



Application of Self-cleaning Finish on Upholstery Fabrics

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Abstract:

As the time is changing, demand of Home textile sectors is growing interest and has become a part in people's lifestyle. Everyone wants new and different from others, so its demand is increasing amongst people. Home Textiles are the fabrics used for manufacturing home furnishings. It gives functional as well as aesthetic appeal to the interiors of homes. Self-cleaning Textiles are developed which can be clean itself without using any laundry actions. The concept of self-cleaning textiles is based on the lotus plant whose leaves are well-known for their ability to 'self-clean' by repelling water and dirt. Self-cleaning textiles is the need of the hour, people are increasingly busy with their work & they do not have lot of time to invest in cleaning of textiles. Use of excessive water and electricity in laundry and chemical detergents which are not ecofriendly can also be avoided as it affects environment. Home makers are also not very adept at washing or cleaning of upholstery fabrics on a regular basis. During cleaning, the fabric shrinks, changes the shape, size and sometime dulls the fabric. Hence this study of the application of Self-cleaning Finish will reduced the amount of dirt present on these fabrics without too much of intervention of homemakers. And will also help to save time, water, energy and cost of laundry for upholstery fabrics and also makes the fabric long last.

Key Words: *Home textiles, Self-cleaning Textile, Upholstery Fabrics.*

1. Introduction:

With the changing time, demand of Home textile sectors is of growing interest to both manufacturers and consumers. It has become a part in people's lifestyle. Everyone wants new, unique and different styles from others, so its demand is increasing amongst people.

Home Textiles are the fabrics used for manufacturing home furnishings. It gives functional as well as aesthetic appeal to the interiors of homes. Home furnishing textiles have broad general usage both on the home front, commercial and Institutional use.

Upholstery is the materials which include fabric, padding, webbing, which makes the soft coverings for chairs, sofas, and other furniture. When choosing upholstery, one should be aware of its durability, clean ability, and resistance to soil and fading.

Washing of clothing and other textiles is the basic need to maintained cleanliness and hygiene. Some need to be hand washed while others can be machine washed. Washing techniques depends on type of fabric. Textiles are weaker when wet and easily get damage or distorted, so they need to be treat gently. Some of the problems occur due to carelessness or lacks of knowledge are bleeding, grayness, watermarks, fading, pilling, etc.

Self-cleaning Textiles are being developed which can be clean itself without using any laundry action, with the help of nanotechnology. This concept is inspired from the lotus leaves that have the properties to keep the surface clean. Self-cleaning textiles is the need of the hour, as people are increasingly busy with their work that they do not have time a lot of time to invest in cleaning of textiles and apparels. Use of excessive water and electricity in laundry, and chemical detergents which are not ecofriendly can also be avoided as it effects the environment.

2. Aim & Objectives

Aim : To understand the procedures followed by home-makers / professional cleaners for the cleaning of upholstery fabrics and create awareness on the regular cleaning of upholstery fabrics at home along with application of Self-Cleaning finish on Upholstery Fabric.

Objective:

- To understand the procedures followed by home-makers for the cleaning of upholstery fabrics
- To create awareness among consumers regarding cleaning of upholstery fabrics

3. Methodology:

The research was carried out in the following way:

- To understand the procedure, a pre survey was conducted for cleaning of Upholstery Fabrics of home makers, as they are engage in cleaning of home.
- **Sample size:** 50 participants
- **Sampling Technique:** Convenience sampling method & Snow ball sampling method
- **Formulation of tool:** On basis of the study, the tool was formulated i.e questionnaire method. 9 open ended and 2 closed ended questions.
- **Implementation of tool:** Implementation was done as per convenience of researcher and participants. i.e on whatsapp
- The data was tabulated and analysis of the data was done.
- After analysis of data, A small demo video has been created regarding cleaning of upholsteries and then send it to the participants.

4. Results & Discussions:

This research was conducted to study the application on self-cleaning finish on upholstery fabric. A survey was taken from homemakers about the cleaning of upholsteries. It was carried out of 50 participants. and then after analysis the data, a small video had been developed. The results of survey is presented in the following section:

4.1 Use of Upholstery Fabric:

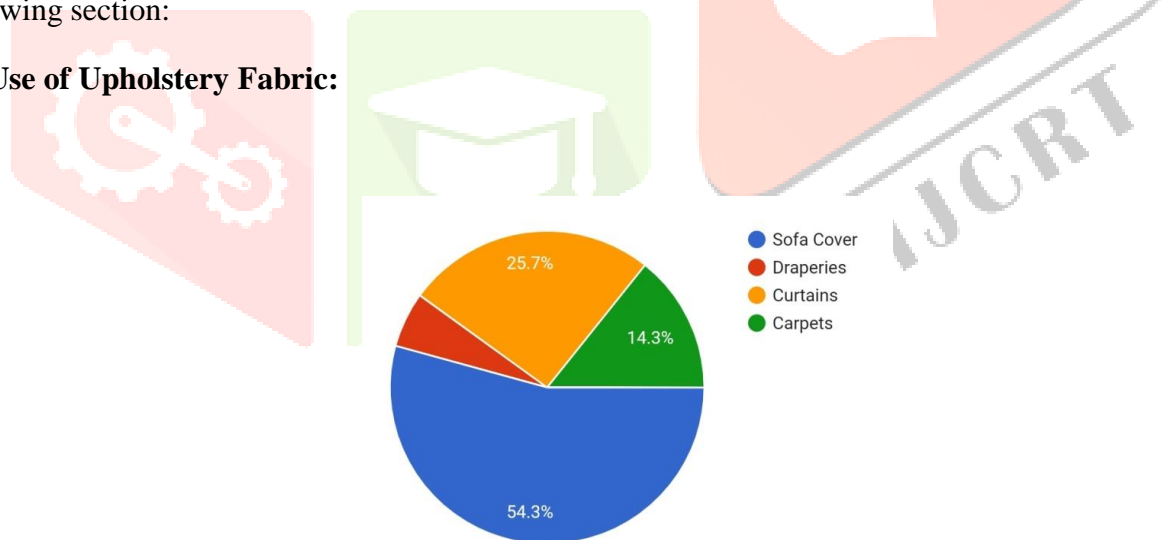


Fig. No. 4.1 Use of Upholstery fabric

The above figure shows that more than 50% of the respondents correctly understand that upholstery fabrics are used as sofa covers only. However, a little more than 14% of the participants feel that upholstery fabrics refer to as carpets. This knowledge is essential as, the care and cleaning procedures to be employed would be erroneous, if the participants do not understand the end use of the fabric.

4.2 Type of Upholstery Fabric preferred:

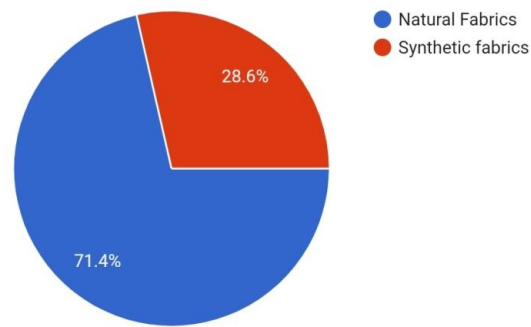


Fig. No. 4.2 Type of Upholstery Fabric preferred

Figure 4.2 shows that 71.4% of the participants prefer to use natural fibers for upholstery fabrics while the remaining (28.6%) prefer synthetic fabrics.

4.3 Frequency of washing Upholstery fabrics:

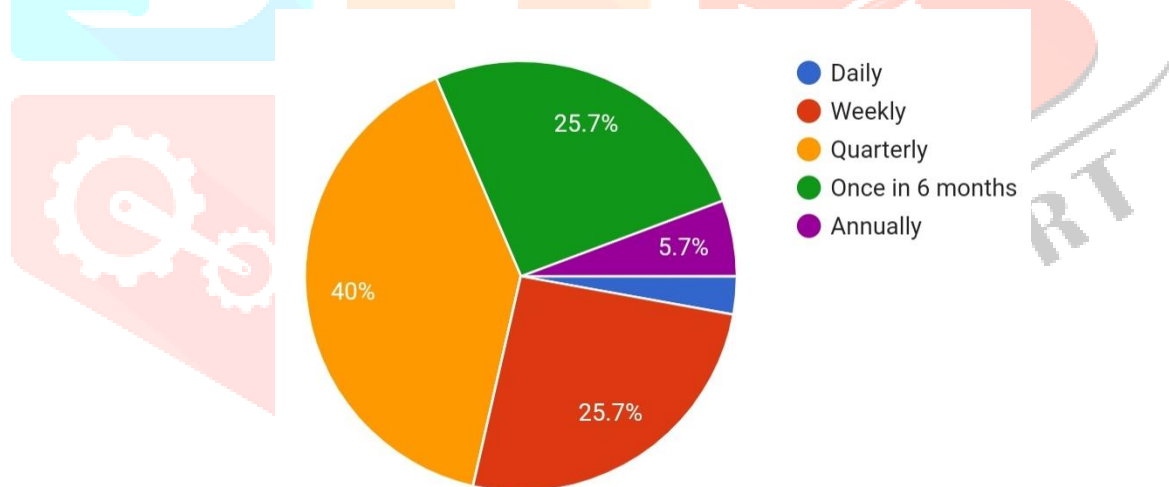


Fig. No. 4.3 Frequency of washing Upholstery fabrics

Figure 5.1.3 shows that maximum participants 40% wash quarterly. However, 25.7% wash once in 6 month and 25.7% wash weekly and around 5.7% clean their upholstery once in a year.

4.4 Frequency of maintaining Upholstery Fabric on regular basis

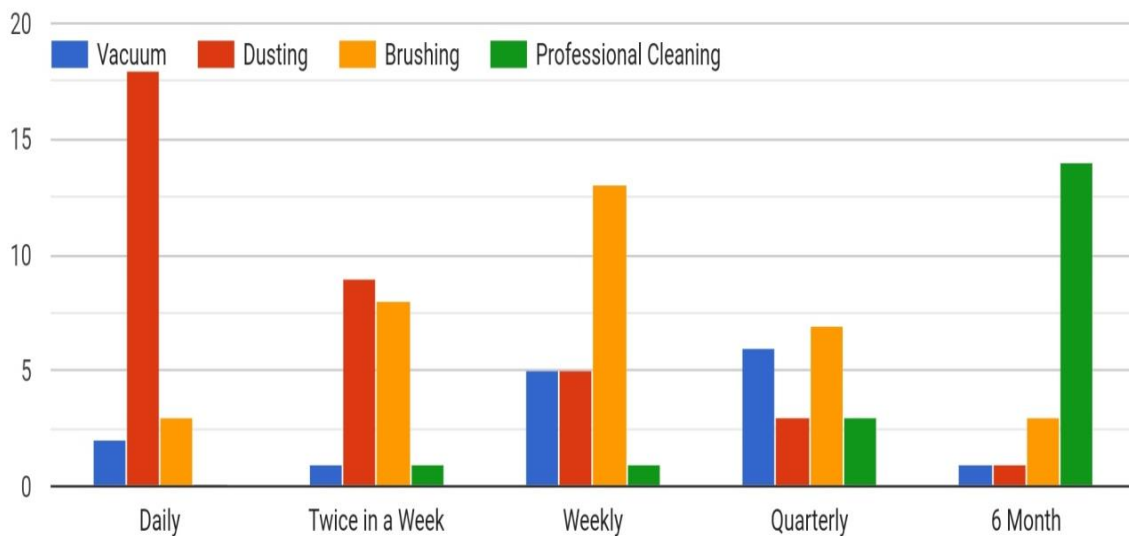


Fig.No. 4. 4 Maintaining upholsteries in a regular basis.

Figure 4.4 shows that maximum participants maintain their upholstery by dusting daily and brushing weekly. And they professionally clean once in a six months. This figure shows that maximum participants maintain their upholstery in a correct way.

4.5 Problem faced while cleaning of upholstery fabrics:

Some of the problems faced by the participants while washing the upholstery fabrics at home include:

None

Its very difficult to wash and after washing small pills are seen.

Yes some times fabric shape and size change.

Sometimes regular dusting does not clean the fabric property

Aesthetically looks dull



Self Cleaning Video.mp4

After analyzing the above data, a small video is created for awareness about cleaning of upholstery fabrics.

4.6 Guidelines incorporated from Video

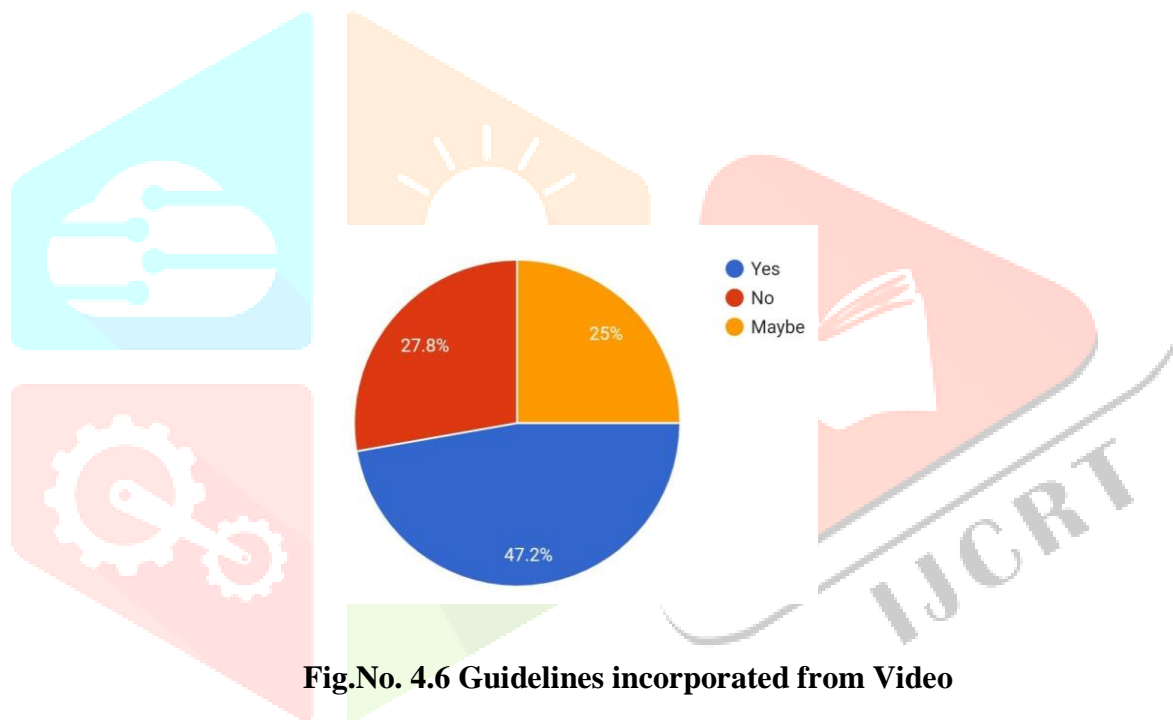


Fig.No. 4.6 Guidelines incorporated from Video

The above figure shows that almost 50% of the respondents have already used the tips given in the video. However, 27.8% respondents haven't used the tips, while 25% respondents are not sure of using the tips for cleaning of upholsteries.

4.7 Guidelines incorporated:

Some of the guidelines incorporated by the respondents in their day to day cleaning of upholstery fabrics from the video include:

- Avoid direct contact from sunlight.
- Rotating pillows, Cleaning with soft brush
- Dusting of curtains

- Cleaning the stains
- Cleaning the sofa set every 15 days, not allowing direct sunlight.
- Dusting upholsteries regularly.

4.8 Aspire to incorporate pointers from the video

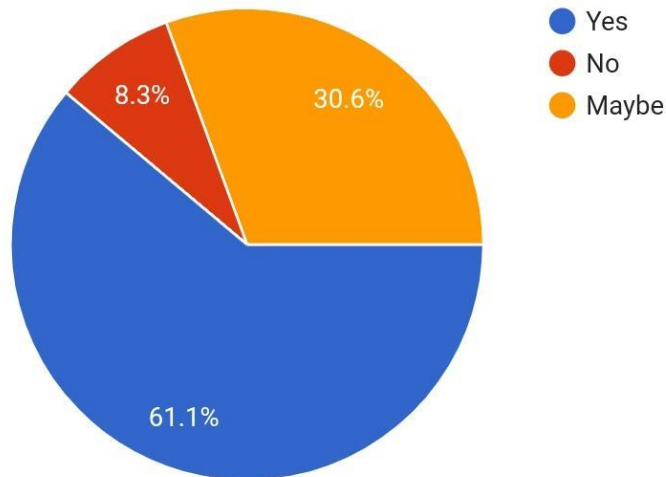


Fig.No. 4.8 Aspire to incorporate pointers from the video

The above figure shows that 61.1% respondent would like to use the tips given in the video. However, 30.6% respondent may use the tips, while 8.3% respondent will not use the tips given in the video. It is important to note that most of the respondents have understood the information on the cleaning of upholsteries and it will be helpful to them even in the future.

4.9 Aspire to use specific pointers:

The respondents have listed some of the pointers from the video which they would wish to use in the future for the cleaning of their upholstery fabrics. They are:

- Removing of stains
- Inside out cleaning
- Vacuum Cleaner to clean sofa
- Rubbing technique
- Keeping the curtains, sofa set clean and healthy and changing the pillow sides
- Avoid direct sunlight from sofa

4.10 Self-cleaning Fabric – Need of the future:

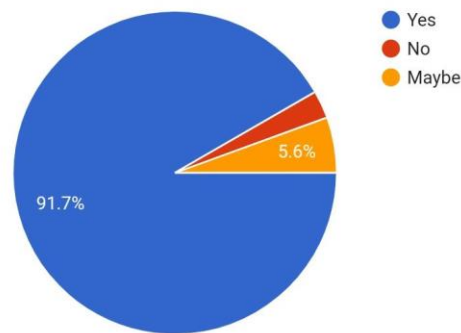


Fig. No. 4.10 Self-cleaning Fabric – Need of the future

The above figure shows that more than 90% respondents think that self-cleaning fabric will create a need in market. However, 5.6% respondents are not sure of people will use this fabric. When the consumers will start using this fabric, then they will understand how this fabric is useful in daily life.

5. Bibliography

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