

Occupational Hazards Caused By Leather Product Manufacturing Units



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Abstract:

The present study was undertaken to study the occupational hazards and problems faced by the workers who were involved in leather product manufacturing work in Agra, *Hing ki Mandi*. A descriptive research design was planned using survey and questionnaire method. Purposive sampling method in combination with lottery method was adopted to select the sample of 10 leather product manufacturing units in Agra, sample also included 50 workers.

The result highlighted the fact that detrimental work practices in leather product manufacturing units without use of safety aids resulting in various types of physical, ergonomic and biological hazards. The major problem faced by the workers were back pain, finger pain, elbow pain, neck pain due to long working hours and poor working condition. Physical problems include headache, nausea also face by the workers involved in leather product manufacturing work. Sometimes problems related to skin also faced by the workers i.e. itching, cracks, and pimple acne due to the exposure of different types of chemicals.

Introduction:

Agra is popularly known for its leather footwear since the Mughal era. In the very olden days Agra was involved in leather product manufacturing work. The Agra leather cluster is mainly involved into the manufacturing of footwear. The Agra footwear cluster comprises approximately 5000 units (2003). Among these 50 units were registered and mechanized and 200 of the units are registered and semi-mechanized. Remaining units were small scale semi-registered and un-registered firm and run as house hold units/workshop. These small scale units manufacture leather product by using traditional method without mechanization.

The Agra footwear cluster can be divided into two segments. This division is based on market: Domestic units and Export units.

Some of the units in Agra are involved only manufacturing of shoe uppers while some small house hold units are involved only with the closing operation of the shoes. This is the reason why some work is outsourced by the export house to these domestic units.

Having reviewed the available literature the investigator discovered the scarcity of database researches carried on such burning issues that are of high concern to the government. As a result the researcher got a hesitant desire to take an initiative to probe in the government concerning need based subject. The research that's why will be answered to exotic and destructive development of leather product manufacturing sector. Hence there was felt need of reliable records focusing on various aspects of

leather product manufacturing units including profile of the workers, technical aspects, and health problems of the workers engaged in leather product manufacturing work.

Methodology:

A descriptive research design was planned using survey and questionnaire method. To gain detailed knowledge of the functioning and existing status of leather product manufacturing units of Agra. Purposive random sampling technique was adopted for the present investigation in order to select respondents.

Based on secondary source of information congregated from various sources of the total small scale leather product manufacturing enterprises established in Agra, Hing ki mandi 10% of the total units i.e. 10 were selected for the study using purposive sampling method in combination with lottery method.

Of the total workers population a sample size of 05 workers from each selected unit using purposive sampling method to study there work profile and health problems faced by the working staff.

The data was presented in terms of percentages, frequencies and tabular form. The descriptive form depicts the scenario of the units.

Result and Discussion:

Finding of investigation as obtained in analysis of data using survey, observation and open and close ended questionnaire method are described and discussed under the following: The leather product cluster, technical information of the units, process of product manufacturing, profile of the workers, health problems of the workers engaged in leather product manufacturing work.

Leather Product Cluster:

Hing ki mandi is one of the major centers to make leather products in Agra. It is 5kms far and situated in the east of Agra.

The total population of this area is 15000 and total number of the unit is 100. There are 250-300 families engaged in leather product manufacturing work. The manufacturing of Hing ki mandi is restricted only in leather product manufacturing as they follow the old traditional method to manufacture leather product after performing some modifications.

Technical Information of the Unit:

The data regarding the area covered by the units revealed that majority i.e. 40% of the units covered an area of 550-750 square feet. 30% of the units covered an area of 750-950 square feet and remaining 30% of the units covered more than 950 square feet area. The finding further indicated that 50% of the units had an initial investment of rupees

200000-300000. Value of the data regarding the existing capital investment in table-1 has been shown below table-1:

Sr. No	Capital Employed	Frequency	Percentage (%)
1.	200000-300000	5	50
2.	300000-400000	3	30
3.	More than 400000	2	20

The data given above shows 50% of the units in Hing ki mandi are invested only 2-3 lac rupees and minimum number of the units are invested more than 4 lac rupees. This is because most of the units in Hing ki mandi are small scale units. The distribution of small scale units are on the basis of area covered by the units and capital employed by the units.

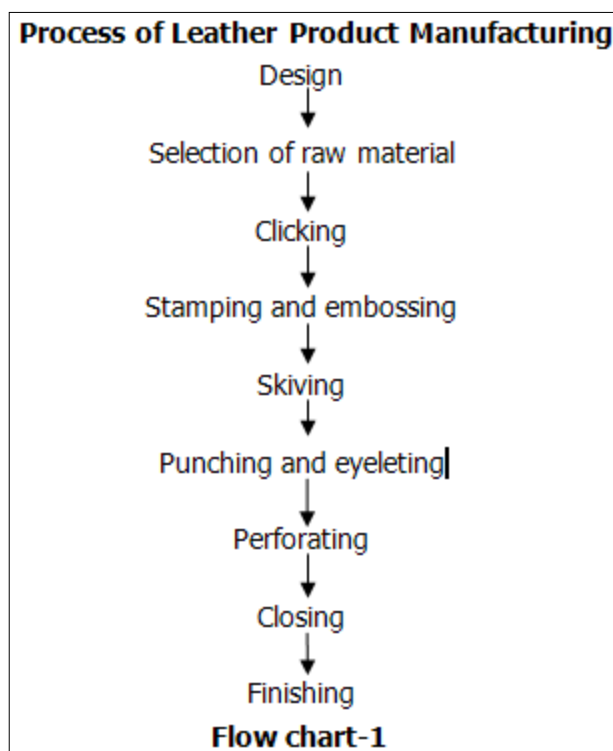
Table-2: Distribution of the Units according to the Type of Product Used:

Sr. No	Type of Product	Frequency	Percentage (%)
1.	Shoes	3	30
2.	Purses	2	20
3.	Bags\ Shoes	2	20
4.	Wallet\ Shoes	3	30

The data given above shows that 30% of the units in Hing ki mandi are involved in shoes manufacturing. 20% of the units are engaged in purse manufacturing other 20% of the units are affianced with bags and shoes manufacturing. Rest 30% of the units is involved in wallet and shoes manufacturing. This shows that maximum units are engaged in shoes manufacturing work. The reason is that Agra is popularly known for footwear manufacturing.

First of all the items to be manufactured is designed as per the choice of buyers and as per market demand. Now the raw material is selected for the manufacturing of different components of various articles. The next process is clicking in which different part of leather is cut to manufacture different leather products. It is performed by both mechanically and manually. The cut leather is stamped and embossed to avoid confusion in further stages of production. The next operation is skiving in which the thick edges of leather are reduced with the help of skiving knife.

This is done to avoid discomfort of product during use. Now punching and eyeleting is done in shoes and other product for decoration purpose and avoid damage of holes.



Perforation process is performed now which give leather product an aesthetic and pleasing look. It also covers certain defects of leather. The next and second last operation is closing in which different parts of leather are assembled and joined together. It is done either by stitching or by using adhesives. The last operation is finishing enhancing aesthetic look of leather products by covering the defects which might have produced during long production process. Finally the goods are polished to give shining appearance. Now the goods are inspected properly, packed properly and dispatched to the market.

Profile of the workers:

Most of the workers were male members out of which 82% of the workers belonged to Muslim community and remaining 18% of the workers belonged to Hindu community. Data pertaining to educational qualification of the workers revealed that only 02% of the workers were senior secondary educated (Table-3).

Table-3: Distribution of the workers according to Demographic Details:

Details	No. of Workers	Percentage (%)
Age Group (Yrs)		
20-30	20	40
31-40	22	44
41-50	08	16
Gender		
Male	30	60
Female	20	40
Religion		
Hindu	09	18
Muslim	41	82
Educational Qualification		
Primary	24	48
Secondary	24	48
Senior Secondary	02	02

The results also revealed that 50% of the workers have been working since past 15 years. 20% of the workers have been working since past 20-25 years who were permanent labors as stated by the owners of the units.

Health Aspect of the Workers:

Data analysis regarding the health problems faced by the workers as observed in table-7 show that workers usually suffered from wrist pain, hand pain, shoulder pain, finger pain type problems. Some of the problems related to skin like itching, cracks, pimple acne also faced by the workers sometimes due to the exposure of chemicals during closing, finishing process.

Table-4: Problems Faced by the Workers Owing to Various Occupational Hazards:

Occupational Hazards	Always		Sometimes		Never	
	(n)	(%)	(n)	(%)	(n)	(%)
Shoulder pain	06	12	17	34	27	54
Elbow pain	19	38	28	56	03	06
Hand pain	14	28	25	50	11	22
Wrist pain	25	50	19	38	06	12
Finger pain	22	44	24	48	04	08
Headache	09	30	30	62	11	20
Neck pain	11	22	19	38	20	40
Waist pain	18	36	21	42	11	22
Abdominal problems	22	44	28	56	00	00
Tuberculosis	00	00	16	32	34	68
Irritation in skin	03	06	17	34	30	60
Leg pain	35	70	08	16	07	14
Knee pain	10	20	23	46	17	34
Ankle pain	12	24	23	46	15	30
Irritation in eyes	01	02	15	30	24	68

The tabulated values indicate hand related problems that are majorly caused due to long and stressful work and heavy jobs performed. Abdominal problems, waist pain type problems also faced by the workers due to long sitting and laborious work. Irritation in skin and eyes problems faced by minimum number of the workers because short duration of exposure of chemicals only in finishing and closing process.

Conclusion:

To conclude it can be said that leather products of Agra have a charm of their own and are in demand in abroad. The units however have a bright future because of increased demand of leather product in world market. The outcome of the study shows that leather product of Agra are the oldest leather product industries. The change in design and manufacturing process has come up with the passage of the time. Leather manufacturing units in Agra at Hing ki mandi procure raw material form Haapur, Kanpur, and Agra (Local market).

Reference:

- Journal of scientific and industrial research vol-68
- Shanmugam Kavitha, “Polluting Leather Units face Closure Threat”, Business Standard, April 28, 2002
- cdc.gov/nccdphp/dnpa/bmi/index.com
- eubooks.com