A Study on Health Status of Women Workers in Textile Industries of Aruppukottai Block

K. Boopathiraj
Assistant Professor of Economics (PG)
Ayya Nadar Janaki Ammal College (Autonomous)
Affiliated to Madurai Kamaraj University, Madurai), Sivakasi, India

P. Balakrishnan
Assistant Professor of Economics (PG)
Ayya Nadar Janaki Ammal College (Autonomous)
Affiliated to Madurai Kamaraj University, Madurai), Sivakasi, India

Abstract

The textile industry is the second-largest worldwide industry after agriculture. One of the largest textile sectors in the world, the Indian textile industry accounts for roughly 14% of the nation's overall industrial output. Additionally, it makes up about 3% of the nation's GDP and significantly increases the amount of foreign exchange the nation earns. With more than 35 million people currently employed, India's textile industry is also the greatest in terms of employment creation. Industrialization is essential for prosperity and occasionally for a country's existence. Initialization alone is insufficient; genuine benefits come from workers' ongoing high performance, which is only made feasible by their good health. Industrial employees are only a small portion of the general population, yet the same factor that affect population health also apply to them

The textile industry is one of the most rapidly expanding sectors for export and has a high labour demand. Numerous individuals in the nation are employed in the textile sector, however in the current environment, it is crucial to place an emphasis on raising awareness of environmental issues like air, water, and noise pollution during the conversion of fibre into fabric. Sorting houses, gins, and gutter sections are all parts of the textile industry. Sorting entails classifying cotton based on quality. In the gin house, the seeds are removed from the cotton and gathered in the gutter. There is a lot of dust in the blow-room where the cotton bales are opened and cleaned. Here, the cotton is repeatedly violently beaten to remove impurities, and then, in the carding area, the cotton laces are dragged by a machine to remove dust, leaves, twigs, and other debris. The carding room is filled with a lot of cotton dust as a result of this procedure. The following step of the project is carried out in the spinning shed, where there is also a lot of dust. A natural fibre called cotton is used to make clothing. When cotton is treated, tiny dust particles are released into the atmosphere.

The individual handling the fibre breathes these particles into their lungs, which results in a long-term reduction in respiratory capacity. Brown lung (or byssinosis), a condition caused by exposure to a lot of cotton dust, affects thousands of people working in the textile sector. By inhaling it, textile dust can enter the body, and tiny dust that contains fibres can end up in the alveoli. The fibbers cannot be removed. Lung cancer, fibrosis, pleural plaques, and bronchitis are all caused by the dust that

is collected in the lung. After prolonged exposure to textile dust, lung function is compromised. Breathlessness, chest pain, and subsequently bronchitis with increased sputum are the symptoms.

Introduction

From the historical past to the contemporary world, clothing has maintained a significant part in human life. In today's market, the apparel industry is a worldwide one. It is possible to date the beginning of clothes creation to 2000 BC. In addition to agriculture, the production of clothing is now one of the major economic activity that generates significant employment. The development of garment units is largely attributed to the highly skilled and semi-skilled labour force that the Indian textile and clothing sector offers.

Global Scenario in Textile Women Workers

The textile and garment sectors are important to the global economy because they employ millions of people, largely women, in around 200 nations. Globally, the clothing sector is undergoing organisational and manufacturing changes, and growing trade activity is changing employer-employee relations. The global apparel industry is about to experience significant institutional changes. Despite being one of the most globally interconnected businesses, advanced economies continue to benefit from distortions in the world's exceptional trade practises. Trade limitations, price, and quality have all evolved over the past three to four decades to become significant determinants of the sector's development patterns. China, India, Pakistan, and Vietnam are traditional heavyweights in the manufacture of textiles and clothing, and they are in competition with one another. Despite the fact that the sectors are geographically spread out around the globe, China currently rules the textile and clothing market.

The greatest producer and exporter of textiles in the world, China has made the most investments in spinning and weaving machinery. In spite of positive growth factors like cotton's eco-friendly, biodegradable nature, its versatility, exports and export potential, the employment it creates in the agricultural and industrial sectors, and employment potential, outdated technology and a persistent labour problem are among the many factors that contribute to the sickness in the cotton textile industry globally. Therefore, it was believed that the entire cotton sector needed to have the required protection in order to preserve its level of production, enable, and employment.

Occupational sickness is a reflection of the health risks that are introduced by exposure in the workplace. Their exposure to health risks at work is made worse by their lack of education, ignorance of the dangers of their profession, general squalor, poor nutrition, and the climatic susceptibility of this region to epidemics. The area of community medicine known as occupational health deals with the impact of employment on people's health. Every profession has certain negative health repercussions; cotton textile workers are one such occupational category.

Health Problems of Women Textile Industry Workers

Women have a variety of roles to perform in society today. They frequently perform two or more activities at once. As a result, they are more likely to get occupational illnesses, which are further worsened by social, psychological, and physical problems. The relationship between nutritional status and respiratory health can take many different forms. Malnutrition, whether it occurs alone or as a result of an acute or chronic illness, impairs respiratory function by weakening diaphragmatic contraction. In individuals with low respiratory reserve and CO_2 retention, the relationship between nutrition and the pulmonary system is particularly obvious.

Despite progress in nutrition throughout the course of the 20th century, more than 1 billion people suffer from micronutrient deficiencies that lead to illness or disability, and over 2 billion people are at risk. Depression, dementia, reduced work ability, and a loss of bone and muscle strength are among the diseases and conditions brought on by micronutrient deficiencies. The health of the individual and the calibre of their work performance are directly impacted by these problems, many of which are reversible. As a result, it is crucial that the workforce has an adequate supply of micronutrients. Hundreds of millions of workers are afflicted by iron deficiency anaemia.

Anaemia and a milder iron shortage reduce physical work capacity and productivity in repeated tasks, although supplementation is an easily affordable cure. Iodine and iron are the two most common micronutrient deficits. Deficiencies in folic acid, vitamin B6, and vitamin C are among the others. Among female cotton mill workers, anaemia and milder iron deficiency were linked to lower work performance and impaired immunological function. In anaemic middle-class women, the impact of iron supplementation (ferrous fumarate) on the iron status and physical labour ability was investigated. It was shown that mild to moderate iron deficiency anaemia affected 60% of the individuals.

Need for the Study

Despite the fact that India's textile industry employs a sizable number of people, the health risks to women employed in the sector have long gone unrecognised. Additionally, all previous studies were restricted to a certain location, and there is currently no recent study that accurately depicts the nutritional and health status of textile mill workers in the study area. Working mothers, wives, and employees all have a variety of responsibilities. They are prone to adjustment crises due to the combined responsibilities of home and work, which may result in stress and strain. Considering these information, an attempt has been made in this study to assess health status of women working in textile industries in Aruppukottai block is essential.

Objectives of the Study

The objectives of the study are:
• To know the socio-economic status of the sample respondents in the study area.
• To acquire information about work pattern, nutritional and health status of textile women workers in the study area.
• To analyse the contribution of women workers to the family income.
• To suggest suitable measures to maintain good health condition by the textile women workers in the study area.

Hypothesis

To give a specific focus to the objectives, following hypotheses have been framed to test the above objectives by using appropriate statistical tools in the analysis chapter.
• There is no significant contribution made by the women workers to the family income

Sampling Frame

Aruppukottai Talk consists of nine textile milla in different areas. For the study the researcher has selected three mills in the basis of number of shifts and number of workers working in the textile mill. Accordingly, the researcher has ranked all the nine mills and the top three ranked mills are included in the study. Accordingly, the selected textile mill are, Sri Ramalinga 'A' Unit, Sri Ramalinga 'B' unit, and Sri Koppammall Mill. All these three mills are running three shifts. The number of women workers working in Sri Ramalinga 'A' Unit is 1200, Sri Ramalinga 'B' Unit

is 700 and Sri Koppammal mill is 250. Totally 2150 women workers are working in these three mills. Out of these 2150 women workers, the researcher wants to select 300 women workers for the present study by adopting proportionate random sampling. Accordingly, the researcher has selected 167 workers from Sri Ramalinga 'A' Unit, 98 workers from Sri Ramalinga 'B' Unit, and 35 workers from Sri Koppammall mill.

Tools of Analysis

For the analysis of data and testing the hypotheses, the following statistical tools are applied.
- Percentage
- Charts
- Correlation and Regression are used to analyze the data.

General Information of the Sample Respondents

A crucial component of studies relating to health is general knowledge. Therefore, based on their information, the researcher classified the sample of female workers in the textile industry, as shown in Table 1.1.

Table 11 General Information of the Sample Respondents

Category	Particulars	Number of Respondents	%
Age (in Years)	Below 20	31	10.33
	20 – 30	40	13.33
	30 – 40	120	40.00
	40 – 50	67	22.34
	Above 50	42	14.00
Educational Level	Primary	85	28.33
	Middle	72	24.00
	High School	90	30.00
	Higher Secondary	41	13.67
	College Level	12	4.00
Number of Earning Members	One	26	8.67
	Two	225	75.00
	Three	40	13.33
	Four	9	3.00
Number of Years of Service	Up to one	80	26.67
	One to Five	142	47.33
	Five to Ten	42	14.00
	Ten to Fifteen	20	6.67
	More than Fifteen	16	5.33
Nature of Employment	Permanent	25	8.33
	Temporary	275	91.67
Nature of Work	Day shift Only	169	56.33
	Alternate Shift	131	43.67

Source: Primary data

It is clear in Table 1.1 that out of 300 sample respondents,120 (40.00 per cent) respondents are 30 to 40 years old, 67 (22.34 per cent) respondents are 40 to 50 years old, 42 (14 per cent) respondents are above 50 years old, 40 (13.33 per cent) respondents are 20 to 30 years old and the remaining 31 (10.33 per cent) respondents are below 20 years old. Educational level shows that out of 300 sample respondents, 90 (30.00 per cent) respondents have completed high school level, 85 (28.33 per cent) respondents have completed only primary level education, 72 (24.00 per cent) respondents have completed middle school level, 41 (13.67 per cent) respondents have completed higher secondary level and the remaining 12 (4.00 per cent) respondents have completed college level. It should be noted that no one textile industry women worker is illiterate in the study area, but the educational attainment in terms of higher level is very low. Further, it is pathetic that, four per cent of the women are working in textile industry casual labourer even after completing their college education. It clearly explains the unemployment situation of an economy. It is obvious from number of earning members, 225 (75.00 per cent) respondents opined that the earning members in their family are two. Another 40 (13.33 per cent) and 26 (8.67 per cent) respondents opined that the earning members in the family are three and one respectively. The remaining nine (3.00 per cent) respondents informed that the earning members in their family are four. It is easy to understand from year of service, 142 (47.33 per cent) respondents are serving in the present industry from one year to five year. Eighty (26.67 per cent) respondents are serving from five to ten years in the present industry. The remaining 42 (14.00 per cent), 20 (6.67 per cent) and 16 (5.33 per cent) respondents are serving in the present factory from five to ten years, ten to fifteen years and more than fifteen years respectively. Nearly 50 (per cent) of the women workers in the study area are having one to five years experience. It is apparent from the nature of employment, only 25 (8.33 per cent) respondents are permanent in the job. The remaining 275 (91.67 per cent) respondents are temporary workers because they are employed on contract basis.   It is obvious from nature of work, 169 (56.33 per cent) respondents are working in day shift only. Remaining 131 (43.67 per cent) respondents are working in alternate shift i.e., they work both in day shift, half-night and full-night.

Contribution to Family Income

It is crucial to demonstrate the worker's contribution to the family's income. because a lot of rural families in those areas rely solely on the additional revenue earned by women and children. In this regard, the researcher gathered data on how much money women workers in the study area contributed to their families in terms of income, which is shown in Table 1.2.

Table 1.2 Contribution to Family Income by the Sample Respondents in the Study Area (in Rs.)

Monthly Income	Below 2000	2000 – 4000	4000 - 6000	Total
Below 5000	4	2	2	8
5000 – 10000	28	5	41	74
10000 – 15000	44	29	14	87
15000 – 20000	17	52	16	85
Above 20000	1	31	14	46
Total	**94 (31.33)**	**119 (39.67)**	**87 (29.00)**	**300**

Source: Primary data

It is evident from the Table 1.2 that out of 300 sample respondents, 94 (31.33 per cent) respondents are contributing below Rs.2000 to their family income, 119 (39.67 per cent) respondents are contributing Rs.2000 to Rs.4000 to their family income and the remaining 87 (29.00 per cent) respondents are contributing Rs.4000 to Rs.6000 to their family income.

Reasons for doing Textile Industry Job

The researcher gathered data on the motivations behind performing this task, which is depicted in Table 1.3.

Table 1.3 Classification of the Sample Respondents on the Basis of Reasons for doing Textile Industry Job

S. No.	Reasons	Number of Respondents	%
1	Nearer to Home	104	34.67
2	Working from early age	59	19.67
3	Relatives Working Here	39	13.00
4	No Other Job Opportunity	98	32.66
	Total	**300**	**100.00**

Source: Primary data

It is obvious from Table 1.3 that out of 300 sample respondents,104 (34.67 per cent) respondents are engaged in this industry because the work place is nearer to their house, 59 (19.67 per cent) respondents are working in the textile industry from their early age. Remaining 39 (13 per cent) and 98 (32.66 per cent) respondents are working in the textile industry because of their relatives working in the same industry and no other job opportunity in the study area respectively.

Category of Work

Different types of health issues must be dealt with by various worker categories. As a result, the researcher categorises the sample of female workers according to the type of work they do; this is shown in Table 1.4.

Table 1.4 Classification of Sample Respondents on the basis of Category of Work

S. No	Category of Work	Number of Respondents	%
1	Mixing	20	6.67
2	Drawing	12	4.00
3	Simplex	50	16.67
4	Spinning	69	23.00
5	Auto Cone	74	24.67
6	Cleaning	38	12.67
7	Doubling	5	1.66
8	TFO	10	3.33
9	Cheese Winding	5	1.67
10	Reeling	17	5.66
	Total	300	100.00

Source: Primary data

It is understood from Table 1.4 that there are 10 different departments in which the women are employed in the textile industry. Number of sample respondents working in different departments in classified and given in this table 5.1. Nearly 1/4th of the respondents working in spinning and auto-cone department. More than 10 (per cent) of them are working in simplex and cleaning department.

Job Satisfaction

One of the key factors affecting every worker's mental health is job satisfaction. So, the researcher asks the sample respondents for their thoughts on job satisfaction, which are then displayed in Table 1.5.

Table 1.5 Classification of Sample Respondents on the basis of Job Satisfaction

S. No	Job Satisfaction	Number of Respondents	%
1	Satisfactory	146	48.67
2	Not Satisfactory	49	16.33
3	No Comment	105	35.00
	Total	**300**	**100.00**

Source: Primary data

It is clear from Table 1.5 that out of 300 sample respondents, 146 (48.67 per cent) respondents are feeling satisfied on their joband 49 (16.33 per cent) respondents field not satisfied with their job.The remaining 105 (35 per cent) respondents are not able to reply any comments. There is a fifty-fifty change of job satisfaction among the women textile workers in the study area.

Health Problems Identified Before Entering into Textile Industry Job

The researcher gathered data based on health issues discovered prior to beginning employment in the textile industry, as shown in Table 1.6.

Table 1.6 Health Problems identified before entering into Textile Industry Job

S. No.	Health Problems	Opinion of the Respondents
1	Healthy	164
2	Eye Problem	15
3	Head Ache	31
4	Respiratory Problem	24
5	Stomach Problem	39
6	Nausea Problem	9
7	Frequent Body Ache	9
8	Back Ache	21
9	Joint Problem	6
10	Anemia	6

Source: Primary data

It is identified from Table 1.6 that out of 300 sample respondents, 15, 31, 24, 39, nine, nine, 21, six and six respondent had eye problem, head ache, respiratory problem, stomach ache, nausea, body ache, back ache, joint pain and anemia respectively. It should be noted that the remaining 164respondents are not identified any health problems before entering into the textile industry job.

Health Problems identified after entered into the Textile Industry Job

The same is shown in Table 1.7. The researcher gathers data on health issues mentioned by sample respondents after beginning employment in the textile industry.

Table 1.7 Health Problems Identified After Entered into the Textile Industry Job

S. No	Health Problems	Opinion of the Respondents
1	Healthy	39
2	Eye Problem	150
3	Head Ache	180
4	Respiratory Problem	107
5	Stomach Problem	39
6	Nausea Problem	21
7	Frequent Body Ache	132
8	Back Ache	60
9	Joint Problem	108
10	Anemia	76

Source: Primary data

It is evident from Table 1.7 that out of 300 sample respondents,150, 180, 107, 39, 21, 132, 60, 108 and 76 respondent have eye problem, head ache, respiratory problem, stomach ache, nausea, body ache, back ache, joint pain and anemia respectively. It should be noted that the remaining 39 respondents are not identified any health problems after entering into the textile industry job. Before enter into textile job nearly 60 (per cent) of the sample workers are healthy and they don't have any health problems. But after entering into this job the health condition of the workers are affected due to dust pollution.

Hypothesis Testing

H_0 =There is no significant contribution made by the women workers to their family income.

R	0.74
Y	3948 + 0.74 x

It is ascertained that the (r) value between income of the women and the income of the family is 0.74 and it is also significant at 1% level. It can be said that there is a high degree of positive correlation between income of the women and income of the family. It can also be interpreted that the contribution of women workers against their family income is 0.74. So the contribution of women to run the family is inevitable.

H_1: There is a significant contribution made by the women workers to their family income.

Suggestions

• To avoid dust and noise pollution, the workers should wear masks and ear bluks during working hours. Wearing of these devices is mandatory and the employers of the textile mill should provide these facilities to all workers working in textile mills.

• Majority of the women are wearing serious during working hours and they are moving with machines. There is a possibility of accident. To avoid this, overcoat facilities should be provided and make it mandatory.

- Regular medical checkup in the form of medical camps should be organized in collaboration with the Government medical authorities or private medical care providers.
- Women workers are playing dual role i.e., house wife in the family and employee in work place. This will increase stress and stress related problems. Hence, the mill authorities should provide psychological counseling to the women workers to rid-off from stress.

References

1. Ahmed, S and Raihan, M.Z., (2014), "Health Status of the Female Workers in the Garment Sector of Bangladesh", Journal of The Faculty of Economics and Administrative Sciences, Vol.4 (1), pp.43-58.
2. Ajeet Jaiswal., (2011), "The occupational health function among female textile workers", International Journal of Sociology and Anthropology Vol.3 (3), pp.109-114.
3. Akhter .S et al., (2010), "Health and Occupational Safety for Female Workforce of Garment Industries in Bangladesh", Journal of Mechanical Engineering, Vol. ME 41(1), pp.65-70.
4. Armstrong J. Ramazzini., (1982), "Teaching Material for 'Biomechanical aspects of Hand Performance and Disorders", Department of Industrial and Environmental Studies, University of Michigan.
5. De Silva, P.V. et al., (2013), "Health status and quality of life of female garment workers in Sri Lanka", Galle Medical Journal, Vol.18 (1), pp.1-7.
6. Hina Chaudhry et al., (2014) "Occupational Health and Safety Studies and Assessment of Asthma in Employees Working in Yarn Making Sector of a Textile Industry near Wan-Radha-Ram", Basic Research Journal of Medicine and Clinical Sciences, ISSN:2315-6864, Vol.4 (1), pp 20-36.
7. Jennet, J.V. and Jeyanthi, G.P., (2006) "Pulmonary Health Status of Ginning Factory Women Laborers in Tirupur, India", Indian Journal of Occupational & Environmental Medicine, Vol.10 (3), pp.116-120.
8. Jump up to:"Census of India 2001: Basic Data Sheet: District Virudhunagar"(PDF). Registrar General & Census Commissioner, India. Archived(PDF) from the original on 25 September 2012.
9. Lina Bandyopadhyay et al., (2012), "Musculoskeletal and Other Health Problems in Workers of Small Scale Garment Industry – An Experience from an Urban Slum, Kolkata", IOSR Journal of Dental and Medical Sciences (JDMS), ISSN: 2279-0853, ISBN: 2279-0861. Vol.2 (6), pp 23-28.
10. Meenaxi Tiwari and Sudha Babel (2013), "Health and nutritional status of the workers working in knitting industry located at Kanpur, India", Asian Journal of Home Science, Vol.9 (1), pp.267-271.
11. Metgud D. C., (2008), "An Ergonomic Study of Women Workers in a Woolen Textile Factory for Identification of Health-related Problems", Indian Journal of Occupational and Environmental Medicine Vol.12 (1), pp.14–19.
12. Metgud D.C et al., (2008) have made a study on "An Ergonomic Study of Women Workers in a Woolen Textile Factory for Identification of Health – Related Problems", International Journal of Occupational and Environmental Medicine, Vol.12 (1), pp.19.14.
13. Nair D.K. (2005), "Indian Cotton Mills Federation", Yojana, Vol-2 (1), pp.26-36.
14. Noopur Tandon and Eswara Reddy .E., (2013), "A Study on Emerging Trends in Textile Industry in India", AMET International Journal of Management, ISSN:2231-6779, pp.81-88.
15. Punitha Kumary. P., et al., (2016) "Pattern of Morbidity among Female Textile Workers in Puducherry, South India", International Journal of Medicine and Public Health. Vol.6 (3): 140-143.

16. Raghbir Singh and Lalit Mohan Kathwia., (2005), "Preparedness of Indian Apparel Exporters after Multifibre Arrangement, An Analysis of Selected Firms", The ICFAI University Press, pp.26-46.
17. Rajesh, S. and Manoj, P.K., (2015), "Women Employee Work-life and Challenges to Industrial Relations: Evidence from North Kerala", IPASJ International Journal of Management (IIJM), Vol.3 (4), pp.1-8.
18. Rangarajan .K., (2012), "International Trade in Textiles and Clothing", paper presented in the International Conference - Textile and Clothing Management.
19. Regupathy Subramanian .K., (2004), "Energy Management in Textile Industry", Allied Publishers Pvt. Ltd., New Delhi.
20. Sherly Thomas., (2011) "A Study on the Health Problems of Women Working in a Textile Unit in Coimbatore", International Journal of Science and Technology, Vol.1 (5), ISSN 2224-3577, pp.200-203.
21. Sridevi, D. and Radhai Sri, S., (2014) "Health Status of Spinning Women Workers", International Journal of Science and Research (IJSR), ISSN (Online): 2319-7064, Vol.3 (12), pp.2568-2570.
22. Sudeshna Saha (2014), "Women Employees in Garment Industries A Case Study Conducted in Selected Garment Industries of Peenya Industrial Area, Bangalore", International Journal of Management Research and Business Strategy, Vol.3 (3), pp.128-137.
23. Tushar Kanti Saha et al., (2010), "Health Status of Workers Engaged in the Small-scale Garment Industry: How Healthy are they?", International Journal of Community Medicine, PMCID: PMC2888354, Vol.35 (1): pp.179-182.
24. Zorawar Singh (2015), "Health Status of Textile Industry Workers: Prevalence and Socioeconomic Correlates of Different Health Problems", Public Health and Preventive Medicine, Vol.1 (3), pp.137-143.