



## **SEAMLESS TECHNOLOGY: AN INNOVATIVE CONCEPT IN CLOTHING**

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### **ABSTRACT :**

The seamless concept is rather new. Seamless knitting technology creates one entire complete garment with minimal or no cutting and sewing process. The technology offers knitwear consumers more comfort and better fit by eliminating seams, thus seamless technology provides benefits to manufacturers as well as end users. Consumers are aware of seamless technology and its advantages but they still do not buy a substantial quantity of this specific type of exterior clothes, hence the market survey was conducted in Nagpur city for preference of seamless technology about design by interviewing with 125 consumers participants.

It is observed that there is not much literature available about this technology and only focused on technical issues than design and fashion, so noteworthy design element to be explored further in seamless fashion garments. Seamless products do not offer variety about styling shapes, so attractive products should be introduced. There is a weak offer when it comes to fashion valued and high cost. Seamless products can satisfy the consumer's requisites about the functionality, performance and comfort.

**Key Words:** Attractive products, Design, Seamless Technology, Performance, Comfort.

### **INTRODUCTION :**

The seamless concept is rather new. Seamless knitting technology creates one entire complete garment with minimal or no cutting and sewing process. The technology offers knitwear consumers more comfort and better fit by eliminating seams, thus seamless technology provides benefits to manufacturers as well as end users. Seamless garment is a one time forming clothes, produced by seamless knitting machine, gives





more comfort because of having no seam in its structure, even though sleeve and neckline of the garment could be joined through sewing. This technology is advancement in apparel industry which eliminates fabric laying, cutting and sewing process. As a result, savings in production times and cost and it minimizes yarn consumption can start from yarn into ready to wear garment.

Hosiery industry recently evolved into a new kind of machinery in production of fine hosiery's made with manmade fibers in new kinds of lingerie, swimsuits, underwear and T-shirts which have been sensitive in the mass market quite discretely by means of brands such as Woldford, Benetton, Marks and Spencer, which is different in fabric, pattern, quality round necked T-shirts in different colors and sizes can be matched with skirts and trousers and provide a distinctive look to one's personality.

Flexibility is nowadays becoming essential factors to satisfy consumers needs and desires. According to present demand, seamless products can satisfy the consumer's requisites about functionality, performance and comfort but the message sometimes does not correctly reach to their direct consumers about this technology has space to expand. To understand the knowledge and adoption of garments using seamless technology by consumers, an inquiry is conducted and its subsequent analysis of results is discussed in this paper.

## **METHODOLOGY**

The methodology of this paper is based on interviews with consumer's market survey for preference of seamless technology about design. Some hypotheses were considered to investigate the reason for not having a wider offer in design and fashion to these clothes. One of





the hypothesis considered the lack of education about creative fashion design especially seamless garments. The other hypothesis which can be answered from the survey of consumers that these consumers do not know what seamless technology stands for or do not find these products enough appealing in terms of fashion and design for external clothes.

A survey was designed to obtain information for consumer's knowledge and use of these products. The questionnaire was composed by fifteen questions, showing some pictures also used whenever it was needed to give better understanding about the products for this research.

### **RESULTS :**

The survey was conducted in Nagpur city with 125 participants. It is observed that majority of participants are 85% female in four groups, based on their age, Young (less than 25 years) 38.5%, Young Adults (between 25 and 35 years) 38.0%, Adults (between 36 and 45 years) 19.6% and Mature (more than 45 years) 3.9%.

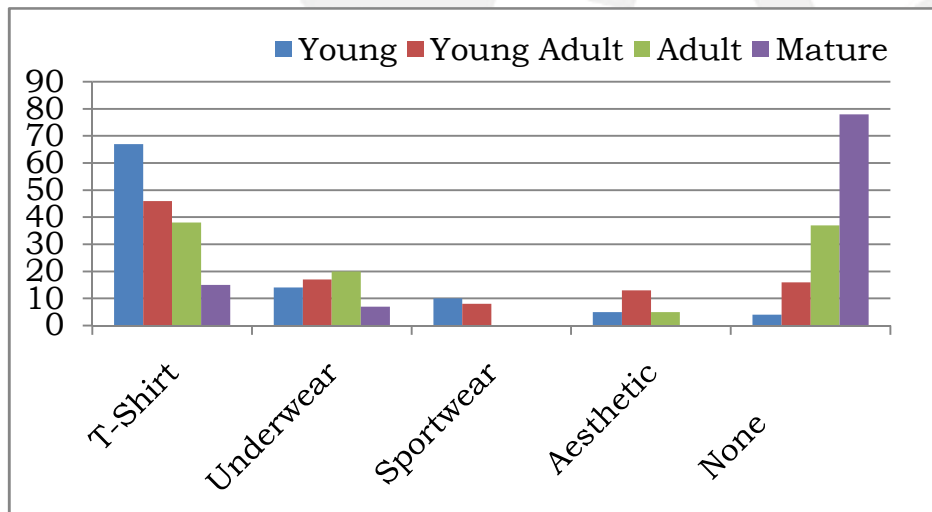
The first question was asked to know about the knowledge of the participants about the seamless products and technology. In this question, a description was given together with some pictures and asked if participants agree with that description. About 84% of the participants knew what seamless stands for and agree with description. The rest participants 16% disagreed or did not know this products and its technology.





**Table-1: Results for question second of the survey.**

Particular	T-Shirt	Underwear	Sportswear	Aesthetic	None
<b>Young</b>	67	14	10	5	4
<b>Young Adult</b>	46	17	8	13	16
<b>Adult</b>	38	20	--	5	37
<b>Mature</b>	15	7	--	--	78



**Fig.1: What kind of garment made with seamless do you usually buy?**

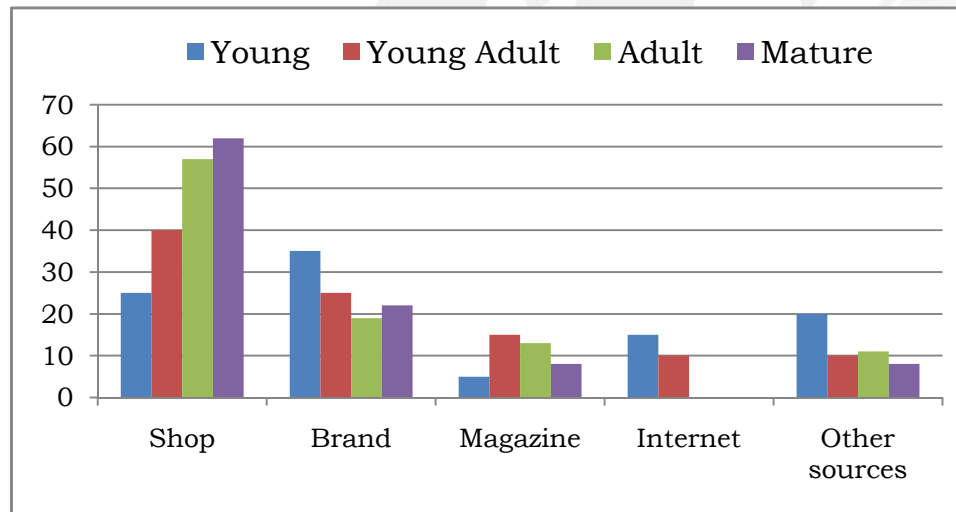
The next second question asked about “What kind of garment made with seamless do you usually buy? In all groups, the majority of purchased seamless based products are T-shirts, underwear, followed by sportswear, aesthetic. The goal of this study has a very small representation in sales about 5% for young people, 13% for young adults, 7% for adults and almost 20% for mature people because such as lack of offer of this products about shirts and high cost, when one considers the trend to increase the purchase with age which probably is related with the economic stability as a person becomes older.





**Table-2: Results for question third of the survey.**

Particulars	Shop	Brand	Magazine	Internet	Other sources
Young	25	35	5	15	20
Young Adult	40	25	15	10	10
Adult	57	19	13	--	11
Mature	62	22	8	--	8



**Fig.2: Participants knew about this technology**

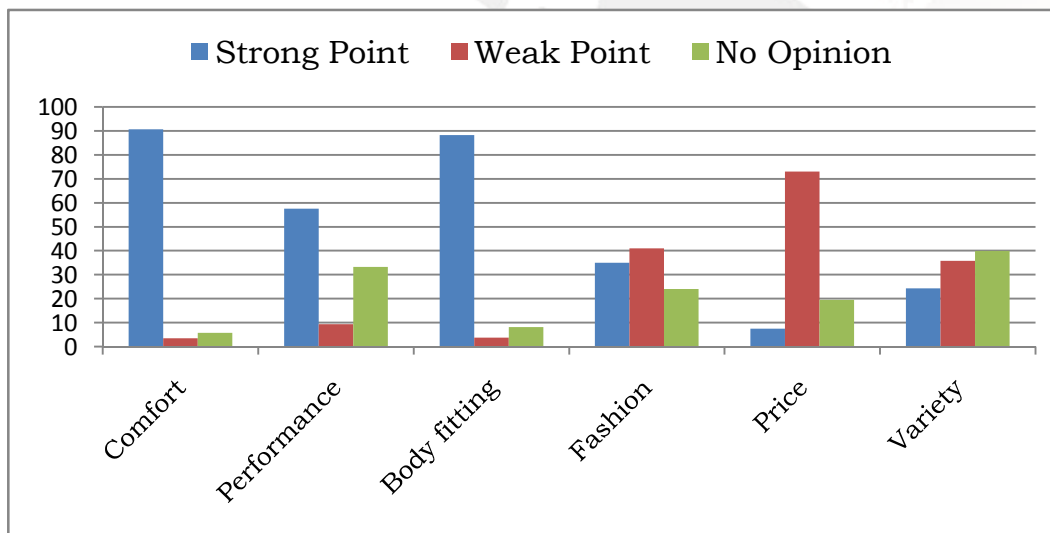
The third question is multi answers and asked about the way participants knew about this technology. The options are shops, brand, magazines, internet/ websites or other source i.e. universities courses, this survey. By response analysis, it is observed on figure 2 that for young people's option through brand and shop were the most selected options with 35% and 25% respectively. Young adults selected mostly shop and brand with 40% and 25% respectively. The adults and mature groups selected shops with 57% and 62% respectively. The results suggested that more than 35 years old had more knowledge about this technology and paid more attention.





**Table- 3: Results for question four of the survey**

Particulars	Strong Point	Weak Point	No Opinion
Comfort	90.7	3.5	5.8
Performance	57.5	9.3	33.20
Body fitting	88.2	3.7	8.1
Fashion	35.0	41.0	24.0
Price	7.5	73.0	19.5
Variety	24.3	35.8	39.9



**Fig.3: Strong and weak points can be identified in seamless products**

Fourth question deals with the strong and weak points can be identified in the seamless products, such as comfort, performance, body fitting, fashion presence, price and variety. Figure 3 shows the most representative results for each of the above mentioned points. The comfort was identified as a strongest point (90.7%). Body fitting showed 88.2% as a strong feature. Performance is considered as a strong point by 57.5% and 33.2% having no opinion which may be related with their lack of knowledge about seamless products.

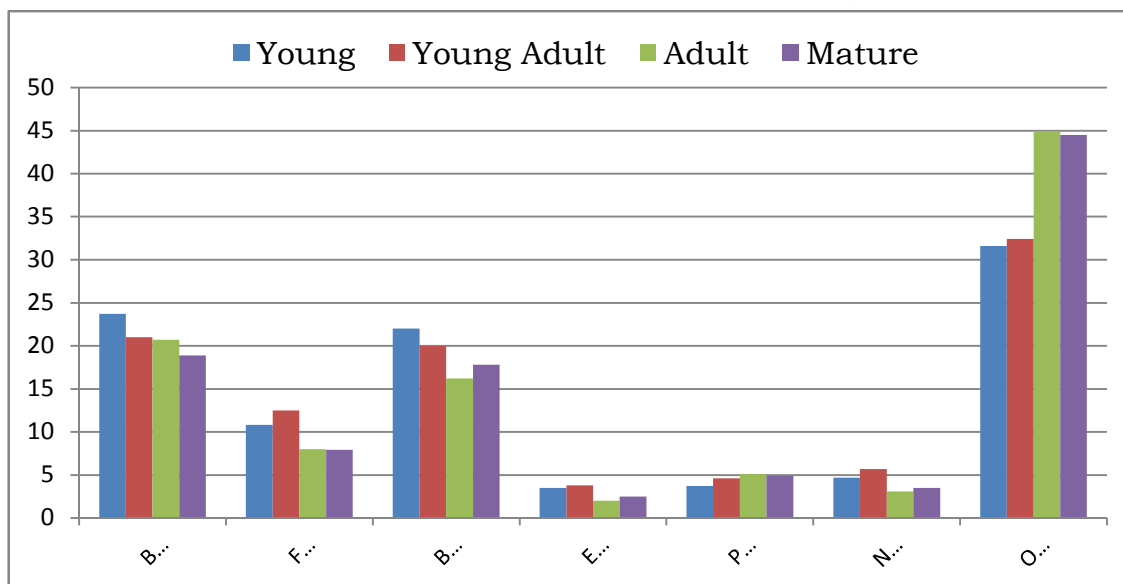




The available fashions are considered as a weak feature for 41.0%, while 35.0% being a strong feature. When the prices are 73.0% recognized as a weak factor, based on the facts that majority of participants are young or young adults, probably may be unstable economical situation. Based on the market research, one can say that most of the seamless products do not offer variety about styling shapes. Finally 35.8% considered the variety of these products as a weak factor.

**Table-4: Results for question five of the survey**

Particulars	Basic colour	Fashion colour	Basic style	Embro/ printing	Pattern texture	Nature fibre	Other
Young	23.7	10.8	22.0	3.5	3.7	4.7	31.6
Young Adult	21.0	12.5	20.0	3.8	4.6	5.7	32.4
Adult	20.7	8.0	16.2	2.0	5.1	3.1	44.9
Mature	18.9	7.9	17.8	2.5	4.9	3.5	44.5



**Fig.4: Seamless products may or may not have fashion elements?**





Final question is that these seamless products may or may not have fashion elements. Set of options were asked to check as being present or not. It is observed from results that 84.3% identified the basic colors, while 39.2% recognized the fashion colors as being present. Basic styles are recognized by 76.0% from the participants. Regarding to embroidery/prints application 11.8% identified its presence but the number increased to 17.0% when patterns and textures are considered as being present in seamless products. The presence of natural fibers is recognized by 18.3%.

## **CONCLUSIONS**

It is observed that consumers are aware of this technology and its advantages but they still do not buy a significant quantity of this specific type of exterior clothes. It is found that there is not much literature available about this technology and only focused on technical issues than design and fashion, so noteworthy design factor to be explored further in seamless fashion garments. Seamless products do not offer variety about styling shapes, so appealing products should be introduced. There is a weak offer when it comes to fashion valued and appealing products, due to the low investment by manufacturers on this technology especially designed. Seamless products can satisfy the consumer's requisites about the functionality, performance and comfort. The results suggested that more than 35 years old had more knowledge about this technology and paid more attention.







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