

Survey On Occupational Health Hazards Of Working Men And Women In Cotton Mills

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Abstract: Cotton is a natural fibre of vegetable origin, like linen, jute or hemp and composed of cellulose. It is one of the principal crops of India and plays a vital role in the country's economic growth by providing substantial employment and making significant contributions to export earnings. India was recognized as the cradle of cotton industry for over 3000 years (1500 BC to 1700 AD). Out of about 50 species of cotton plants in the world, only four have been domestically cultivated for cotton fibers A Cotton mill is a factory housing powered spinning or weaving machinery to produce yarn or cloth from cotton . I have selected few Spinning and Ginning mills in Guntur as more number of these mills are locate here. More number of female workers are identified compared to men in these mills. Rural India has a long tradition of women's participation in agriculture, and cotton cultivation is no exception. Women play a major role in almost all the operations in the cotton farm. This paper explains the impacts on environment and the reasons behind it . Approximately about 40 workers (20 male workers and 20 female workers) were questioned.. It has identified that more than 60%percentage of the workers are effected with, vomiting, tremors, lack of coordination, difficulty breathing or respiratory depression, There is no awareness and technology so the technology should be improved by the government. Necessary measures can be suggested by them or the environmentalist to overcome the problem.

Key words:

1) Introduction on cotton mills 2) Environmental issues relating to it 3) control measures

1. INTRODUCTION

Textile industry is the second largest industry in India providing more employment after agriculture. Andhra Pradesh is the third largest state in the production of cotton with 55.00lakh bales and consuming only 34.00 lakh bales at present Cotton today is the most used textile fiber in the world

Cotton cultivation first spread from India to Egypt,China and the South Pacific. Even though cotton fiber had been known already in Southern America, the large-scale cotton cultivation in Northern America began in the 16th century with the arrival of colonists to southern parts of today's United States

There are many Spinning and Ginning mills are present in Guntur district as the crop production is more in this area. Ginning mills helps to remove cotton fibre from the seeds and Spinning helps to make the yarn into thread.

Ginning mills Cotton gin is a machine helps to separate the cotton fibres from the seeds

Spinning millsA spinning mill took raw cotton bales and opened them and cleaned the cotton in the blowing room. The cotton staples are then carded into lap. This is straightened and drawn into roving. The roving is now spun using one of two technologies: a mule or ring frame. The yarn can be doubled and processed into thread, or prepared for weaving.

Weaving

A weaving mill needed yarn suitable for the warp and the weft. The warp had to deliver on the beam, or was wound on the beam from cheeses by a beamer To obtain the extra strength needed, the yarn was sized on a sizer. The weft was wound onto the pirns for the shuttle on a pirner. These preparatory processes completed the yarn was woven on a loom. One weaver would operate 4 or six looms. A self-acting loom would stop when any thread broke, and the thread had to be re tied or pieced. The process required greater levels of light than spinning, and weaving sheds would often be single storey, with overhead north facing lights. Placing a loom onto the ground also reduced the problems caused by the vibrations of operation.

The preparatory processes and spinning happen in a spinning mill, weaving happens in a weaving shed and finishing at the bleach works and dye works. Traditionally these processes

occur in separate mills, though combination mills have been built which take raw cotton through to printed cloth.

2. STUDY AREA AND METHODOLOGY

I have visited Spinning mills in Chebrolu of Guntur district there I have studied about the spinning and ginning mills for survey

I have visited spinning mills like

1) Srivenkta lakshmi narsimha Spinning mills

2) SriSeshsai Spinning mills

Ginning mills like

1) Srilakshmi Vishnu ginning mills

2) Venkata padmavathi ginning mills

Srivenkta lakshmi narsimha Spinning mills and SriSeshsai Spinning mills are located in Chebrolu of Guntur district. Srilakshmi Vishnu and Venkata padmavathi ginning mills are present in Etukuru of Guntur district

Ginning is the process which helps to remove the seeds of cotton. Raw cotton consists of 66% of seed and only 33% can be removed by ginning. Remaining seed and the waste can be removed by the Spinning process. So more work is carried out in Spinning.

Approximately 300 employs in each spinning mills are present in which 180 members are residents and 120 members are non residents. The female workers are more in number when compared to male. More problems can be seen in female workers when compared to males. When inhaled, airborne cotton dust in textile mills causes symptoms and lung function changes without previous sensitization. It has been observed that most of the workers are not taking proper precautions. So the cotton dust particles enters through the nose and can damage lungs and causes respiratory bronchitis. They informed that they are suffering with vomiting, improper breathing, asthma after they joined. Women aged 20-40 years who were employed in these cotton textile mills were given a questionnaire that included questions on respiratory diseases and symptoms. Additional major questions include the effects of uncertainties in actual pollution exposures, the degree of prematurity of "excess" deaths, and whether the development of new cases of chronic disease is associated with air pollution. Public policy issues center around interpreting the new epidemiological studies in the light of these uncertainties and the analysis and management of the concomitant health risks.

OBJECTIVES

- 1) To study the spinning and ginning mills and its importance
- 2) To collect the data on the effects of cotton mills on human health.

3) To create awareness on the cotton fibers to the workers and suggest measures

In my survey 13 workers are effected out of 20 workers so 65% of the female workers are effected.

Classification based on the age

21-30	31 -40	41-50	51-60
8	7	4	1

Effected number based on age

21-30	31 -40	41-50	51-60
4	4	4	1

Here 8 workers are effected out of 20 so the percentage is 40.

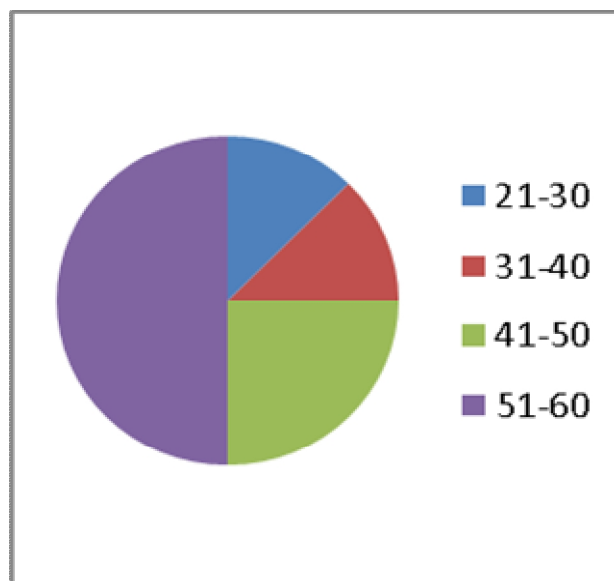
Classification depending on the age

21-30	31-40	41-50	51-60
3	8	4	5

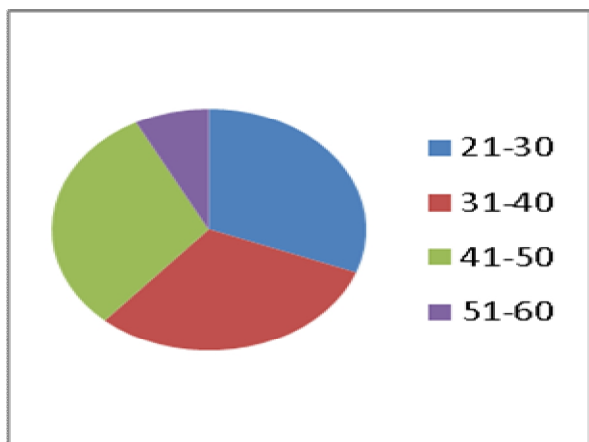
Effected numbers based on age

21-30	31-40	41-50	51-60
1	1	2	4

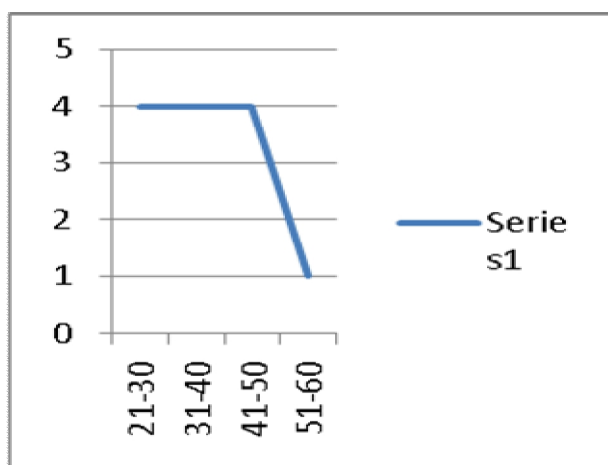
Male



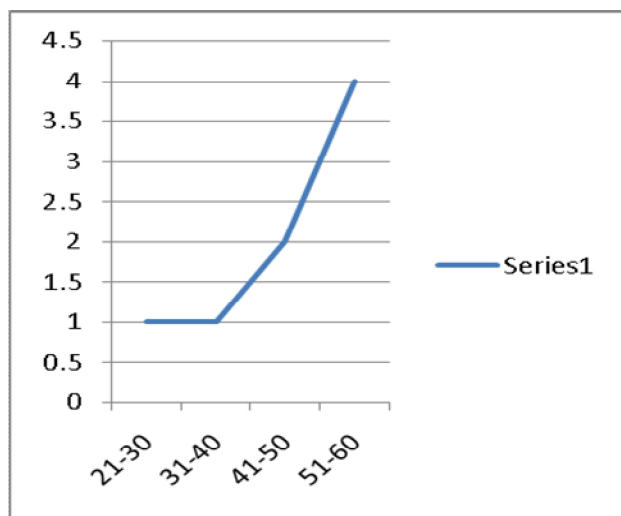
female



female



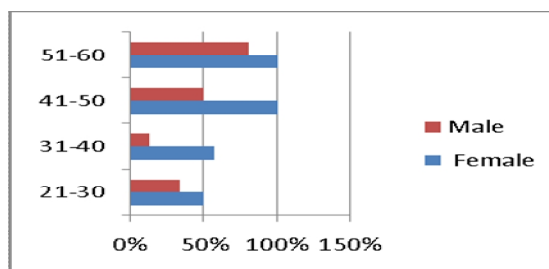
Male



Effected percentage of female and the male based on aged group

SNO	AGE GROUP	Female	Male
1	21-30	50%	33%
2	31-40	57%	12.5%
3	41-50	100%	50%
4	51-60	100%	80%

Barchart showing the effected percentage of male and female



The effected percentage of the male 21-30years 33%

The effected percentage of the male 31-40years 12.5%

The effected percentage of the male 41-50years 50%

The effected percentage of the male 51-60years 80%

The effected percentage of the female 21-30years 50%

The effected percentage of the female 31-40years 57%

The effected percentage of the female 41-50years 100%

The effected percentage of the female 51-60years 100%

So overall more than 60%female workers are effected when compared to female.

Effects on human health

Dust during handling and processing of cotton weaving or knitting of fabrics or dust produced from manufacturing process is known as cotton dust. Cotton dust present in the air may contain a mixture of many substances including ground up plant matter, fiber, bacteria, fungi, soil, pesticides, non cotton plant matter and other contaminants which may have accumulated with the cotton during the growing, harvesting and subsequent processing or storage periods. The Micro-dust comprises 50-80% fibre fragments, leaf and husk fragments, 10-25 % sand and earth and 10-25 % water-soluble materials. The high proportion of fibre fragments indicates that a large part of the micro-dust arises in the course of processing. Nearly about 40 % of the micro dust is free between the fibres and flocks, 20-30 % is looselybound, and the remaining 20-30 % bound to the fibers.

- 1) All women had some potential exposure to cotton dust. male workers exposed to dust in carding and spinning rooms of a cotton textile mill had byssinosis —that is, chest tightness, or cough.

- 2) The cotton dust in the air causes air pollution and degrades environmental quality. Dust particles settle on the land and affect the food chain.
- 3) Dust may enter into the lung airways and the gas exchange region or it may reach the alveolar region of the lungs.
- 4) It causes harm when deposited anywhere in the respiratory tree including the mouth and nose.
- 5) Cotton fibers released into the air may cause air pollution.
- 6) In Etikuru there are 300 ginning mills present approximately that have contaminated the land. Most of the cotton dust entered into the air and disrupted air quality.
- 7) It has been observed that workers in the spinning mills met with accidents often.
- 8) I have observed that the workers also suffered with nose block and throat infections frequently and skin irritation.



This cotton dust in the ginning mills can affect the workers



Cotton fibers on road in Etikuru



Sriveshasai spinning mills



Srivenkta lakshmi narsimha Spinning mills

CONCLUSION

Finally I conclude that more women workers are there in Spinning and Ginning mills and suffering with many problems. Female workers are more in number due to poverty and family problems. Lack of proper sanitation and precautions made the situation worse.

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