RESEARCH ARTICLE

A study on consumer attitude and preferences towards graphic design on clothing

Subhasre Sathyamoorthy*, Nirmala Varghese

Abstract

Graphic design in the fashion industry is a magic tool. Fashion is all about fading trends and timelessness all at the same time. There are so many possibilities for graphic design to influence the fashion industry. It is a clothing brand that helps in selling fashion as art. Graphic design as a concept revolves around conveying a message. Since the fashion industry is supported by graphic design, the world becomes a massive canvas that shows individual personalities. The main aim of the research is to conduct a survey for graphic Tees among the target customers to know their knowledge and awareness and also to get their design preferences on various aspects of graphics. Based on the understanding, graphics were developed and a feedback survey was collected to know the acceptance of the developed graphic design. Manufacturing practicality and commercialization of the developed graphics were also discussed.

Keywords: Awareness, Communication, Design, Fashion, Graphic design.

Introduction

Design is a kind of communication that implies information about the character with whom the designer expresses the idea. Graphic design is used as an important "tool" inside the different 4 elements of message design. In graphic design, the primary goal is to offer functional, aesthetic, and organized shapes to all varieties of record sets. Fashion and graphics are interconnected because "signs and symbols are each worlds - stock of trade" (Musa, 2019). According to Barnard's "Fashion as Communication," the Bayeux Tapestry is set, providing "visual proof of the element that garb performs in legitimizing a social order".

Fashion has a prominent place in graphic design and effects. Culture and heritage reflect all style trends. Cultures around the globe use clothing to make statements about the style (Musa, 2019). Therefore, whilst the usage of a subject matter or idea as a medium to convey the characteristics of the style, designers should have reference to the graphic design. The use of aesthetics and design on apparel and accessories can be described as fashion design. It has to be mentioned that fashion design impacts social and cultural factors that change with time and place.

Clothes are not ever a frill; they are always a reflection of the prevailing social and economic constraints. Leticia Abraham, Executive Vice President of the WGSN, agreed that fashion is one of the most visible and productive spaces for distinct and social expression and that it is a medium of communication but not a revolt in and of itself.

We are surrounded by visuals in the twenty-first century that represent how the world perceives and processes information. Graphics can be read and comprehended in the same way as texts can (Musa, 2019). Social and cultural traditions, values, and tastes all impact the creation of a graphic in the interaction between the artist and the client. So, graphic design circulates in conveying one's personality, their perspective towards society also creates awareness about any important issues. The objectives of this study are: To analyze how much people connect with graphics in T-shirts. Developing prints and graphics based on consumers' design preferences. To study consumer acceptability towards developed T-shirt graphics. Also, the practicality of developed designs and knowing the scope of commercialization of graphic printed T-shirts.

Department of Apparel and Fashion Design, PSG College of Technology, Coimbatore, Tamil Nadu, India

*Corresponding Author: Nirmala Varghese, Associate Professor, Department of Apparel and Fashion Design, PSG College of Technology, Coimbatore, Tamil Nadu, India, E-mail: rvn.afd@psgtech.ac.in

Literature Review

Graphic Design in Clothing Fabric as a Part of an Image Design

Any type of textile print has an impact and might evoke associations. The textile print is created by combining form and color. The wearer can generate a certain psychological mood and optically correct body parts by selecting the suitable print style. Several factors must be considered when selecting a textile print: body type, silhouette type, season colors, age, social status, individual style, and so on.

Rhetoric in Graphic Design

Rhetoric is used in every kind of communication. Communication is at the heart of graphic design. The rhetorical nature of graphic design is constant. They have explained rhetoric in information graphics, typography, new design, and design elements.

Each visual element contains data and makes decisions. Every decision the graphic designer makes during the creative process impacts the message's perception. Type size, line spacing, colour, and framing are just a few examples.

Fashion Design for Longevity

The ways in which users influence the lifespan of garments are primarily individual, often conflicting, and fluctuate throughout time. The physical features of clothing can affect the extent of its active life; however, owing to the user's behaviors (such as laundering), information (eg. on fibres and ecological influences), services, and period (to patch or modify a garment), and lifestyle, these features regularly play out in unpredicted ways (hobbies and work) (Barnard, 2013). They also discovered that design-led marketing and brand posts promote longevity strategies, making them a valuable tool for communicating the brand.

The Rise of Research in Graphic Design

Graphic design philosophies are founded on artistic principles. The development of commercial design work that wins contests became inexorably the focus of graphic design. Graphic designers have begun to examine the issues around what they make and the impact of graphic design artifacts on society with greater seriousness. It encourages graphic designers to consider the broader historical, political, cultural, and social implications of the products they create.

Typographic Decoration

To uncover trends in the creation of typographic compositions for clothing ornamentation, establish generic design guidelines, and research the socio-cultural aspects of this approach to garment design.

It is assumed that a person can transmit various types of messages to the environment by wearing clothing embellished with typographic compositions. The typographic decor is a modern fashion trend that adds to the significance of clothing in the information culture.

The key to attracting the attention of the surroundings is to wear clothing with typographic decorations. It conveys the wearer's originality, progressiveness, intelligence, and presence of a public position or philosophical knowledge of life (Seo & Ha, 2007). The significance of what drives and inspires individuals to connect directly or indirectly is conveyed by such clothing.

The fact that there is so much "typographic clothing" on the streets of cities indicates that it is widely used, and so typography in clothes has become a fashion trend. The technological possibilities of computer modeling and digital printing, as well as the fast application of the picture to several materials with a lengthy subsequent use term, make it easier to transfer graphic design goods to the field of clothes design. Fashion designers attempt to find new ways to create outfits that are not only comfortable but also impressive in order to stay competitive. As a result, the popularity of typography in graphic design impacts their decision and inspires the desire to employ not only aesthetic factors (color, tone, shape, proportions of product pieces) but also meanings in a fashion picture.

Furthermore, typography as a sort of decorating enables for the active introduction of the producer's campaign naming, brand slogans, names, and designers. The availability of such contextual information in the topic environment strengthens their positions in the fashion market and allows for concealed advertising connection with consumers. In the framework of graphic design, clothing, and accessory design, and general cultural trends, we explore the explanation of socio-cultural and merely design components of the challenges presented.

Design Principles in Typography

Typography will be harmonious when there is good interaction between the different parts in the design and the "wholeness." A well-balanced font communicates reliability and quality."

The sum of all the elements, the horizontals, and verticals, the darks, and the brightness that make up the design, is called balance. Information should be balanced, and entertaining, but not unpleasant or distracting. Balance might take the shape of a formal or informal arrangement. Formal balance is symmetrical in every way and appears to be static and harmonious. However, it has the potential to be tedious.

The viewer's attention can be directed via composition (Seo and Ha, 2007). A sense of dynamism is enhanced by informal equilibrium. It could, for example, draw attention to a certain image, a portion of a paragraph, or the complete information material. On the other hand, unbalanced and inconsistent use of colours, images, and typography has been shown to impair learning (Dahmoos, 2018).

Different colors, fonts, sizes, and styles can be used to create contrast in typography. It's all too common when the contrast isn't right. It's usually a shade of grey or chromatic colors that's more or less even. Different colors may have the same value, resulting in little contrast. Another typical issue is the usage of symbols and typography that are too small. The text should always be large enough to read. The distinction in resolution across different mediums is critical. We have a tendency to collect impressions that form natural opposites, supporting one another.

Emotion Aspect in the Design

The communication model of emotion design is the basic concept of emotion design, and the three primary functions of the design object, designer, and users should be identified. Designers generally offer the design item meaning or messages during the design process. The designs were most likely being used for the intended function or emotional realm. Users and designers would interact regardless of the intended use or design.

Emotional design can improve a product's usability by fostering a strong mental bond between users and the product (Walker, 2014).

More emphasis should be placed on the emotional part of the usage and design process than on the functional aspect. An emotional design might meet both the needs of what the users expected and what the designers were able to prepare and give in the interaction of experience.

Harmony in Colour

Pure colour pairings that are harmonious will look good together. Color harmonies, often known as color chords, are color pairings that are particularly attractive. The artist may use any two colors on the color wheel that are opposite each other, any three colors that are evenly spaced and make a triangle on the color wheel, or any four colors that create a square or a rectangle on the color wheel. The relationships between primary, secondary, and tertiary colors are depicted on a color wheel (Jacobson *et al.*, 1958).

For ornamentation, color and typographic elements can be used. When color and typography are employed for decoration, and when the user is meant to have some cognitive relevance, it must always be very obvious and easy to understand for the recipient.

The designer's major purpose is to provide consumers with happy emotions by creating a unique experience through seeing the visuals themselves. Furthermore, the entire emotional content of the consumption experience depends on fulfilling the consumer's emotional experience (Dabner *et al.*, 2017).

Methodology

Survey Process

The survey was conducted to study the preferences of people toward graphic design in clothing. The participants
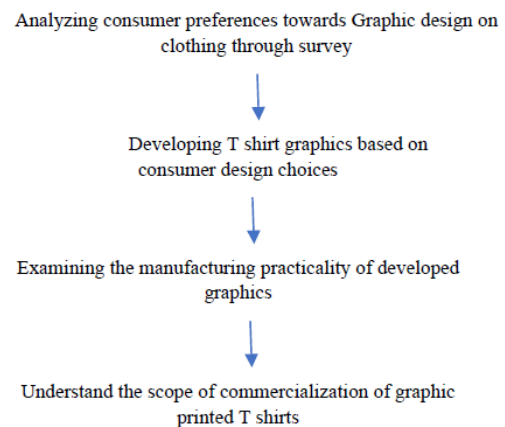
Figure 1: Workflow

were male and female in the age group of 16 to 30 years. 50 people participated in the survey.

Analyzing People's Preference in Relation to Graphic Prints on T-Shirts

An online survey was conducted to get to know the target customer's mindset on Graphic prints on T-shirts. Online survey or internet survey, is quite possibly the most famous datum assortment source, where a bunch of study questions is conveyed to an objective example and the individuals from this example can react to the inquiries over the internet. Respondents get online overviews through different mediums like email, installed over the site, web-based media, and so forth.

Online overviews are the most financially savvy and can arrive at the greatest number of individuals in contrast with different mediums. The exhibition of these studies is substantially broader than different information assortment strategies. In circumstances where there is more than one inquiry to be posed to the objective example, certain analysts inclined toward leading on the online surveys over the customary up close and personal or telephone reviews.

Data Assortment

Data gathering permits us to gather the information that we need to assemble from our study members. A questionnaire was developed for the online survey regarding Graphic prints and consumers' awareness of the "Support a cause" T-shirts.

Preparation of the Questionnaire

The tool used for this research to conduct and summarize the survey results is Google Forms. The questionnaire developed was simple and easily understandable and anyone not related to any particular field could undergo this survey and give their responses. It possibly conforms to the respondent's way of thinking.

The initial questions in the form cover the respondents' general information, including their name, age, and gender.

Table 1: Developed Graphics

S.NO	DESIGN	JUSTIFICATION
Theme 1		These 4 graphics were developed based on the theme of Women empowerment. Illustrative art work was carried out to bring out the originality and show the world that they are incredible. Making a positive indent and faith in themselves.
Theme 2		Theme 2 on Mental health and self-care importance. 3 graphics were developed with the theme.
Theme 3		Typographic prints were developed with various messages.
Theme 4		This graphic is to create awareness among the people to know the importance and effectiveness of the current state and act accordingly.

Then it specifically drives into Graphic T-shirts, to know about their knowledge and awareness about the outfits. When taken into specific topics, proper information was provided with example images for better understanding, in order to get relevant responses. The questionnaire includes multiple choice questions, short answers, and linear scale questions to determine their agreement with a particular segment. The pilot study was conducted and the form was first circulated to a small group of people to understand the difficulties faced by them in filling out. The changes were rectified and revised forms were sent to 50 participants to get the research done

Development of Graphics

The following 12 graphics were developed on base themes: women empowerment, mental health importance, and supporting or creating awareness on current issues.
Software used: Adobe Illustrator
Adobe Illustrator is a vector graphics editor and design program that is established and promoted by Adobe Inc. The latest version, Illustrator CC 2021, was released on October 20, 2020, and is the 25th generation in the product line. Adobe Illustrator was rewarded as the best vector graphics editing program in 2018 by PC Magazines.

Developed Graphics

The developed graphics are shown in Table 1.

Conducting Feedback Survey

Preparation of Questionnaire

General information of respondents like name, age, and gender were asked. Four different types of typographic prints were given to the respondents and were requested to select 2 based on their preference with a reason. They were asked to rate typographic prints on a scale of 5 for four categories: Color choices, communication, message relevance, and purchase decision.

The next set of illustrative prints on Women empowerment and prints on mental health/self-care importance were given and the same procedure is followed as the first set.
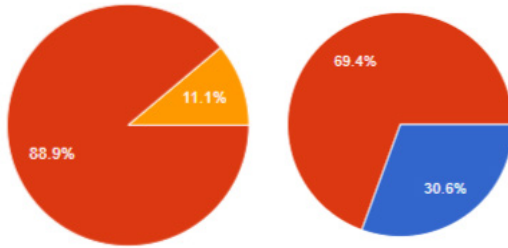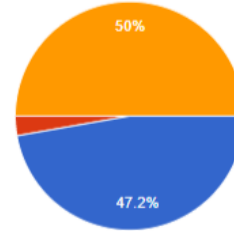
Figure 2: Age and gender data
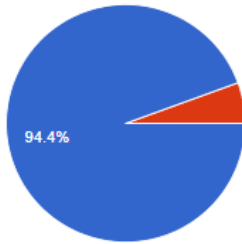

Figure 4: Exhibit personality
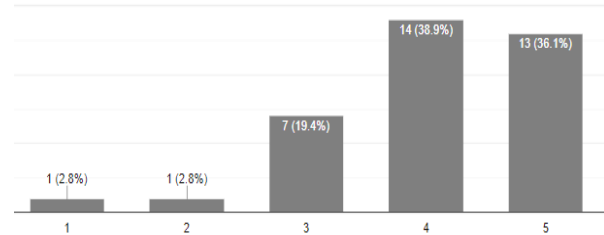

Figure 3: Purchase attitude

Figure 5: Bar graph on graphic communication

An awareness print T-shirt was displayed and respondents were asked to give their opinion on the particular print. And also asked if they would purchase a Graphic Tee that communicates a message.

Manufacturing Practicality

To know the production practicality of this graphic T-shirt, a simple questionnaire was created and given to an industrial manufacturing expert.

The industry approached was: CR Garments, Tiruppur

4 prints were selected from developed graphics from each category. The experts were requested to respond to the following questions for each graphic print. It includes the printing techniques used for production, Tools used for printing, colours and cost relation, time taken to develop, and total cost of printing.

Scope of Commercialization

To know the commercialization part of these Graphic printed T-shirts, 2 retailers were approached. The selected 4 graphic prints were shown to them and asked whether they would be interested in purchasing and selling the T-shirts, also the price range was recorded. The retailers were the chief executive officers of Sakthivel Clothing Group, Tiruppur

Results and Discussion

Analyzing Consumer Design Preferences towards Graphic Design

Data Collection:

The survey was conducted to know how people view Graphic T-shirts. Their design, color, and placement preferences. Data analysis and interpretation.
Age and gender.

The respondent's age and gender information are shown in Figure 2. It is observed that 88. 9% of respondents were between the age group of 18-23 and 11.1% of respondents were between 24-30. 69.4% of subjects were female respondents and 30.6% of subjects were Male respondents.

• *Purchase Attitude of Consumers*

The buying attitude of the consumers is shown in Figure 3. Consumers are aware of these Graphic printed T-shirts. 94.4% of respondents have already purchased a Graphic T-shirt. It shows that people are aware of graphic prints and are interested to buy graphic printed T-shirts.

• *Occasion People Prefer Wearing Graphic Tee*

The question was asked to understand on which occasion they prefer to wear graphic printed T-shirts. The respondents preferred to wear graphic T-shirts as casual wear, to hang out with friends, on outings and on trips. Graphic tee shows one's unique personality.

This question was asked to the respondents to understand whether they agree that graphic T-shirt depicts their personality (Figure 4). As These T-shirts involve different kinds of prints like typography and illustrative figures. 47.2% of respondents agreed and the remaining 50% of respondents believe that a Graphic T-shirt will show one's unique personality.

• *Communication level of Graphics*

The communication level of graphics is shown in Figure 5. It is important that the graphic developed should convey a message. So, from the survey conducted, it is understood that the majority of respondents agreed that graphic design communicates information to the user. In particular, more than 75% rated 4-5 on a scale of 5 agree that graphic design
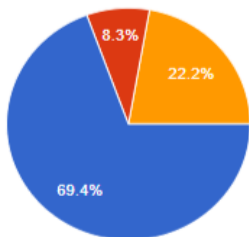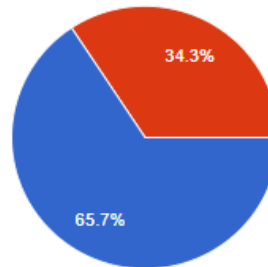
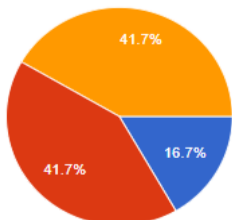**Figure 6:** Graphic and social impact

Figure 7: Purchase decision of Support a cause T-shirt
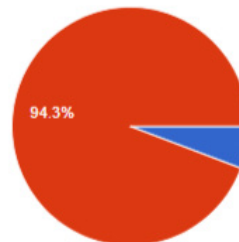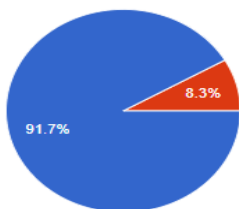
Figure 8: Graphic customization

concept revolves around communicating a message.

Respondent's Preferences on Graphic Trends

The question was asked to understand the user preferences on different trends of graphics. The options given were Typography with bold statements, Elaborate designs, Illustrative figures, Minimalistic prints, Animal prints, and Doodle artworks. Respondents showed interest majorly in Typography with bold statements, Illustrative figures, and Minimalist prints.

• *Graphic Tee and Social Impact:*

Consumers believe that some of the graphic t-shirts hold a special social impact and through these social graphics, people get to know some of the important happenings in society. From the survey, it is concluded that 69.4% of subjects agreed and 22.2% voted maybe that statement Tees make an impact on society and related issues. (Figure 6).

Some T-shirt print have you seen that influences a particular issue:

The question was asked to know if the consumers have already come across any social issue-related graphics T-shirts. Some of the responses from the consumers are: worn during a marathon for a cause and it will have the wording for the cause. Protest for Jallikattu and Hindi theriyaathu poda! (Social issue and Language issue).

Figure 9: Colour choices

Figure 10: Design choices

Supporting cancer, marathon, sporting tees advocating cancer awareness, and farmer's issue.

• *Purchasing Decision of Support a Cause T-Shirt*

Consumers' interest in buying a support a cause T-shirt is shown in Figure 7.

41.7% people are willing to buy these support a cause Graphic Tees and some people have recorded that they have already purchased while a least percent of 16.7 people have recorded no. This shows that people show interest in buying a T-shirt that supports a social cause or an issue that socially creates an awareness to the people and triggers people's attitude towards it.

• *Customization of T-Shirt Graphics*

Customization is a new emerging trend and there are various line of customized products. In that category comes the customized graphic tees. 91.7% subjects have shown their interest in customizing their T shirt graphics. (Refer figure 8 for data analysis of customized graphics)

• *Colour Preferences*

Colors play a major role in attracting the consumer. The color used in the graphic tees greatly impacts the delivery ages. The majority of respondents showed interest in white or light colour choices. 65.7% of people choose white or light colors. 34.3% people chose Dark color tones (shown in Figure 9)

• *Design Preferences*

The question was asked to understand the consumer preference for designs. Two options were given: complicated designs with maximum no. of colors and minimalistic
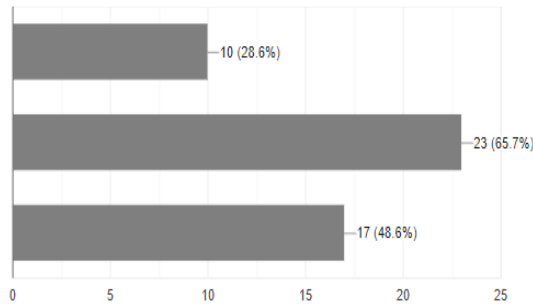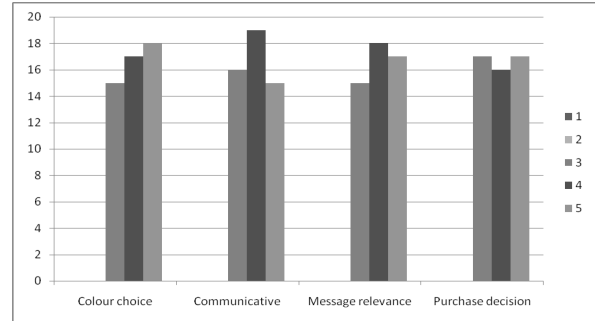
Figure 11: Bar graph on graphic placement

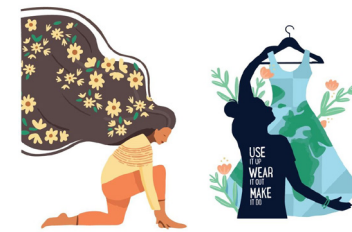**Figure 12:** Typographic prints

Figure 13: Selected typographic prints

designs with limited no. of colors. This is an era where people prefer minimalistic designs. On that note 94.3% (shown in figure 10) prefer a minimalistic design with a limited no. of colors.

- *Placement Preferences*

Figure 11 shows the placement preference of the consumers. The placement also play an important role in these kinds of T-shirts. To understand the consumer preferences, options like chest print, pocket print and bottom print were given. 65.7% of respondents chose chest print placement and 48.6% chose pocket print, and the remaining chose bottom print.

Based on the above survey results, graphics were developed on consumers' design choices and a feedback survey was conducted to rate the graphics.

Consumer Acceptability – Feedback Survey

The feedback survey was given to the same target audience who filled the consumer preference survey.

Four graphic prints were developed based on the preferences obtained, and the consumers were asked to choose the two most favorite.

Figure 12 shows the developed graphics prints on Typography.

The respondents chose typographic prints shown in Figure 13, stating the following reasons.

Figure 14: Rating of typographic graphics on each category

Figure 15: Graphic prints developed on women empowerment

Figure 16: Selected graphic prints

'Cool colours in the print, Positive message conveyed, looks attractive and appealing to the eye, Loved the typography'.etc

The respondents were asked to rate the graphics they selected based on the four categories: colour choice, communicative, message relevance and purchase decision.

1. **Colour choice:** Among 50 subjects, 18 rated 5 for the color choice, 17 rated 4 and the remaining rated 3.
2. **Communicative:** Among 50, 15 rated 5, 19 rated 4 and the remaining 16 rated 3.
3. **Message relevance:** 17 rated 5, 18 rated for 4 and the remaining 15 rated 3.
4. **Purchase decision:** 17 subjects each rated on 3 and 5. and 16 subjects rated 3. Refer to figure 14.

Four graphic prints were developed based on the preferences obtained for illustrative figures, and the consumers were asked to choose the two most favorite.

Prints developed for women's empowerment are shown in figure 15. Figure 16 shows 2 illustrative artworks chosen by the respondents, for the following reasons.

- Different print and expressing a good message are aesthetically appealing designs, It has a bolder feminine look, and the design and color are very unique and creative. It Looks like a minimalist theme of femininity.
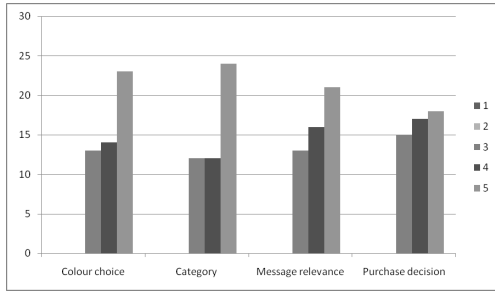
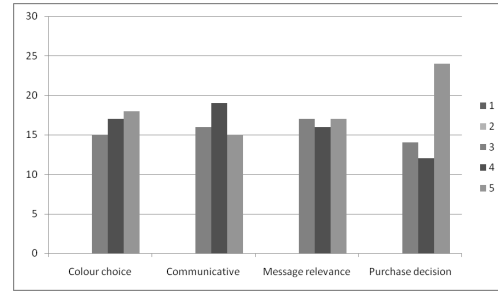**Figure 17:** Rating of women empowerment graphics in each category

Figure 20: Rating of Mental health importance graphics on each category

Figure 18: Mental health graphics

Figure 21: Developed awareness of print

Figure 19: Selected graphic prints

The respondents were asked to rate the graphics they selected based on the four categories: color choice, communication, message relevance, and purchase decision.

1. **Colour choice:** Among 50 subjects, 23 rated 5 for the color choice, 14 rated 4 and the remaining rated 3.
2. **Communicative:** Among 50, 24 rated 5, 14 rated 4 and the remaining 12 rated 3.
3. **Message relevance:** 21 rated 5, 16 rated for 4 and the remaining 13 rated 3.
4. **Purchase decision:** 18 subjects rated 5, 16 for 4 and the remaining rated 3. (Refer figure 17)

Four graphic prints were developed based on the preferences obtained for minimalistic prints, and the consumers were asked to choose the two most favorite.

Figure 18 shows prints developed on mental health. Prints shown in figure 19 were selected on mental health and self-care prints, for the following reasons,

• It looks simpler and this kind of tee can be worn with any bottoms, Love the to-do list and the battery looks exactly like a man's whole day energy, it looks like more productivity in a day, Loved the aesthetic, Minimalist look, etc.

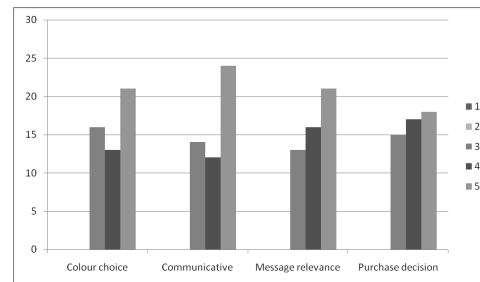The respondents were asked to rate the graphics they selected based on the four categories: colour choice,

Figure 22: Rating of awareness graphic print on each category

communicative, message relevance and purchase decision.

1. **Colour choice:** Among 50 subjects, 18 rated 5 for the color choice, 17 rated 4, and the remaining rated 3.
2. **Communicative:** Among 50, 15 rated 5, 19 rated 4, and the remaining 16 rated 3.
3. **Message relevance**: 17 rated 5, 16 rated for 4, and the remaining 17 rated 3.
4. **Purchase decision:** 24 subjects rated 5, 14 for 4 and the remaining rated 3. (Refer to figure 20)

Awareness print

Since most of the respondents believe that these graphic prints convey a social message and hence in order to create awareness regarding the current issue, graphic print has been developed and asked for feedback about the print. (Shown in figure 21)

Respondents' view and feedback on the awareness print T-shirt:

'It is really important to spread awareness on different things to the society around us. It also looks good with different
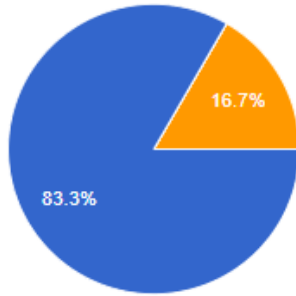
Figure 23: Communication of graphics

typography. Awareness print is important and needs to be made to reach customers to have awareness and positivity. A unique way to spread awareness. People who are not conscious about the situation can get to know from this kind of graphics.

The respondents were asked to rate the graphics they selected based on the four categories: colour choice, communicative, message relevance and purchase decision.

1. **Colour Choice:** Among 50 subjects, 21 rated 5 for the color choice, 16 rated 4 and the remaining rated 3.
2. **Communicative:** Among 50, 24 rated 5, 14 rated 4 and remaining 12 rated 3.
3. **Message Relevance:** 21 rated 5, 16 rated for 4 and the remaining 13 rated 3.
4. **Purchase Decision:** 18 subjects rated 5, 16 for 4 and remaining rated 3. (Refer figure 22)

This question was asked to the respondents to rate the previously developed graphic to know how much it communicates the message. Figure 23 shows that 83.3% respondents voted that these kind of T shirts communicates right timely message

Manufacturing Practicality

The 4 developed prints where shown and certain questions were asked relating to the printing of these graphics on T shirt. Table 2 shows the data collected.

- *Questionnaire*
  - Which printing technique is used to print this graphic?
  - Tools used for printing
  - Does no of colors used in the print influence the cost of production?
  - Time taken to develop the print
  - Cost for printing the graphic on T shirt

Scope of Commercialization of Developed Graphic Print

From the retailers, it is known that all the graphic print T shirts will be purchased to merchandise, but in different price ranges, as it is taken from 2 different retailers. These T shirts are fast moving and in demand.

Table 2: Printing details of developed graphics

S.NO	DESIGN	DETAILS
Print1		MHM printing. MHM Printing machine. Yes, colors influence cost. 1 day
Print 2		Normal screen printing Screen, dyes, printing table, Yes, colors influence costing. 2-4 days Rs. 30-35
Print 3		Normal screen printing Screen, dyes, printing table, Yes, colors influence costing. 2-3 days Rs.20-25
Print 4		Screen printing Screen, dyes, printing table, Yes, colors influence costing. 2-3 days Rs. 15-20

For all the four prints shown above, selling price ranges between Rs.150-300.

Conclusion

This research found that graphic design t shirt can create major attraction towards the consumer. These T -shirts proved to convey a message or create awareness among people. People are more interested in dressing differently from others. They want their opinion to be heard and valued. T shirts with bold statements or illustrations relating or supporting a cause have a great scope. It can also be used to influence people in the right way, to make them conscious about a situation. Designers put their creativity into this graphic print to convey a social message. These prints then go to manufacturing industries, where the produce this digital design into a fine usable product. Then retailers merchandise these t shirts and help in reaching the

consumers. Consumers intend to buy these Graphic T shirts because they feel connected, spread a word, or even act supportive to a cause or movement.

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