

Popularizing eco-friendly textiles in urban India

■ SURABHI MAHAJAN

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Author for correspondence:

SURABHI MAHAJAN

Department of Apparel and
Textile Science, College of Home
Science, Punjab Agricultural
University, LUDHIANA (PUNJAB)
INDIA

Email: surabhimahajanct@pau.edu

■ **ABSTRACT** : Fashion is the prevailing mode of expression. Fashions change more quickly than the culture as a whole. The present paper aims to explore the ways and means to popularize eco-friendly textiles in India and making them as a way of life. It is based on a survey of four of the leading textile manufacturing units and responses of 200 customers selected from all zones of Ludhiana city in the year 2010. The results showed that while manufacturers have the constraint of cost and acceptability by the customers, more than two-third customers lacked awareness about eco-friendly or green clothing. They also suggested that the awareness about these clothing, their ready availability and affordable cost may make them popular among the common people. It is suggested that government should organize informative programmes to make the public aware about eco-friendly/green clothing and should provide liberal subsidies to units engaged in manufacturing them.

■ **KEY WORDS**: Fashion style, Eco-friendly/green clothing, Synthetic clothing, Natural fibres,

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Textile industries all over the world are facing a challenging condition in the field of quality and productivity, due to the globalization of the world market. As any other industrial activity, the textile industry is also responsible for environmental pollution during the manufacturing of textiles from fibres to finished products. The highly competitive atmosphere and the ecological parameters are becoming more stringent, it becomes the prime concern of the textile industry to be conscious about quality and ecology. Again the guidelines for the textile processing industries by the pollution control boards create concern over the environment-friendliness of the processes. This in turn makes it essential for innovations and changes in the processes in protecting the ultimate interests of the consumers. It has been shown time and again that children are at greater risk for pesticide-related health problems than adults so far as textiles are concerned. This is the reason that the rate of people experiencing a wide barrage of health problems such as rashes, allergies, respiratory problems, and difficulties focusing mentally due to chemical sensitivities has been growing alarmingly.

Textiles include fibre, yarn, fabric and even the clothing which are also called as dress, attire or a garment. The garment is made from various kinds of materials and taking several forms used by men, women and children to cover their body. The human beings across cultures wear clothing in order to protect themselves against adverse climate conditions, for modesty and for adornment. The clothes vary across cultures and individual likes and dislikes of the wearer. Although the purposes of clothing are motivated by the environmental conditions, its form is determined by the wearer's own characteristics and especially by their beliefs and values. In today's environmental scenario, the concern for eco-friendly things is gaining impetus and in this drive eco-friendly textiles are also gaining importance.

Indian textile industry occupies a unique position in the Indian economy. Over the period, it has gone through several changes. It seems to be concerned for customers' fear of non-eco-friendly clothes and subsequent their health consequences. True, it may not be possible to totally prevent the environmental pollution during manufacturing, but attempts could be made to minimize it to the possible extent.

In fact, increasing environmental responsibilities on part of the management to comply with environment protection and pollution control legislations as well as escalating environmental compliance and remediation costs, has created a need for effective Environmental Management System (EMS). The focus of EMS is to conserve input resources and to protect the environment (Joshi, 2001).

It is no longer adequate to have a finished product to be safe only to human beings, but the product has to be environmentally safe during its entire life cycle and even beyond. Some of the tools available to control environmental pollution are legislation, waste minimization, adoption of cleaner technologies and appropriate end-of-pipe treatment (Lal, 2001). Using organic fabrics is not the only way the fashion industry is going eco-friendly and protecting the future of our natural resources. Textile industry has also become more ethical and advancing towards using fair trade and fair labour. The textile industry is slowly recognizing the need for eco-friendly wet processing that is sustainable and beneficial methods. Number of sustainable practices has been implemented by various textile processing industries such as eco-friendly bleaching; peroxide bleaching; eco-friendly dyeing and printing; low impact dyes; natural dyes; Azo free dyes; Phthalates free Printing.

Fabrics required for green fashion are readily available in India. For example, we have organically grown natural fabrics (cotton, hemp/linen, merino wool, cashmere, ahimsa silk, etc.), fabrics made from recycled synthetic fibres, including plastics (viscose and nylon, etc.), fabrics made from natural materials like soya, sea cell, bamboo, sasawashi, tencel, etc., fabrics dyed with natural dyes or non-polluting dyes, unbleached fabric, and handloom fabrics. Why the textile manufacturers and customers don't make use of them and help in the healthy growth of nation? Manufacturers do owe a social responsibility for protecting the life of customers and controlling environmental hazards. These are very important questions in the present scenario which require answer through a systematic investigation.

With the eco-fashion industry still in its infancy, the main responsibility at the moment lies with clothes manufacturers and fashion designers, who need to start using sustainable materials and processes. Fashion world is showing an enormous growth in the field of eco-friendly clothing and accessories. Many European and Asian companies are showing a due impact by adopting some of the generous ways in this context. Getting the great designers from around the world, the fashion industry is targeting on the organic clothing rather the synthetic or fibre cloths that puts a lot pressure on the nature.

The eco-friendly textiles uses best land management practices, sustainable farming practices and the production also adheres to fair trade practices besides using minimum chemicals and that too only those which are safe. These textiles are made from fibres that do not require the use of any

pesticide or chemical to grow. They are naturally resistant to mould and mildew and are disease free. They are not only eco-friendly but are also animal friendly. They also carry eco-friendly certification.

Statement of the problem :

When the customers purchase any clothing for them, they look for colour, quality and style that suit them, besides the cost and fashion prevailing at that time. The salesmen are often seen trying to convince the customers that their stock is of latest design and fabric. But, both the salesmen and the customers are unaware about the harmful chemicals used in manufacturing of clothes as well as dyes and finishing processes used in the production process for clothes and textiles. So, the thought of buying eco-friendly clothes do not click to them. Also many customers are not aware of this type of safe, more hygienic clothing as alternative available in the market. Customers do not realize that even clothes which are the major part of their lives, seven days a week and twenty four hours a day are harmful to them in long run.

The infants and old age people are highly sensitive to chemicals that are used in synthetic materials. Lack of consciousness is due to proper warning which is not attached with the clothes by the manufacturers as such things may hamper the sale of their products and ultimately their business. If customers are made aware about eco-friendly, textiles they will definitely go for these clothes. They will never like to endanger their life as well as that of their nearer and dearer. It is in this context that this study was undertaken, which humbly attempts to explore the level of awareness of eco-textiles amongst consumers and their expectations from the government as well as the textile manufacturers.

Objectives of the study :

The textile industry is one of the biggest industries in the world. Global awareness of the real price of clothing is growing and there are increasing numbers of cases of people experiencing health problems such as rashes, allergies, respiratory and concentration problems due to chemical sensitivities. Many have found organic clothing or eco-friendly textiles to be helpful in reducing exposure to the vast amount of toxic chemicals that we are unknowingly exposed to on a daily basis. This is the reason that awareness about eco-friendly textiles is assuming significance along with the fashion.

The fashion these days is changing to sustainable fashion, which means that the customers are given the information of where the clothing comes from, who makes it and what it is processed with to ensure the item is worthy of the eco-friendly message it's sporting. As there is need for encouraging eco-friendly consumption culture, that is, consumption of green products in India, it becomes imperative to study the ways and means for popularizing eco-friendly textiles in urban India first and then to rural people.

The specific objectives of this study were as follows:

- To explore the extent of awareness of customers for eco-friendly textiles in a metropolitan city of Punjab.
- To study the liking and disliking of customers for eco-friendly textiles.
- To investigate the reasons for non-popularity of eco-friendly textiles amongst customers.
- To find out the expectations of customers from textile manufacturers and the Government.

■ RESEARCH METHODS

The methodology adopted for fulfilling the above objectives was divided into two parts: *first* getting the responses of customers regarding their level of awareness and likes and dislikes about eco-friendly textiles and *second* investigating the view point of manufacturers. Accordingly attempt has been made to elicit the responses of 200 customers selected from all the four zones of Ludhiana, which is one of the leading metropolitan cities as well as industrial and cultural hub of Punjab, India.

- Ludhiana city was divided into four zones- North, South, East and West.
- 50 apparel customers were purposely selected from each zone to make a total of 200 customers.
- One textile manufacturer was randomly selected from each zone to make total of 4 manufacturers.

The customers for this study were selected through purposive sampling in September 2010 from different shops and company outlets. The age group of customers selected was up to 30 years (43%), 31 to 45 years (33%) and above 45 years (24%). More than half of the customers were females (55.5%) and remaining less than half were males (44.5%). Four leading textile manufacturers were also randomly selected for the study and their identity was not disclosed on their request.

■ RESEARCH FINDINGS AND DISCUSSION

Contrary to the rapid progress made by the textile industry in advanced countries in their efforts to minimize the ecological destruction and offering consumer natural products choices, not much has been done by the textile industry in India. While becoming eco-friendly can be a worthy endeavour for any textile industry, the efforts have not come up because of many multifold problems. The results of this study may be

summarized as follows:

Awareness about eco-friendly textiles among customers in various age groups :

Table 1 shows the percentage distribution of customers according to their age group and awareness about eco-friendly textiles:

The data presented in Table 1 show the following results:

- The proportion of customers who were not fully aware about eco-textiles (somewhat aware and not aware at all) came to more than two-third (70.0%).
- The proportion of fully aware customers decreased with the increase in their age group.
- Unlike age and awareness about eco-friendly textiles were independent of each other.

Some of the other findings related to awareness about green fashion among customers are as follows:

- One-third customers (33.0%) choose their clothes keeping in view the good quality of the fibre used; another less than one-third (31.5%) according to good fibre as well as design and remaining more than one-third (35.5%) keep in mind the appeal and fashion, *i.e.*, they prefer those clothes which are more appealing and in accordance with the fashion.
- Almost half of the customers (49.5%) are not aware about the hazards that the textile industries are posing to the environment against less than one-third (31.0%) who know a little bit about harmful dyes and chemicals used in fibres by textile manufacturers. Only one-fifth customers (19.5%) are quite aware about the dangers to environment by the textile industries.
- Only less than one-third customers (30.5%) know fully about eco-friendly fibres like organic cotton, organic silk, organic wool etc.
- Less than one-fourth customers (23.0%) are aware about the differences between eco-friendly and non-eco-friendly fibres.

Preference of customers for eco-friendly textiles in various age groups :

Table 2 shows the percentage distribution of customers according to their age groups and preferences about eco-friendly textiles:

Table 1 : Percentage distribution of customers' awareness about eco-friendly textiles according to their age group				
Age group	Fully aware	Somewhat aware	Not aware at all	Total
Up to 30 years	41.9 (36)	38.4 (33)	19.8 (17)	100.0 (86)
31 to 45 years	31.8 (21)	36.4 (24)	31.8 (21)	100.0 (66)
Above 45 years	6.3 (3)	25.0 (12)	68.8 (33)	100.0 (48)
Total	30.0 (60)	34.5 (69)	35.5 (71)	100 (200)

Actual figures are shown in parentheses
Contingency co-efficient = .391

Chi-square = 36.023*; DF = 4; Significance Level >.01

The data presented in Table 2 show the following results:

- Only a little less than one-fourth customers were ready to prefer eco-friendly textiles. Such customers belonged to all the age groups.
- More than half of the customers were ready to go for eco-friendly textiles if cost involved was not much as compared to other textiles. Here the proportion of customers showed increase with the increase in their age.
- Buying eco-friendly textiles hardly matters for remaining more than one-fifth of the customers.

Liking and disliking of customers about eco-textiles :

Distribution of customers about their likings of eco-textiles showed the following results :

- 50 per cent of the customers liked eco-textiles because they are safe for the environment.
- 40 per cent of the customers liked eco-textiles because they are safe for health of its user.
- 10 per cent of the customers liked eco-textiles because of both the above mentioned reasons.

Distribution of customers about their disliking of eco-textiles showed the following results :

- 40 per cent of the customers disliked eco-textiles because they are expensive as compared to non-eco-textiles counterparts.
- 20 per cent of the customers disliked eco-textiles because they are not easily available at different outlets.
- 30 per cent of the customers disliked eco-textiles because the information on their labels was not given properly regarding their care.
- 10 per cent of the customers disliked eco-textiles because they do not get discounts or sale offers on them.

Reasons for non-popularity of eco-friendly textiles among customers :

Reasons stated by customers for non-popularity of eco-friendly textiles were as follows :

- 65 per cent of the customers felt that there was lack of education and awareness among them.
- 25 per cent of the customers felt that there was

inadequate advertisement of the green and eco-friendly textiles.

- 10 per cent of the customers felt that there was lack of information at the retailer level as to whether the product was eco-friendly or not.

Reasons of textile manufacturers for not following eco-friendly processes at production and finishing stages :

Reasons given by textile manufacturers for not following eco-friendly processes at production and finishing stages were as follows :

- 50 per cent of the manufacturers felt that there was lack of demand for eco-friendly textiles.
- 30 per cent of the manufacturers felt that there was lack of knowledge about eco-friendly production and finishing of products.
- 20 per cent of the manufacturers felt that there was high cost involved in changing their own set up for undertaking new procedure for eco-friendly production of products.

Expectations of the customers from the textile manufacturers:

Expectations of the customers from the textile manufacturers are stated as below :

- A proper label should be given with garments as to which fibre, dye and process has been used to manufacture them.
- The manufacturers should give some discount offers on eco-friendly textiles to make them more popular.
- Proper wash care and ironing instructions should be mentioned so that the eco-friendly textiles last longer.

Expectations of the customers from the Government :

Expectations of the customers from the Government are as follows :

- The farmers should be encouraged to grow organic crops so that no pesticides are involved in the production.
- Organization of informative programs to make public aware about need for eco-friendly textiles.
- Convince textile industry to adopt production and disposal ecology for their products.

Table 2 : Percentage distribution of customers preferences about eco-friendly textiles according to their age group				
Age group	Will buy only eco-friendly textiles	Eco-friendly if they are not expensive	Hardly matters if textiles are eco-friendly or not	Total
Up to 30 years	23.3 (20)	51.2 (44)	25.6 (22)	100.0 (86)
31-45 years	28.8 (19)	54.5 (36)	16.7 (11)	100.0 (66)
Above 45 years	16.7 (8)	60.4 (29)	22.9 (11)	100.0 (48)
Total	23.5 (47)	54.5 (109)	22.0 (44)	100.0 (200)

Actual figures are shown in parentheses
Contingency co-efficient = .133

Chi-square = 3.598*; DF = 4; Significance Level <.05

- Provide liberal subsidies to units engaged in manufacturing eco-friendly textiles.
- Adopt stringent measure to control the use of harmful chemicals and dyes in textile industry.
- Organize training sessions for industrial workforce to help them in adopting eco-friendly measures.

Other findings of the study show that the educational level of the customers, financial position of their family and marital status do play an important role in motivating them to pay more for green fashion as is evident from the Chi-square values ($\chi^2 = 19.245$, DF = 6, Significance Level $>.01$; $\chi^2 = 17.008$, DF = 4, Significance Level $>.01$; $\chi^2 = 28.896$, DF = 4, Significance Level $>.01$, respectively). For example, only one-fourth customers (26.7%) who have education up to matriculation are ready to pay more for green fashion as against nearly three-fourth (73.3%) who are graduates or even more educated. Similarly, only one-eighth customers having monthly income up to Rs. 30,000 (12.0%) are ready to pay more for green fashion as compared to one-third in the income bracket of Rs. 30,001 to 50,000 (33.3%) and more than half having income of more than Rs. 50,000 (54.7%). Less proportion of widows/widowers (6.7%) and unmarried customers (36.0%) are ready to pay more for green fashion as compared to those who are married (57.3%). However, the sex of the customers is independent of their stated position to spend more on green fashion ($\chi^2 = 3.864$, DF = 2, Significance Level $<.05$) though the proportion of male customers (53.3%) is bit higher than that of female counterparts (46.7%).

Conclusion :

The results of this study revealed that the customers can be motivated to go green and buy eco-friendly textiles by increasing their level of awareness about the merits of eco-friendly clothes on one hand and environmental hazards of non-eco-products on the other. The increase in demand of eco-textiles in metropolitan cities/urban India will encourage the textile manufacturers to produce them. There is a need to develop environmentally responsible or green marketing in India and intensively campaign for it. Audio-visual media of mass communication like television and print media should be used for advertising green fashion. The stringent action on part of government for non usage of banned dyes and other such products in the Industry will add on in the production of eco-friendly textiles. In order to make the textiles totally environment friendly, not only the final product to be used by the customer should be eco-friendly but the production technology, user technology and disposal ecology must be taken into consideration. Information campaigns both for customers as well as textile manufacturers will surely contribute a lot in making this earth clean and green.

Farmers should be encouraged to grow organic cotton and other eco-friendly fibres. As the growth process of the

harvested fibres does not involve chemicals, harvesting such fibres will reduce the cost. Government should purchase these fibres for onward supply to textile industry and give incentive to textile industry for giving due cast of these fibres to the farmers. Checks should also be made on synthetic fabrics, such as polyesters, nylons, and acrylics which have adversely affect human body and help in degrading the environment. Fibres derived from various animals such as rabbit, sheep, llama, goats, etc. is also used for green fashion and such animals also need legal protection for availability of fibre in large quantity. Farmers should also be encouraged for helping in such fibres.

There is also the urgent need for eco-label is a market-based mechanism designed to provide information about product externalities to consumers and give a market incentive to producers to make environmentally and socially beneficial products. In a number of countries, it has been effectively used as a product information policy tool to tackle unsustainable consumption and production patterns. Realizing its importance, India too launched its own national eco-labelling scheme in the year 1991. Properly designed and implemented eco-labelling schemes encourage and expand trade volume and stimulate domestic development in line with local and national environmental net gains. Hence, it should be made mandatory to have eco-label on all the textile products in the market.

In order to make the textiles totally environment friendly, not only the final product to be used by the consumer should be eco-friendly, but the production technology, packaging and disposal after use should also be eco-friendly. Therefore, the production ecology, user ecology and disposal ecology must be taken into consideration. Government should discharge its duty in convincing textile industry to consider all these factors and if the industry does not fall in line, stringent legal measures should be adopted to have control on the industry in the larger interest of the people and the environment.

In the light of empirical evidence, it is suggested that government should organize informative programs to make the public aware about need for green clothing, processes and dyes used in other clothes that adversely affect the nature, their processing with heavy chemical agents which are not only harmful and have enduring effects on environment but also on the health of people. In the larger interest of a nation and its people, government should provide liberal subsidies to units engaged in manufacturing green clothes and should adopt stringent measure to control the use of harmful chemicals and dyes in textile industry.

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