and wall paint it was concluded that although the Gorakhpur is in developing stage but professionals of Gorakhpur had better knowledge in comparison to Mumbai.

Major Findings – On the basis of the study it was concluded that in Mumbai the percentage of professionals were high in moderate aware category.

- But in highly aware category the professionals of Gorakhpur did better in comparison to their counterpart of Mumbai.
- So, on the whole it can be concluded that though the professionals of Gorakhpur had greater percentage in highly aware category but professionals of Mumbai found to be more aware about eco-friendly practices, because a bigger group having good knowledge is much better than a small group having 100% knowledge.

Recommendation

- Professionals should try to create awareness among client that environmentally sensitive design will improve the quality of life and surrounding environment
- Professionals (architects and designers) should try to convince the client to use the eco- friendly materials.
- .Increased environmental awareness also gives industry the opportunity to develop new products and improve the standard of product in the market..
- Government should encourage industry producing eco-friendly materials/ products by offering concession in the eco certification rate.
- Arrange workshop, seminar, and conference, talk, exhibitions to update the knowledge about green products, technologies and for promotion of green products..
- Designers and architects should demand for eco-friendly materials and products, if they demand more the industry will forced to conduct it

Checklist

The following checklist was developed on the basis of review of literature and findings of the study for quick reference of the professionals.

1. **Checklist developed for plywood.**

It should be-

- ✓ Renewable
- ✓ Reusable
- ✓ Water proof
- ✓ Durable
- ✓ Low in embodied energy
- ✓ Certify with an eco-label

2. **Checklist developed for wall paint**

It should be-

- ✓ Branded
- ✓ Water based
- ✓ Low in Volatile organic compound (voc) emission (free or low formaldehyde, free from lead, chromium etc.)

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