Research Paper Home Science

Kutch Dyers & Printers Attitude and Practices Towards the Precautionary Measures and Handling Techniques in Context to Vat Dyes.

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ABSTRACT

Kutch is known as heaven of handicrafts and dyeing and printing is one of the primary occupation of people of Kutch, therefore play an important role in the socioeconomic development of society by providing employment to people. The workers in the handicraft industry suffer from various types of health risk factors and various occupational health hazards. It is high time that we need to wake up to the serious problem and make effort to reduce the risk caused to dyers and printers by assessing the knowledge, attitude and practice of fabric dyers and printers towards the health hazards due to dyes. Therefore the need arises to conduct study on Kutch Dyers & Printers Attitude and Practices towards the Precautionary Measures and Handling Techniques in context to Vat Dyes. Majority of the dyers and printers using Vat dyes had knowledge and practice in safe handling of dyes and chemicals. Very few dyers and printers doing vat dyeing had a positive attitude and practice of wearing personal protective wear or equipment like apron, eyeglasses and mouth & nose mask. Majority of dyers and printers had an appropriate attitude and practice towards use of first aid during accidental hazards. .

KEYWORDS Tie&dye, Bandhani, Vat Dyes,Personal Protective Equipment (PPE).

Introduction:

Kutch situated in the western part of Gujarat has a strong tradition of crafts. Majority of the handicrafts are created by Kutchi dyers and printers by dyeing and printing techniques with various kinds of dyes. From fibre, yarn, fabric, garment, to end product dyeing and printing processes are involved in one or the other stages and at times in all stages of handicraft production. Majority of dyers and printers of Kutch are following this profession from generations. Kutchi bandhani also called as bandhej is very renowned all over the world and is very much known for its intricate motifs. These dyers and printers produce colourful and beautiful crafts but show very less concern about their health so it become essential to study the Kutch dyers & printers attitude and practices towards the precautionary measures and handling techniques in context to vat dyes.

Tie Dyeing or tie and dye is a resist dyeing technique. In tie dyeing technique parts of the fabric are tightly wound with yarns, or the fabric may be tied into knots in selected areas. When the fabric is placed in a dye bath, the covered or knotted areas are protected from the dye. Careful attention to the shape of the wrapping and the placement of the tied areas can produce intricate and attractive patterns. (Collier & Tortora, 2001). Shibori, tritik, knotting, spiral and marble effect etc are beautiful tie-dyeing techniques. Often used for T-shirts, dresses, skirts, and other garments, tie-dyeing has become a popular craft technique today.

Bandhani is age old traditional craft of Kutch and Khatri community can be said to be preceptors of this craft. Khatris are involved in this art from the last 400 yrs. They produce very intricate and beautiful bandhej items. Bandhanis are very closely associated with deep rooted social customs of India and symbol of married life. Bandhani is also called as 'Bandhej' came originally from the word 'Bandhana' (to tie). Today, most of the Bandhani produced in India is made in Kutch, Saurashtra and in other neighbouring Districts. In this craft the cloth is first tied with small thread at different placing as per required motif. Then this cloth is dyed in the dyebath. When this dyed cloth is dried then the threads are loosened and opened which ultimately results in final designed cloth raw material which can be used for different purposes. Bandhani is used in many products like stoles, sarees, Punjabi dresses, scarfs, bed sheets, skirts and shawls etc.

Vat dyes are the fastest dyes for cotton, linen and rayon. Vat dyes are not only resistant to light and to acids and alkalies, but are also equally resistant to the strong oxidizing bleaches used in commercial laundries. The ancient method of fermenting and steeping indigo in a vat gave vat dyes their name. Indigo is one of the oldest natural vat dye but nowadays synthetic indigo and other vat dyes are used. They are prepared today on the same principle, but the process is shorter. Vat dyes are expensive .They are insoluble pigments, but they are made soluble in water by the use of a strong reducing agent, such as hydrosulphite dissolved in the alkali, sodium hydroxide. The fabric is immersed in this solution. Exposure to air or immersion in an oxidizing bath (bichromate) restores the dye to its insoluble form as a part of the fibre.

Many of the components used in Vat dyeing are known to cause skin problems so strict cleanliness, and strict use of protective clothing such as goggles, face masks, gloves, and aprons should be followed. Dye powders and solutions must never be allowed to contact the skin. Vat dyeing should be done only in fully ventilated room. Therefore there is a great concern that dyers and printers should be aware of the adverse effects of vat dyes as appropriate practice and attitude towards the precautionary measures is essential for safety and health of dyers and printers. Suitable personal protective equipment (PPE), including eye-protective equipment like eyeglasses, face protective equipment like nose & mouth mask should be worn to prevent contact with these hazards. So a study was conducted with the following objective:

- To find out opinion on vat dyes about the attitude and practices towards the precautionary measures and handling techniques among the dyers and printers.

Methodology:

The sample of the study comprised of 250 dyers and printers from Kutch region, selected by purposive sampling method. Among which 39 dyers and printers performed dyeing and

printing with vat dyes. The samples belonged to New Anjar, Old Anjar & Bhuj who are into regular dyeing and printing occupation of Kutch Region. A structured schedule was developed by the investigator to study the opinion level of the dyers and printers regarding the attitude and practices towards the precautionary measures and the handling techniques while using vat dyes. The tool was constructed in different sections with different response systems. The 5-point scale consisted of the items to measure the opinion on vat dyes about the attitude and practices towards the precautionary measures and handling techniques among the dyers and printers. The statistical measure used for the analysis of the data was percentage method.

Findings:

Level of response	**Score given**
To very great extent	5
To great extent	4
To moderate extent	3
To minimum extent	2
Not at all	1

Table showing the valid percentage of level of response on opinion on vat dyes on attitude and practices towards the precautionary measures and the handling techniques.

Sr. No.	OPINIONS	VAT DYES (%)				
		1	2	3	4	5
1	USE OF HAND GLOVES	-	5.1	2.6	2.6	89.7
2	USE OF ONLY PROPERLY LABELLED DYE	-	-	12.8	5.1	82.1
3	SAFE DISPOSAL OF CONTAMINATED DYES	5.1	2.6	35.9	5.1	51.3
4	PROPER STORAGE OF DYES	-	-	2.6	5.1	92.3
5	USE OF RUBBER SHOES	7.7	7.7	2.6	-	82.1
6	USE OF MOUTH AND NOSE MASKS	89.7	7.7	2.6	-	-
7	USE OF EYE GLASSES	94.9	2.6	2.6	-	-
8	KNOWLEDGE TO HANDLE WHEN DYE SPILLS	17.9	2.6	7.7	2.6	69.2
9	KNOWLEDGE TO HANDLE CHEMICALS	2.6	5.1	5.1	2.6	84.6
10	USE OF APRON	79.5	15.4	2.6	-	2.6
11	USE OF FIRST AID	38.5	15.4	2.5	5.1	38.5

89.7% of dyers practiced the use of hand gloves to very great extent, 2.6% to great extent, 2.6% to moderate extent and 5.1% of dyers practiced the usage of hand gloves to minimum extent.

- 82.1% dyers practiced use of properly labelled dyes to maximum extent, 5.1% to great extent, 12.8% to moderate extent.
- 51.3% dyers practiced safe disposal of contaminated dyes to maximum extent, 5.1% to great extent, 35.9% to moderate extent, 2.6% to minimum extent.
- 92.3% dyers practiced proper storage of dyes to maximum extent, 5.1% to great extent and 2.6% to moderate extent.
- Uses of rubber shoes as precautionary measure were practiced to maximum extent of 82.1%, to moderate extent of 2.6% and to minimum extent of 7.7%.
- Mouth and nose mask as precautionary measure were practiced by 2.6% to moderate extent and 7.7% to minimum extent.
- None of the dyers used eyeglasses as precautionary measure to maximum extent, 2.6% to moderate extent and 2.6% to minimum extent.
- 69.2% dyers had the knowledge to handle dyes on spilling to maximum extent, 2.6% to great extent, 7.7% to moderate extent and 2.6% to minimum extent.
- Dyers had the knowledge to handle chemicals to a very great extent of 84.6%, 2.6% to great extent, 5.1% to moderate extent and 5.1% to minimum extent.
- Attitude of dyers towards usage of apron were to maximum extent of 2.6%, moderate extent of 2.6% and minimum extent of 15.4%.
- The practice of use of first aid by dyers was to maximum extent of 38.5% , great extent of 5.1%, moderate extent of 2.5% and minimum extent of 15.4%.
- Majority of the dyers and printers doing vat dyeing had knowledge and practice in safe handling of dyes and chemicals.
- Only few dyers and printers doing vat dyeing had an appropriate attitude and practice of wearing personal protective wear or personal protective equipment (PPE) like apron, eyeglasses, mouth and nose mask.
- Very few dyers and printers doing vat dyeing had an appropriate attitude and practice towards use of first aid during accidental hazards.
- Majority of the dyers and printers had appropriate attitude and practice of wearing rubber shoes and hand gloves while dyeing with vat dyes.
- Thus, attitudinal change is required and these dyers need to be sensitized towards the harmful consequences of dyes on their health.

Implication of the study:

- Attitude of dyers and printers towards the usage of apron needs to be changed and should be made compulsory as a protective wear at dyeing and printing units.
- Sanitary facilities for washing, bathing and changing should be provided in dyeing units and the workers should be encouraged to use them as personal hygiene is particularly important for dye workers.
- More practical knowledge should be imparted by demonstrations to dyers and printers about use of (PPE) that is rubber shoes, eye glasses and mouth and nose mask as a precautionary measure to reduce health hazards and accidents.

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