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Occupational Health Hazards among Garment Industry Workers in Unorganised Sector in Tiruppur

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Abstract: ***Occupational health risks are a growing challenge for humanity as a whole. The majority of the labour force works in the unorganised or informal sectors, which make up a significant portion of the Indian economy. The occupation employs a large number of people on a daily pay, and these people are frequently exposed to many kinds of dangerous materials, which could eventually lead to occupational diseases in the employees and their families. The work environment in the garment industry, on the other hand, is hazardous and risky for the employees, which causes a number of health issues from many sorts of physical, chemical, ergonomic, and biological risks. In order to assess the safety measures used in the garment industry, this paper measures work environment parameters like lighting, noise, temperature, and humidity. Ergonomic workstations, inadequate ventilation, excessive noise, dust, and the lack of use of personal protective equipment were the main issues faced by the workers in these industries.***

Keywords: Occupational health, Garment industry, Safety, Protective equipment

I. INTRODUCTION

Due to their dangerous work environments, workers in the garment sector have recently experienced a significantly higher rate of occupational health concerns. The garment industries, which account for around 7% of global industrial production and 8.3% of global trade in industrial materials, are among the most significant strategic industries. Additionally, employs more than 14% of the global labor force. In different nations around the world, it employs about 40 million people. One of the largest knitted garment manufacturing and exporting clusters in South Asia is Tirupur, which is situated in Western Tamil Nadu, South India. Since manufacturers started exporting to Europe in the early 1970s, the industry has grown steadily, and it is now a major hub for clothing exports to the global market. Tiruppur, also referred to as "T-shirt city," is the major garment-producing region in the south and will produce around 80% of the knitwear that will be exported outside. The key ingredient for productivity and economic prosperity is a well-motivated and healthy labor force. Workers seek better compensation for their productive labor by requesting safer working conditions. High rates of accidents, occupational diseases, and unhealthful working conditions are thought to originate from the expansion of operations' scale coupled with the ageing of mechanical equipment and the introduction of complex and dangerous technology.(1)

WHO (1948) defined health as a condition of whole physical, mental, and social wellbeing rather than only the absence of diseases or infirmities. Concerned with health risks associated with the workplace environment is occupational health hazard. Work physiology, occupational hygiene, occupational psychology, occupational toxicology, and other fields are all included in the science of workplace health hazards.(2) One of the most important planned industries is the clothing sector, which accounts for 8.3% of all trade in industrial materials and around 7% of global industrial production. Additionally, employs more than 14% of the global labor force. In different nations around the world, it employs about 40 million people.(3) Numerous health issues are brought on by the hazardous and unhygienic working conditions in the textile sectors. Workers should be safeguarded against a variety of occupational health risks because they constitute the backbone of the national economy. The workers' health and safety have so been acknowledged as fundamental human rights. (4) The same dangerous working conditions that are present in other export factories are also present in garment factories, including long hours on excessively rapid production lines, extremely low pay, sexual harassment, anti-union violence, limited breaks, and a lack of job security. When workers cut, trim, and stitch fabric, dust is produced in the garment construction unit. Even if fabric dust from materials treated with chemicals is hazardous in and of itself. Breathing issues may result from inhaling cotton and other fabric dust.

Because of factors like:

1) Poor health status brought on by poverty, overcrowding, illiteracy, malnutrition, higher prevalence of infections, parasites, and other diseases, lack of adequate medical and health care facilities, and a host of other factors, occupational health problems affecting workers in our country, in fact, workers of any developing country, are likely to be much more complicated and dangerous than those of developed countries
2) A significant portion of the health issue facing garment workers is caused by non-industrial ailments. In fact, industrial employees have a greater frequency of several common diseases than the general population, including respiratory conditions (flu, bronchitis, cough, asthma), TB, peptic ulcers, dysentery, etc.
3) The primary cause of the overall absence is illness absenteeism. There is no doubt that the incidence of sickness is high among our employees, despite the fact that the causes of this high absenteeism due to illness are quite complex and varied. The payment of medical benefits in cash in lieu of in-kind medical care at the plant level may be one of the primary causes (as per Industrial workers Wages and Productivity Commission). Effective health care procedures implemented at the workplace to provide urgent treatment in the early stages of many of these illnesses will shorten the course and will greatly reduce the likelihood of disability due to illness.
4) Health risks are brought on by the absence of laboratory facilities for monitoring, analyzing, and evaluating the dangerous pollutants in the workplace and their impact on the health of the workers. Because there has been relatively little research specifically on the health of garment workers, very little is known about their state of health.[5] Based on secondary data, this review paper emphasizes the hazardous working conditions in the apparel industry.

II. METHODOLOGY

The secondary data analysis was conducted in Tirpur, the seventh-largest city in Tamil Nadu, India, and one of the cities in the state with the most rapid growth. It is known as Dollar City, Small Japan, T-Shirt City, or Banian City and is known for producing the best knitted ready-to-wear. [6,7,4] The textile and apparel industry has been in Tamil Nadu, the southernmost state of India, for 128 years. Coimbatore district, which is close, is known for its garment manufacturing, but Tiruppur city, often known as "T-shirt" city, is located 50 kilometres south of Coimbatore. Nearly 90% of all the knitwear produced in India is produced in this region's garment industry. A stitched garment created from knitted fabric can be innerwear, hosiery, a t-shirt, or almost any other type of clothing. The production process for knitted materials entails more than a dozen processes. The process of making knitted clothing starts in Tiruppur with the deseeding of cotton from the field and finishes with the packing of boxes for export shipment. Manufacturing facilities in this sector carry out all stages of production for practically every variation of knitted garment. Geographically, the region has a district population of many millions, a broad municipal territory of 27 square kilometres, and a relatively modest permanent population of roughly 700,000 in Tiruppur city. The 1990s saw a boom in the Tiruppur export market as manufacturing shifted from producing inner wear to primarily T-shirts, leading to the recent development of garment production into the neighboring Erode district. The region's expanding influence on the local, domestic market is also noteworthy. Multinational companies can now advertise domestically manufactured clothing in India because to the quick development of export-based garment manufacturing. These products are often made in the Tiruppur region. Despite this more recent tendency, the majority of producers in the Tiruppur knitwear production cluster are engaged in the export market to some extent. They either create finished goods for the global market or perform subcontracting work for other export facilities.

The working environment is depicted in with all the variables, including illumination, noise, temperature, and humidity. Thus, in order to evaluate the workplace, all of these factors were carefully examined in order to draw reliable conclusions. The methodology used face-to-face interviews to simultaneously record levels of mechanical, physical, chemical, ergonomic, and psychological dangers. A checklist was created to describe the risks and safety precautions used in the apparel industry. 514 garment workers from the same chosen garment industries received it after that.

III. RESULTS AND DISCUSSION

Table 1 summarizes the working conditions in the garment industry. [4]

Table:1 Hazards Prevalent in Garment Industries

Particulars Rate	Frequency (N=514)	Percentage
Mechanical Risk	129	25.0
Physical Risk	178	34.6
Chemical Risk	60	11.6
Ergonomic Risk	347	67.5
Psychosocial Risk	168	32.6

According to Table 1, one-fourth of the employees in Tiruppur's unorganized sector responded to mechanical dangers at work. The study assessed ergonomic, chemical, and physical risk. The 514 respondents identified five risks: mechanical risks (25%) physical risks (34.6%) chemical risks (11.6%), ergonomic risks (67.5%), and psychosocial risks (32.6%). Medium and small businesses in Tirupur have more challenges than large and export clothing factories do. Guards missing from machines are frequently seen, either because the machines are old or the guards have escaped or were never there in the first place. Industry executives hint that they will soon be replacing the devices. Poor housekeeping, or disorder, clutter, and untidiness, not only hinder the free flow of materials through the industry and diminish output, but they also have a variety of negative impacts, from burns and allergies to poisoning and cancer. From the perspective of the garment industry, the main chemical problem come from the high dust levels in certain sections of the industry (e.g. the cutting section) and from the choice of chemicals used in the spot cleaning process. Prolonged exposure to cotton dust, flax and soft hemp can lead to the chronic respiratory disease known as byssinosis characterized by wheezing, chest tightness and a shortage of breath amongst the affected workers (particularly noticeable after the weekend break and therefore called as Monday Fever). This is probably due to a histamine releasing substance.

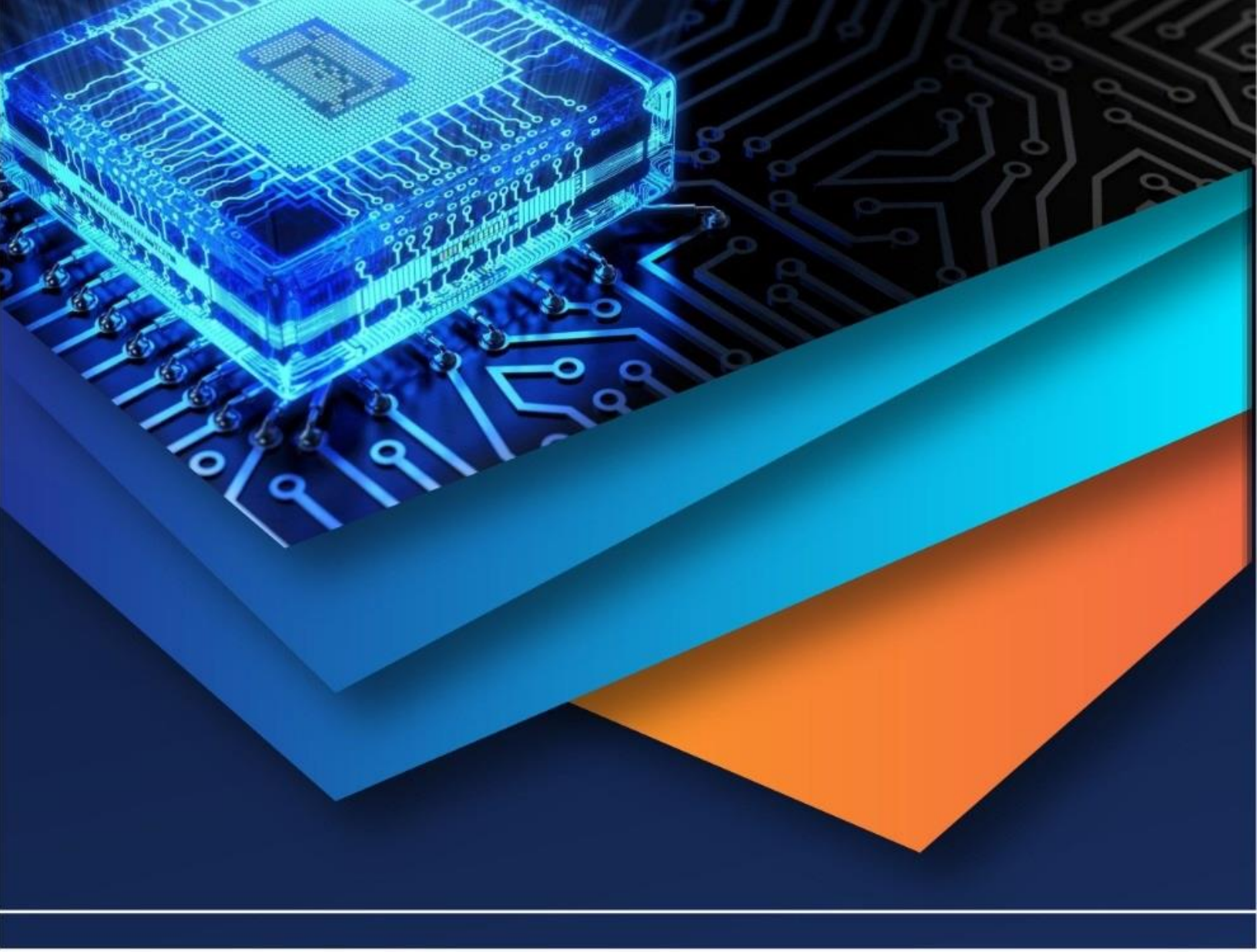
In addition to causing histamine release, cotton dust exposure irritates the bronchi and upper respiratory tracts, which over time leads to chronic obstructive pulmonary disease. Additionally, dust issues exist in all garment businesses. On workbenches, lamps, and even the hair of employees, dust fibres, primarily created from the cutting and sewing sectors of the garment industry, may be seen. The tiniest of these fibres are inhaled by the workers and, over time, they can lead to a number of respiratory issues. The issues are exacerbated by the fact that many industries choose to use brooms and dusters to clean the workplace rather than industrial vacuum cleaners, which only serve to spread the dust. Additionally, dust control is frequently made worse by employees who do not wear their dust masks properly. The usage of various spot cleaning solutions in the apparel sector is associated with additional chemical issues. While some sectors are converting to the less dangerous alternative of using soap or water combinations for the cleaning process, others are using a variety of solvents that, if used incorrectly, can have major health and safety issues. The current study is consistent with a 2008 study by Lu J.L. [(8)] on the occupational dangers and illnesses experienced by Filipina women working in export processing zones. The study assessed ergonomic, chemical, and physical risk. The 500 respondents identified five risks: chemical exposure (50.8%), overworked (66.6%), heat (72.2%), poor ventilation (54.8%), and ergonomic risks (72.2%). Gastrointestinal disorders (57.4%), backaches (56%), headaches (53.2%), and fatigue/weakness (53.2%) were the most prevalent ailments, in that order.

IV. CONCLUSION

It was discovered that the medium and small sized garment industries in Tiruppur had bad lighting, low ventilation, excessive noise, a crowded work area, and uncomfortable workstations. Dust, chemicals, primarily in the form of solvents, ergonomic issues, psychosocial issues, etc. were all exposed to the workers. Their exposure to health risks at work in the unorganized sector is made worse by their lack of education, ignorance of the risks associated with their employment, general squalor, poor nutrition, and the climatic susceptibility of this region to epidemics. Consequently, actions taken to raise workers' understanding of occupational health and safety and encourage their use of personal protection equipment would contribute to a safe and healthy work environment.

REFERENCES

[1] Iqbal M., 2010 “Government’s efforts to develop and strengthen national occupational safety and health system”, Country report Islamic Republic of Pakistan, Ankara-Turkey, 24-29 May, 1-15,
[2] Harrington, J. M. and F. S. Gill. 1989“Occupational Health”. Blackwell Scientific Publications, London.
[3] Megeid Z.M.A., Hammadi A.E.L., Hamdi A.B. and Malak M., 2011 “A study of the application of ergonomic in ready-made garments factories in Egypt”, J. Ame. Sci., 7(3), pp 738- 747.
[4] Padmini D.S.* and Venmathi A. 2012 “ Unsafe Work Environment In Garment Industries, Tirupur, India” Journal of Environmental Research And Development Vol. 7 No. 1A,
[5] Nigam, N. C., Maheshwari, A. K.and N. P. Roa. 2007. “Safety and Health in Chemical Industry”. Indian J. of Fertilizers. Vol. 3(7): 13-20, 23-26.
[6] Kauasalya R. and Amuthalakshmi P. 2007 “Relationship between ergonomic factors and health hazards in software indutries (A study conducted at Chennai, India)” J. Environ. Res. Develop. 2(2), 250-257.
[7] Jacks G.., Killage M. and Magnusson C., 1994“The environmental cost of T-shirt sharing common Water resources”, Proc. Int. Bioeth, Workshop in Madras, Background Paper, 1-7,. 4.
[8] Lu J.L., 2008 “Occupational hazards and illnesses of filipino women workers in export processing zones” , Int. J. Occup. Saf. Ergono., 14(3), 333-342.



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