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### RESEARCH ARTICLE

#### ECO DENIM VARIANTS OF KHADI: UNLEASHING SUSTAINABLE ALTERNATIVE REVENUE STREAMS FOR COTTON GROWERS IN GUJARAT

Bharat Jain<sup>1</sup> and Dr. Dolly Mogra<sup>2</sup>

1. Research Scholar, Pacific University, Udaipur.
2. Assistant Professor & (incharge), Department of Readymade Garments, University College Of Social Sciences And Humanities, MohanlalSukhadia University, Udaipur, Rajasthan.

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#### Abstract

Cotton accounts for almost 40% of global textile production and the industry supports an estimated 250 million livelihoods. Statistical data shows that only 12% of the world's cotton is currently classed as sustainable. Consumer and brand demand for Eco/Green clothing is growing, but this must be matched in production volumes. There is hardly any research to understand the importance and role of eco denims variants and its contribution towards making casual wear as a choice of fashion for youth & in a way empowering the people specially farmers at the grassroots level of supply chain that are involved in the manufacturing of eco clothing.

Looking to the remarkable importance of the subject present research work was planned with two objectives.

- (1) To identify the awareness level for eco-denim among consumers.
- (2) To assess the knowledge of eco-denim production technique among cotton growing farmers.

50 cotton growing farmers and 50 consumers were included for data collection. Information was collected through personal interview schedule.

**It was concluded that:** Sizeable consumers (Apprx.75%) are aware that organic / eco denims are fabrics that can be made from natural fibers like cotton, Jute, Hemp, Linen etc., and its processing is hazardous chemical free.

Sizeable consumers (Apprx.60%) are open to shift to sustainable options e.g. Khadi denim (Hand Spun & Hand Woven) in future depending upon it's nearby & easy availability & it's comparative costs vis-à-vis non eco products. Over 80% of farmers interviewed are interested in learning about technologies of cotton farming for eco denim production. Eco Denims are unleashing options and solutions for a growing number of cotton farmers by providing skill upgradation training, access to information and links to market partners, These are the small steps that will lead to not only sustainable, but regenerative agriculture that will support thriving and resilient communities & contributing towards making Eco/Green clothing as a choice of fashion.

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**Corresponding Author:- Bharat Jain**

Address:- Research Scholar, Pacific University, Udaipur.

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**Introduction:-**

Organic agriculture protects the health of people and the planet by reducing overall exposure to toxic chemicals from synthetic pesticides that can end up in the ground, air, water and food supply, and that are associated with health consequences, from asthma to cancer. (Overall & Impact, 2018)

Cotton is the most important fiber crop not only of India but of the entire world. Cotton is mostly grown in monoculture and is a very pesticide-intensive crop. Although it is only grown on 2.5% of the world's agricultural land, it consumes 16% of all the insecticides and 6,8% of all herbicides used worldwide. Organic cotton production offers a strong alternative to current conventional production methods. (Platform, 2018)

According to a recent joint FAO, UNEP and WHO publication, between 26 million (1%) and 77 million (3%) of agricultural workers worldwide suffer from acute pesticide poisonings, with at least 1 million requiring hospitalization each year. Acute poisoning effects can include cramping in the lower limbs that leads to lack of coordination and paralysis, and very high doses of toxic pesticides may result in unconsciousness, convulsion and death. (Organic & Congress, 2008)

Problems with GM cotton and conventional processing – Cotton is a toxic crop. While occupying just 2.5 percent of agricultural land area, it uses 7 percent of agricultural land area, it uses 7 percent of the total amount of pesticides used in farming globally each year and 16 percent of all insecticides. More than 90 percent cotton growing in India is Genetically Modified (GM) or Bt cotton. Farmers are gambling their livelihoods and getting into debt in the hope of higher returns using GM cotton. (Global et al., 2018)

Furthermore, there are many environmental, and health issues associated with processing (spinning, dyeing, printing, fading, finishing etc.) of denim e.g. excessive water consumption, discharged waste-water from dye house containing colour, health risks associated with sand blasting, environment hazards of chemicals used in colour fading e.g. potassium permanganate etc.

Brands, NGOs, consumers and government across the globe have been looking at more sustainable and eco-friendly options in textiles and chemical industry. There is a growing demand for eco-fashion across the globe, including India.

**Purpose of writing the paper:**

There is hardly any research to understand the awareness level for eco-denim among consumers & the knowledge of eco-denim production technique among cotton growing farmers for contributing towards making Eco/Green clothing as a choice of fashion.

The answers should also help us to highlight Eco Denim variants of Khadi, Unleashing sustainable alternative revenue streams for cotton growers in Gujarat.

**Backgrounder:****DENIM...The Enigma:**

Denim has been in American usage since the late 18th century. Denim, word comes from name of a sturdy fabric called serge, originally made in Nimes, France, by the Andre family. Originally called serge de Nimes, the name was soon shortened to denim. Denim was traditionally coloured blue with indigo dye to make blue "jeans," though "jeans" then denoted a different, lighter cotton textile; the contemporary use of jean comes from the French word for Genoa, Italy (Genes), where the first denim trousers were made.

The first modern blue jeans are actually not modern at all and have been around for over 140 years. The typical American blue jeans were first invented by Jacob Davis and Levi Strauss, as far back as the year 1873. These two gifted immigrants had the foresight to see what could be made out of a simple piece of denim, thread, and a piece of metal. When they made the world's first pair of blue jeans, however, they meant it to be used for people working in mines. Therefore, they called them 'waist overalls'. Meant to be used by workers, it was supposed to be a sturdy and at the same time practical and comfortable dress.

Denim is the coolest part of Indian garment industry and it's a big business as well. The market size of Indian Denim Wear was estimated to be Rs. 20,205 crore in 2016. The market is now projected to grow at a CAGR of 14.5 per cent and reach Rs. 39,651 crore by 2021, and Rs 77,999 crore market by 2026. The men's denim segment comprises 84 per cent of the market while the women's denim segment and kids' denim segment comprise 10 per cent and 6 per cent respectively (Gugnani, Fashion, Nigar, & Fashion, 2018).

**Khadi:**

Launching it as a weapon of political protest to promote swadeshi, Mahatma Gandhi embedded khadi firmly in the national psyche. He set up the first khadi production centre at Kathiawad, Gujarat, in 1921. A quarter of a century later, the Khadi and Village Industries Commission as we know it today came into being a year after the Khadi and Village Industries Commission Act was passed in 1956. A statutory body under the micro, small and medium enterprises ministry, it seeks to "plan, promote, facilitate, organize and assist in the establishment and development of khadi and village industries in the rural areas in coordination with other agencies engaged in rural development wherever necessary". Being labour-intensive, the growth of khadi and village industries is significant in a labour surplus country like India. "Production of Khadi recorded Rs 1065.6 crore in 2015-16 and khadi activity provided employment to 11.07 lakh persons," says Vinai Kumar Saxena, chairman, KVIC. ("National fabric: Once a swadeshi weapon, Khadi is now a growing industry in India", 2018)

**Association with denim:**

Khadi and Denim: two fabrics of distinct origins, histories are now woven together in an exploratory but potentially significant idea. One of the most exciting textile developments, this pairing is making inroads into the billion-dollar denim market.

Sturdy denim, once representing the tenacity of America's working class is meeting India's poetic khadi, developed as a fabric for the common man and signifying hope to a newly independent India. Denim however, has managed to progress from its utilitarian origins into a uniform for the chic and modern, appropriated equally by niche luxury brands while firmly belonging to the streets. On the contrary, khadi's popularity has wavered, with a younger generation yet to forge a strong connection, often still considered the conventional cloth of oldies.

Both are woven cotton, yet denim is highly technical and mechanized, whereas khadi relies on the dexterity of a hand that spins on an antiquated loom. India's denim production is expected to grow like anything, yet there is nothing Indian about it: the technology is imported and designs are from Italian and American makers. Khadi, on the other hand, is India's legacy and signature – naturally washed, chemically unprocessed, hand-spun & hand woven in much lower quantities – only 91 million square meters per annum in 2012-13. (Suniti, 2018)

Khadi is not merely a piece of cloth. It is a symbol of empowerment, of pride, of history. Hand spun, hand woven, purity and elegance are the attributes of Khadi. As a fabric, it has truly evolved and come a long way from its traditional form "Khaddar" to very fine and comfort "Khadi". Khadi is also symbolic of Indian self-esteem, self-efficacy and self-reliance. It stands for uniformity and simplicity. Khadi denim is an initiative to revolutionize traditional Khadi wear into a fashion fabric that appeals to the youth and competes in line with popular brands in terms of quality and cost effectiveness. By buying Khadi Denim the user not only enjoys the attributes of Khadi as a fashion fabric but also contributes to the society in terms of providing sustainable employment opportunity to millions of poor spinners, weavers and other artisans associated in crafting the fabric. (Business, 2017)

**Shifting Paradigms:**

Arvind Limited, India's largest denim manufacturer, is a key player in bringing khadi-denim to market, having spent the last four years in R&D understanding the commercial, social and marketing angle that fits in with an of-the-moment East-meets-West narrative. Sharp branding of the three could propel the birth of a new textile, with a long life ahead of it.

The idea for this hybrid fabric first floated in the mid-Nineties, when a Rajkot-based organization Saurashtra RachnatmakSamiti (SRS) began experimenting with samples. The resources involved in creating a commercial product are, however, an entirely separate proposition, and Arvind contacted SRS to pool resources for a larger scale operation.

For the first time, an initiative to penetrate into several national service sectors like Airlines, Navy, Railways, Postal Department were made. These translated into orders from Air India, CBI, Department of Posts and Indian Railways. Most importantly, these orders were secured through competitive tendering and quality check, thus upholding the value for price nature of Khadi and village industries products. Also, The Khadi village & industries commission (KVIC) is reaching out to corporate entities, hence increasing the visibility and competitiveness of Khadi in the public domain. JK Cement group, a leading corporate house, also agreed to use Khadi dress material for uniforms in all their schools, colleges and factories. This has fetched an order of 6200 meters of dress material and 1000 safety shoes in April 2016. All these orders are resulting in the generation of man-days of additional work (Malhotra Sarika, 2018)

The Khadi village & industries commission (KVIC) is eyeing to reach Rs. 3,000 crore turnover in financial year 2017-18 which stood around Rs 2,005 crore in 2016-17. The KVIC will be targeting Rs 5,000 crore turnovers by the end of 2020.

Khadi village & industries commission, (KVIC) has been in recent years pushing khadi in the branded space. In May this year, it partnered with Aditya Birla Fashion and Retail Ltd to launch a new line of khadi products under the Peter England brand. The same month, Raymond announced the launch of its khadi label—Khadi by Raymond. The company will be sourcing around 400,000 meters of khadi from khadi institutions. It has also signed an MoU with NIFT for better design development and training at different khadi institutions.

Denim maker Arvind Ltd. is the latest to be certified by khadi body to make products with a 'Khadi mark'. The company also showcased its khadi denim collection while announcing its deal with KVIC. ("Khadi goes designer as KVIC signs deals with apparel firms," 2017)

#### **Innovations at international front:**

Haikure, a jeans brand focused on transparency & sustainability, each item carries a QR code through which every step in the production process can be tracked.

H&M, the Swedish multinational fast fashion retailer, has unveiled a sustainable unisex denim collection called Denim United and breaking down traditional gender barriers.

The collection blurred the borders between men's and women's fashion by pulling inspiration for fabrics and silhouettes from both. Denim United features oversized cuts and casual mix-and-match pieces including work wear jackets, overalls and slouchy shorts. The garments in the collection are made with sustainable materials such as organic and recycled cotton.

Lindex, a European fashion chain, has launched its new 'Even Better Denim' styles in their women's and kids' assortments containing sustainable cotton and post-consumer recycled cotton sourced in the supply chain, representing a step forward in their journey towards even more sustainable denim and closing the loop. The new styles will be available in all Lindex stores and at online Lindex platform.

It may be mentioned that 100 per cent of Lindex denim assortment is made from more sustainable cotton and with more sustainable processes that require up to 45 per cent less water and 27 per cent less energy.

With approximately 480 stores in 17 markets, Lindex assortment includes several different concepts within women's wear, kids' wear, lingerie and cosmetics.

Manuj Kanchan, GM – South Asia, Jeanologia maintains that fashion is a 360° process where ideas such as lead time, price, design, quality, compliance, and sustainability are treated with equal importance. The only way a step ahead can be taken is with technology that can convert dirty processes to clean processes, thus saving on time, energy, and manpower.

Moving a step forward towards responsible fashion, Guess, an American upscale clothing brand and retailer, had come up with its first ever sustainable denim line for the Spring/Summer 2016 season.

The brand has covered all aspects – from manufacturing techniques and fabric choices to materials for embellishments – for this very first assortment, with each stage of the production process especially tailored to reduce the environmental impact.

Apparel brands like H&M, G-Star and Pharrell Williams already have sustainable denim line. Guess, in its own collection, has used organic cotton, with details and embellishments ensuring less harm to the environment... For example, leather labels are certified by Oeko-Tex, while buttons and rivets are finished with a “Low Impact Finish Ensemble” (LIFE) treatment.

### **Literature review:-**

Arrigo, E. (2013) is of opinion that, The main output of corporate responsibility management is solid stakeholder relationships resulting in: employee attraction and motivation, powerful brand, enhanced consumer perceptions, profitability. Through the corporate responsibility management process, fast fashion companies can obtain a sustainable development. The corporate responsibility management process reconciles the need to create revenue and efficiency with the building of many critical partnerships. It makes it possible to improve the social and environmental conditions of the different markets where the global firm operates and it enables to reach a sustainable development.

Misra, S., Nagabhusana, R., & Nanda, S. (2012) says India being one of the most promising emerging economies has strong and growing base of young, adventurous, and affluent population. Having understood the local preferences and demand for local flavor, the existing global brands are continuously launching India inspired products. The exploratory study was done to gain more clarity about the apparel retailing industry and its potential. Descriptive study was conducted using questionnaire to know the customer sensitivity towards eco-friendly apparel brands and preferences towards global apparel brands in India. The growing sensitivity in favor of eco-friendly products in both luxury and economy segments is evident in apparel sector as well. Wide range of products and assortment of global apparel brands should be made available to the customers using multi brand outlets, shopping malls, and exclusive brand outlets. The customer profile in growing economy like India has undergone drastic changes. Customers belonging to premium and economy segment are becoming more brand and environment conscious.

### **Objective:-**

1. To identify the awareness level for eco-denim among consumers
2. To assess the knowledge of eco-denim production technique among cotton growing farmers.

### **Methodology:-**

The study includes a consumer survey (50 consumers) through structured questionnaire understand the consumer's perspective for data collection & personal interview schedule (50 cotton growing farmers ) to collect relevant information.

The paper is mainly exploratory in nature and therefore quantitative research methods have been adopted where results have been quantified for a population on the basis of a data collected from a sample.

**The paper is a combination of secondary and primary research implemented in a three stage process.**

#### **The 1<sup>st</sup> stage:**

##### **Secondary research:**

The study called for an exhaustive study of the different aspects of cotton production, Khadi & its new eco denim variants & related linkages, Keeping this into consideration a comprehensive literature survey was conducted through detailed study of relevant published research reports and books and journals on cotton production, Khadi & its new eco denim variants.

Consumer's awareness levels towards Eco Denims, Khadi in general and the products made and marketed by (KVIC) Khadi and Village Industries Commission, a statutory body formed by the Government of India, has also been studied. Through the secondary research it was intended to get a clear understanding of the term Eco denims & their producer & consumer awareness levels.

**2<sup>nd</sup> stage:****Questionnaire survey:**

A structured questionnaire was prepared for respondents (Consumers) ,The sampling technique used was non-probability convenience sampling. The aim was to get a first-hand idea about their socio economic and demographics details, psychographic details, and their awareness level for eco-denims. Structured non disguised questionnaire method was used for this purpose.

**Observations:-****Table 1:-** Consumers response. N=50

S. No.	Source/Aspect	Category	Frequency	Percentage
1	Respondents Educational Qualifications	10+2	5	10
		Graduation	10	20
		Master's	30	60
		Other	5	10
2	Respondents domain of Educational Qualifications	Humanities	4	8
		Engineering	4	8
		Commerce	1	2
		Design	30	60
		Management	6	12
		Other's	5	10
3	Time Period , Awareness of denim products	From School Time	40	80
		From College time	8	16
		From my first job	1	2
		Can't remember	1	2
4	Have heard of ecofriendly denim & variants	Yes	43	86
		No	7	14
5	Harmful impact of mill made denim can be reduced by	By creating awareness among people	24	48
		By reducing the consumption of denim	2	4
		By creating options for sustainable manufacturing of denim	24	48
6	Awareness among respondents that organic/eco denims are fabric that can be made from natural fibers e.g. Cotton, Jute , linen, Hemp etc.	Yes	38	76
		No	12	24
7	Are you aware, Eco denim is produced organically?	Yes	34	68
		No	16	32
8	Buying behaviour about Apparel Home furnishings which are made from eco denim materials	Yes	8	16
		No	20	40
		I intend to but it is not available nearby	12	24
		I intend to buy but it is expensive than non eco denim products	10	20
9	Readiness to shift to sustainable denim	yes	30	60
		No	1	2
		Maybe	18	36
		Other's	1	2

**Table 2:-** Respondents were ask to rank suitable options for choosing denim from the following criteria.

Criteria	Topmost	Very	important	Not	Least	Total	Mean	Standard
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		Important		important				Deviation
<b>Affordable</b>	39.60%	30.20%	20.80%	3.80%	5.70%	100.00%	4.1	0.91
<b>Comfortable</b>	37.70%	26.40%	28.30%	3.80%	3.80%	100.00%	3.9	1.22
<b>Breathable</b>	24.50%	11.30%	41.50%	13.20%	9.40%	100.00%	3.5	1.51
<b>Washable</b>	22.60%	34.00%	30.20%	7.50%	5.70%	100.00%	3.7	0.91
<b>Skin Friendly</b>	20.80%	26.40%	35.80%	9.40%	7.50%	100.00%	3.7	0.92
<b>Light Weight</b>	15.10%	22.60%	13.20%	32.10%	17.00%	100.00%	2.9	1.36
<b>Longevity</b>	20.80%	50.90%	22.60%	1.90%	3.80%	100.00%	3.8	0.91
<b>Organic</b>	5.70%	7.50%	30.20%	30.20%	26.40%	100.00%	2.7	1.13
<b>Mean percentage</b>	23.30%	26.20%	27.80%	12.70%	9.90%	100.00%	28.2	8.87

**The questionnaire survey administered on the consumers revealed some very interesting facts:**

Ref. Table no. 1 Sr. 1, 70 % of respondents are masters & above in terms of their education level

When the respondents were asked about time period, Since how long they are aware of Denim products? 80 % of the respondents are aware of same since their school time, ref. table no. 1 Sr. no.3

Table No.1, Sr. 2 depicts a clear picture of respondents domain of educational qualifications , 72 % of respondents are from Design & management domain across genders , only 16 % of respondents are from engineering & humanities respectively.

When the respondents were asked about shifting to sustainable denim e.g.khadi denim (Hand Spun & Hand Woven) in future? , 60% of the respondents were interested in same,36 % of Respondents were still undecided, It can be concluded that people are open to shift to sustainable options depending upon availability, ref. Table no.1, Sr. no.9.

It is evident from above mentioned Table no.1,Sr.no. that almost 86% of respondents have heard of Eco Friendly Denim & Variants, ref. Table no.1, Sr. no.4.

48% respondents are of option that harmful effects of denim can be reduced by creating options for sustainable manufacturing of denim & by creating awareness among people, ref. Table no.1, Sr. no.5.

It is evident from above mentioned Table no. 1 sr. no. 6that almost 76% of the respondents are aware that organic / eco denims are fabrics that can be made from natural fibers like cotton, Jute, Hemp, Linen etc., and its processing is hazardous chemical free.

It is evident from above mentioned Table no. 1& sr. no. that 40% of respondents have not bought Apparel/Home Furnishings which are made from eco denim materials , about 24% of respondents almost intend to buy eco denim materials but have availability issues, ref. Table no.1, Sr. no.5.

It is evident from above mentioned Table no. 1 & sr. no. 7that almost 68% respondents know Eco Denim is produced organically.

86 % of the consumers were aware & had heard of eco denim availability for casual wear, ref. Table no.1, Sr. no.4.

Respondents were ask to rank suitable options for choosing denim from the criteria's available in table no. 2 .depicting various criteria's namely Affordable, Comfortable, Breathable, Washable, Skin Friendly ,Light Weight, Longevity ,Organic.

Affordability (Mean4.1), comfortability(Mean3.9) , longevity(Mean3.8) seems to emerge as top most criteria's , Being organic was least rated (Mean 2.7).

**3<sup>rd</sup> stage:****Personal one to one interview schedule:**

In order to understand & to get a first-hand idea about cotton growing farmers socio economic and demographics details , psychographic details, and their knowledge of producing organic cotton for eco-denims & related techniques , a personal one to one interview schedule was planned for interviewees in the outskirts of Gandhinagar city e.g. Pethapur , Mahudi& nearby villages, same were randomly selected based on contacts , The schedule was conducted in multiple visits to the region and took about 1 months' time. The study has given a lot of insight into their understanding levels and conclusions have been derived accordingly.

**Observation:****Table 3:- Farmers Response N=50.**

S. No.	Source/Aspect	Category	Frequency	Percentage
1	Awareness of cotton yield position of India	Yes	30	60
		No	20	40
2	Awareness of cotton yield position of Gujrat	Yes	35	70
		No	15	30
3	Awareness about pesticide hazards on health of cotton growers	Yes	32	64
		No	18	36
4	Awareness about controlled use of pesticides in their fields	Yes	15	30
		No	35	70
5	Ever heard about organic farming	Yes	28	56
		No	22	44
6	Taken training of producing organic cotton	Yes	10	20
		No	40	80
7	Interested to receive training on production of organic cotton for eco denim	Yes	40	80
		No	10	20
8	Would like to keep track of new farming experiments in cotton growing as per changing market trends	Yes	42	84
		No	8	16

**The questionnaire survey administered on the farmers revealed some very interesting facts:**

Ref. Table no. 3 Sr. 1, 60 % of respondents are aware of cotton yield position of India.

When the respondents were asked about cotton yield position of Gujarat ? 70 % of the respondents are aware of same, ref. table no. 3 Sr. no.2.

Table No.3, Sr. 3 depicts a clear picture of respondents understanding of pesticides hazards .64% of respondents are aware of same.

Table No.3, Sr. 4, When the respondents were asked about controlled use of pesticides in the field? , only 30% of the respondents are aware of same.

56% respondents have heard of organic farming, ref. Table no.3, Sr. no.5.

It is evident from above mentioned Table no. 3 sr. no. 6 that only 20% of respondents have previously taken training of producing organic cotton.

Sizeable number (80%) are interested in receiving training of organic farming provided they receive training on skill enhancement and explorations for new farming experiments e.g. cotton farming for eco denim production as per changing market trends, ref. Table no. 3 sr. no. 7,8. They think that such interventions are necessary and beneficial.



**Conclusion:-****It was concluded that:**

Sizeable consumers (Apprx.76%) are aware that organic / eco denims are fabrics that can be made from natural fibers like cotton, Jute, Hemp, Linen etc., and its processing is hazardous chemical free.

Sizeable consumers (60%) are open to shift to sustainable options e.g. Khadi denim (Hand Spun & Hand Woven) in future depending upon it's nearby & easy availability & it's comparative costs vis-à-vis non eco products.

80% of farmers interviewed are interested in learning about cotton farming techniques for eco denim production.

Eco Denims are unleashing options and solutions for a growing number of cotton farmers by providing skill upgradation training, access to information and links to market partners, these are the small steps that will lead to not only sustainable, but regenerative agriculture that will support thriving and resilient communities & contributing towards making Eco/Green clothing as a choice of fashion.

The Indian denim wear market is expected to witness huge growth in the coming years. With the country's ever-expanding economy, booming consumption, urbanization, and growing middle class purchasing power; denim wear has a huge opportunity to grow. The increasing shift of the rural fashion market from ethnic wear to western wear is one of the key growth drivers of denim industry. The large youth population with rising disposable income and awareness towards fashion will act as a catalyst in the growth of denim wear in the country.

**Suggestions:-****And scope of future study:**

The results of this research make it clear that eco denims can play a significant role in empowering the cotton growers in Gujarat and therefore unleashing sustainable alternative revenue streams for them along with popularizing it in collaboration with apparel brands with retail presence

The results of this research has long term implication as both consumers and apparel brand owners will understand the relevance and importance of getting associated with eco denims & thereby creating enhanced opportunities for people at the grassroots level. Further research can be done in other parts of the country and the globe covering other eco initiatives.

**Magazine & website Reference:**

1. Gugnani, A. (2012, January). Experts Speak. images ,business of fashion, 96.
2. Team AV. (2012, May). Denim ..the timeless Fabric. Apparel Views, 54-55.
3. Fashion Forward Trends April 16-30,2013. (n.d.). Apparel online India, 28.
4. Gugnani ,Technopak, A., &Brahma,Technopak, K. P. (2014, January). Casual wear Market in India. Images business of Fashion , 2014, 78-86.
5. Team AO. (2014, April 16). Global denim Fabric Manufacturing concentrated in india. Apparel Online, 17(2), 16-22.
6. Team AV. (2014, April). Indian denim industry promising future ahead. Apparel Views,13(4), 50-51.
7. [http://apparelresources.com/wpcontent/uploads/woocommerce\\_uploads/2016/11/aov\\_june\\_2016.pdf](http://apparelresources.com/wpcontent/uploads/woocommerce_uploads/2016/11/aov_june_2016.pdf)
8. <https://apparelresources.com/business-news/sustainability/pharell-williams-and-g-star-team-up-for-ecological-denim-line/>
9. National fabric: Once a swadeshi weapon, Khadi is now a growing industry in India. (2018). India Today. Retrieved 19 March 2018, from <https://www.indiatoday.in/magazine/cover-story/story/20170821-khadi-gram-udyog-mahatma-gandhi-kvic-swadeshi-1028898-2017-08-11>
10. (2018). Apparelresources.com. Retrieved 19 March 2018, from [http://apparelresources.com/wpcontent/uploads/woocommerce\\_uploads/2016/08/apparel-online-india-august-16-31-2016-.pdf](http://apparelresources.com/wpcontent/uploads/woocommerce_uploads/2016/08/apparel-online-india-august-16-31-2016-.pdf)
11. (2018).Bestdialogue.antenna.nl. Retrieved 26 March 2018, from <http://bestdialogue.antenna.nl/jspui/bitstream/20.500.12018/2936/1/Social%20and%20environmental%20>
12. Jeremias, S. (2018). Definition of Denim. Lookingforwardmaternity.com. Retrieved 26 March 2018, from <http://www.lookingforwardmaternity.com/Pages/Denimhttp://www.levistrauss.com/our-story/>

13. Our Story - Levi Strauss. (2018). Levi Strauss. Retrieved 26 March 2018, from <http://www.levistrauss.com/our-story/>

**Bibliography:-**

1. Elisa Arrigo, (2013) "Corporate responsibility management in fast fashion companies: the Gap Inc. case", *Journal of Fashion Marketing and Management: An International Journal*, Vol. 17 Issue: 2, pp.175-189, <https://doi.org/10.1108/JFMM-10-2011-0074>
2. Misra, S., Nagabhusana, R., & Nanda, S. (2012). Customer sensitivity towards eco-friendly apparel brands and preferences towards global apparel brands in india. *Asia Pacific Journal of Management & Entrepreneurship Research*, 1(3), 25-42. Retrieved from <https://search.proquest.com/docview/1317617005?accountid=38977>
3. Business, F. (2017). KHADI DENIM: THE INDOFABRIC OF THE YOUTH, (70). Retrieved from [http://shop.indiaretailing.com/wpcontent/uploads/2017/07/Contents\\_BoF\\_July\\_2017.pdf](http://shop.indiaretailing.com/wpcontent/uploads/2017/07/Contents_BoF_July_2017.pdf).
4. Global, T., Textile, O., Cotton, O., Report, M., Exchange, T., Federation, I., ... Agriculture, O. (2018). The critical role of organic textiles in the fashion market of the future, 1–6.
5. Gugnani, A., Fashion, S. V. P.-, Nigar, S., & Fashion, A. C.-. (2018). The Indian denim wear market from 2017 to. Retrieved from <http://www.indiaretailing.com/2017/09/11/fashion/indian-denim-wear-market-2017-2027/>
6. Khadi goes designer as KVIC signs deals with apparel firms. (2017). *Apparel Resources*. Retrieved from <https://us.apparelresources.com/supplier-news/textile-supplier/khadi-goes-designer-kvic-signs-deals-apparel-firms/>
7. Malhotra Sarika. (2018). Khadi sales went up by 34 % in FY16 due to PM Modi efforts '.
8. Organic, I., & Congress, W. (2008). Social and environmental impacts of pesticide use in cotton production.
9. Overall, C. S., & Impact, E. (2018). Cotton and the Environment Why is organic cotton production.
10. Platform, C. (2018). The risks of cotton farming E-Discussions Current discussion. Retrieved from <https://organiccotton.org/oc/Cotton-general/Impact-of-cotton/Risk-of-cotton-farming.php>
11. Suniti, Rao illa. (2018). potentially revolutionary.
12. Gugnani, A., Fashion, S. V. P.-, Nigar, S., & Fashion, A. C.-. (2018). The Indian denim wear market from 2017 to. Retrieved from: <http://www.indiaretailing.com/2017/09/11/fashion/indian-denim-wear-market-2017-2027/>.