



RICE MILL WORKERS: A SOCIOLOGICAL VIEW



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ABSTRACT

Food, clothing and shelter are three essential needs for any human. Food is consumed by human as pulses, grains, etc., among various grains; rice is most important staple food in India. India is the second biggest rice producing country in the world after China, contributing about 20 percent of the world's production. In India the southern region consumes more rice and also cultivates paddy in large quantities. Rice is the end product of paddy after various production operations. In the past, the conversion of paddy to rice was a house hold job, a tasking proposition for the women folk. But due to high demand for rice the household job was transformed to mills operations.



Milling is a crucial step in post-production of rice. The basic objective of a rice milling system is to remove the husk and the bran layers, and produce an edible, white rice kernel that is sufficiently milled and free of impurities. This is initially done in mills by manual operation. Due to the innovation of machineries, the new technology, has been adopting for converting paddy to rice in the name modernization. Modernization of rice mill yield more rice from it, and came with more competition between the rice mill

entrepreneurs. It involve of high capital, and huge investment to start a new rice mill. Even though more rice mills were emerged in southern region of India. Many of the rice processing units are of the semi automatic type and are inefficient. Modern rice mills are having high capacity and are capital intensive, although inefficient. It is a bottleneck in its adoption by the prospective entrepreneur. So, it leads more challenges for all rice mill workers in Karnataka.

Keywords: Rice mill workers, Problems and Prospects, Mill Owners, Rice, Importance of Food.

1. INTRODUCTION

In most of the Rice Mill workers loading and unloading the sacs of paddy and rice are carried

out mostly manually by the workers. Often, the workers have to adopt awkward postures to carry sacks of paddy and rice for loading into the truck. Working with heavy load in awkward posture leads to physiological strain, back pain and musculoskeletal problem. The present study was undertaken to evaluate the Rice Mill workers with respect to their nutritional status, workload, energy expenditure and musculoskeletal pain, posture, back pain related discomfort resulting out of nature of work load in rice mills. The environment of working condition is hot, which reduces the working efficiency of labors. They have to work more than ten hours daily, though officially they supposed to work for eight hours. This is due to posture related discomforts which leads to the shortage of manpower and delays the production, hence available labors have to work more than ten hours. Till date very few report of ergonomic study on Rice Mill workers is available especially for Karnataka.

Occupational health includes studies on all factors relating to work, working methods, condition of work and the working environment that may cause adverse health hazards or diseases. The occupational disease or otherwise termed as work related disease, is there for a potential hazard linked to the occupation and this hazard linked to the probability that an occupational link may occur. The 'Exposure effect' relationship, which defines the relation between the exposure and the severity of the impairment in a subject and the 'Exposure response' relationship, which defines the relation between the exposure and the relative number of subjects affected, become important elements for the determination of occupational disease.

The rice mill workers if not using safety measures are much prone to get Occupational hazards which may lead to illness, injury, or death. They can include physical risks like falls and exposures to heavy machinery, along with psychological ones such as stress. Occupational hazards like exposure to chemical, biological, and radiological agents are also a concern. In people who work in jobs with at recognized occupational safety hazard, special training is often provided so that people are made aware of the hazard. In Canada, Hazards are typically categorized into one of six groups they are Safety (moving machinery, working at heights, slippery surfaces, mobile equipment, etc.), Ergonomic (material handling, environment, work organization, etc.), Chemical Agents, Biological Agents, Physical Agents (noise, lighting, radiation, etc.), Psychosocial (stress, violence, etc.).

One of the most common work-related injuries to occur globally is the development of musculoskeletal disorders caused by heavy lifting and performing tasks that require repetitive motions. These occupational health hazards are also responsible for the most incidents of disability claims, whether temporary, long-term, or permanent. Muscle injuries due to physical stress most often occur in occupations such as construction and farming, while repetitive motion injuries are most often sustained in environments related to services that typically involve heavy typing and data entry.

2. OBJECTIVES OF THE STUDY:

1. To understand the problems and prospects of rice mill workers.
2. To assess the health condition of workers with reference to the working condition at the rice mill.
3. To study the financial benefits and other benefits of the rice mill workers.

3. METHODOLOGY:

The present paper is mainly based on secondary data, the secondary data have been gathered from the publications of the Government, professional and academic journals and prominent websites dealing with rice mill workers.

4. SIGNIFICANCE OF THE STUDY:

The study mainly focuses on problems and prospects of rice mill workers in general and discusses the meaning, advantages and disadvantages of rice mill workers. Hence, the present study is planned to address the problems and challenges of rice mill industries workers.

5. REVIEW OF LITERATURE

The related literatures are presented in the following sub headings:

- a. Studies related to occupational health hazards.
- b. Studies related to occupational health hazards among rice mill workers.
- c. Studies related to importance of interventions in occupational health hazards.

A) STUDIES RELATED TO OCCUPATIONAL HEALTH HAZARDS.

❖ Dembe AE, Delbos R, Erickson JB conducted a study on “THE EFFECT OF OCCUPATION AND INDUSTRY ON THE INJURY RISKS FROM DEMANDING WORK SCHEDULES”. The main objective of the study was that the Employees working in nonstandard shifts and long-hour schedules have an increased risk for job-related injuries and illnesses. This study estimated the extent of that risk among various occupations and industries. Sample was collected on Longitudinal data for 13 years among a sample of nearly 11,000 employees aged 22 to 43 was used to calculate the risk of injury by occupation and industry for six types of demanding work schedules. Cox proportional hazard regression analyses were used to estimate risks within specific occupational and industrial classifications. This study showed that the greatest risks of job-related injury were among

- 1) construction workers in evening shifts,
- 2) professional, technical, and managerial personnel working overtime schedules, and
- 3) employees working overtime shifts in the business and repair services sectors. This study concluded that Injury prevention efforts should be targeted toward employees in specific industries and occupations who work certain long-hour and shift work schedules.

❖ Occupational risk factors for ovarian cancer have been investigated only to a limited extent. Wernli KJ, Ray RM, Gao DL, Fitzgibbons ED, Camp JE, Astrakianakis G, Seixas N, Wong EY, Li W, De Roos AJ, Feng Z, Thomas DB, Checkoway H et al conducted a case-cohort study on “OCCUPATIONAL EXPOSURES AND OVARIAN CANCER IN TEXTILE WORKERS” to examine associations between occupational exposures and ovarian cancer in the textile industry. They compared 261 incident ovarian cancer cases diagnosed, with an age-stratified reference sub cohort (n = 3199) from a cohort of 267,400 textile workers in Shanghai, China. Occupational exposures were assessed by job-exposure matrices designed for the textile industry, and estimates of quantitative cotton dust and endotoxin. An increased risk was associated with ever having worked in textile finishing (2.1;0.9-5.0). They found an increasing risk of ovarian cancer associated with cumulative exposure to silica dust (for <10 years exposure, HR = 6.8 [CI = 0.6-76]; for ≥10 years, 5.6 [1.3-23.6]), although these results are based on only 8 exposed sub cohort women (0.3%) and 4 cases (1.3%). Finally the conclusion of this study was Silica dust may increase the risk of ovarian cancer, and cotton dust and endotoxin may reduce risk.

B) STUDIES RELATED TO OCCUPATIONAL HEALTH HAZARDS AMONG RICE MILL WORKERS.

The noise from machines in the rice mills was found to be the major occupational hazard for the rice mill workers. The study was conducted by Prasanna Kumar GV, Dewangan KN, Sarkar A, Kumari A, Kar B, et al on OCCUPATIONAL NOISE IN RICE MILLS AT NORTH EASTERN REGIONAL INSTITUTE OF SCIENCE AND

TECHNOLOGY, ITANAGAR, ARUNACHAL PRADESH, INDIA. To identify the predominant noise sources and their distributions in rice mills, to study the causes of high levels of noise in rice mills and to examine the response of the workers towards noise. About 26% of the total laborers were found to be exposed to higher levels of noise than 85 dBA. The noise survey in eight select rice mills of the major paddy-growing regions of India revealed that the workrooms of five rice mills had SPL more than 85 dBA in the locations where workers were engaged for most of the time. Study concluded that apart from undertaking appropriate noise control measures, preventive maintenance of machines needs to be given due importance in all the rice mills.

❖ Local rice mills were the main resource of dust particles which is produced during the milling process. So a cross sectional study was conducted by Bhat MR, Ramaswamy C, on LUNG FUNCTIONS IN RICE MILL AND SAW MILL WORKERS AT KASTURIBA MEDICAL COLLEGE, MANGALORE. In this study the lung function test was carried out to determine the relative effect of rice husk and saw dust on mill workers. The study consisted of 195 subjects of which 56 rice mill workers, 71 saw mill workers and 68 controls of similar age, sex and socio-economic condition. FVC was significantly reduced in saw-mill workers compared to both the controls and rice mill workers. Both FEV1 and PEF/min were significantly reduced in both mill workers compared to controls. There was a fall in PEF/min in saw mill workers was also significant when compared to rice mill workers. This study concluded that FVC was reduced after 5 years of exposure only in saw mill workers and FEV1 was reduced within a year which was further reduced after 5 years in both mill workers and PEF/min was highly reduced within a year remained so even after 5 years.

❖ Local rice mills producing dust particles during the milling process was affecting the community of Malaysia. So a cross sectional study was conducted by Kiattisak Batsungneon and Thanatchai Kulworawanichpong, on EFFECT OF DUST PARTICLES IN LOCAL RICE MILLS ON HUMAN RESPIRATORY SYSTEM at Nakhon Ratchasima, THAILAND. Size and amount of dust particles are two observed variables to distinguish the key difference between two structure types of local rice mills: i) wooden type and ii) iron type. Four workers in the local rice mills are monitored and tested for performance of the respiratory system. They found that all four workers have restrictive lung conditions related to breathing filled with dust during the milling process every day. The results show that the paddy pouring station is the riskiest place in local rice mills which may cause a problem to human's respiratory system. Moreover, all workers under studied are restrictive lung conditions. The outcome of this study is expected to use for preventive plan in order to reduce risk from working activities for local rice mill workers.

C) STUDIES RELATED TO IMPORTANCE OF INTERVENTIONS IN OCCUPATIONAL HEALTH HAZARDS.

❖ Noise induced hearing loss can only be prevented by eliminating or lowering noise exposure levels. So, a study was conducted by El Dib RP, Verbeek J, Atallah AN, Andriolo RB, Soares BG, et al on "INTERVENTIONS TO PROMOTE THE WEARING OF HEARING PROTECTION". They aimed to establish whether interventions to increase the wearing of hearing protection are effective and the main objective of the study was to summarise the evidence for the effectiveness of interventions to enhance the wearing of hearing protection among workers exposed to noise in the workplace. Two studies were found. One study was a two-phased randomized controlled trial. A computer-based intervention tailored to the risk of an individual worker lasting 30 minutes was not found to be more effective than a video providing general information among workers, around 80% of whom already used hearing

protection. The second phase of the trial involved sending a reminder to the home address of participants at 30 days, 90 days or at both 30 and 90 days after the intervention, or no reminder. There was no significant differences in the mean use of hearing protection were found. A second randomized controlled trial evaluated the effect of a four year school based hearing loss prevention programme among pupils working at their parents farms (N=753) in a cluster randomized controlled trial. The study concluded that the results are based on single studies only and better interventions are needed to enhance the use of hearing protection need to be developed and evaluated in order to increase the prevention of noise induced hearing loss among workers.

❖ Welders are exposed to a variety of occupational hazards with untoward health effects. Sabitu K, Iliyasu Z, Dauda MM conducted a study on "AWARENESS OF OCCUPATIONAL HAZARDS AND UTILIZATION OF SAFETY MEASURES AMONG WELDERS IN KADUNA METROPOLIS, NORTHERN NIGERIA". This study assessed the awareness of occupational hazards and adherence to safety measures among welders. A structured questionnaire was administered on a cross-section of 330 welders. Information was sought on their socio-demographic characteristics, their awareness of occupational hazards and adherence to safety measures. All welders were males with a mean age of 35.7 +/- 8.4 years. The illiteracy rate was 7.6%. Overall, 257 (77.9%) of the welders were aware of one or more workplace hazards. The study concluded that the level of awareness of occupational hazards was high with sub optimal utilization of protective measures against the hazards. Therefore there was need for health and safety education of these workers for health and increased productivity.

6. PROBLEMS AND PROSPECTS OF RICE MILL WORKERS:

Rice mill workers are potentially exposed to organic and inorganic dust and rice husk that may have adverse effect on hematological parameters. Several reports have suggested that unprotected dust exposures in agricultural settings may lead to hematological disorders. There have been many reports on health effects of rice husk exposures. Rice husk has a long history association with disease, and its adverse effect on various organ such as eyes, nose, skin, lung and the hematological parameters have been described. Rice husk is known to have a high silica content (Hurst TS and Dosman JA. 1990). Rice Husk dust causes damage to bronchial passages, along with damage to the elastic component of alveolar walls. Rice husk dust contains some air borne endotoxins which cause inflammatory reactions in broncho-pulmonary system. Air-borne endotoxin is commonly present in a rice producing commune (Olenchock et al, 1984).

Occupational respiratory disease can be defined as an acute or chronic disorder that arises from the inhalation of air-borne agents in the work place. Subjects with workplace exposure to organic dust have high prevalence of respiratory diseases (Oxman et al., 1993). Many industrial processes produce air-borne contaminants and their most common route of absorption is by inhalation. Industrial dust inhalation over a long period leads to proliferative and fibrotic changes in the lungs (Boyd, 1977). Decrease in various lung function parameters in rice mill workers may be due to exposure to industrial dust, poor ventilation, non-use of face masks and lack of proper exhaust facility (Deacon et al, 1998). Decrease in various lung function parameters in rice mill workers may be due to exposure to industrial dust, poor ventilation, non-use of face masks and lack of proper exhaust facility (Deacon et al, 1998).

7. HEALTH CONDITIONS OF RICE MILL WORKERS:

The establishment of fitness criteria is often an oversimplification which may not be consistent with sound occupational health practice. In practice, it is preferable to express fitness in terms of "no

medical contra-indication" to a specific job or work and to express "unfitness" in terms of the kinds of jobs and conditions of work and exposure to hazards which are medically contra-indicated, temporarily or permanently. 5.4. The shift from a "fitness" to "adaptation" approach implies that the results of the health assessment should also be used for the objectives of advising the worker and the employer on the measures that they should take to overcome the problem; on which lifestyle might minimize work-related problems; the use of individually adapted protective equipment; and advising the employer, management, workers' representatives and the safety and health committee, where it exists, on measures (collective, individual or both) to adapt the working environment or the work organization to the physiological and psychological needs of workers.

When workers' health surveillance reveals that the health conditions of the worker and the nature of the tasks performed are likely to endanger the safety of others, the decision with regard to fitness may be difficult to take. The worker must be clearly informed of the situation, so that he or she can take remedial action. In the case of a particular hazardous situation, the management must be informed and take the necessary measures to safeguard other persons.

When an occupational disease has been detected in a worker, and continued employment might jeopardize health, remedial action should be taken in the interest of the worker. Primarily, this should consist of removing the hazards and improving the working environment and working conditions. However, occupational hazards may be intrinsically linked to the work and, in such cases, the removal from exposure or a particular work situation, either temporarily or permanently, may be the only solution. When alternative employment is provided, it should be consistent with the state of the worker's health and not likely to impede or retard recovery

8. BENEFITS:

Rice in India is marketed by the Government (through the National Food Authority NFA), and the private sector (traders, processors, wholesalers, and retailers). Since rice marketing is extensive, the enforcement of uniform grading systems and specifications is necessary to regulate such business activity. The NFA is mandated to formulate and implement standards for marketing rice. Hence, the India Grains Standards for Rice and Corn (NFA 1991) comes to the fore. It forms part of the NFA rules and regulations for grain business. The set of standards cover units of measurement, terminology and symbols, product and process specifications, and product and human safety. The standards also include test methods for grading and classification which are primarily based on ocular inspection of the physical characteristics of paddy and milled rice.

9. CONCLUSION:

The common problems faced by rice mill workers and individual characteristics required for workers and external supports need from external environment also. And from above conceptual work key factors for the research work is identified pertinent to the problems and prospects of rice mill workers. This may come across under various categories. But I took all the categories of problems under eleven headings and also prospects under eleven headings. With this framework in a sequence of getting the things from the rice mill workers towards Karnataka.

REFERENCES:

1. Devraja T.S (2009), "Financial performance of Agro Based Industries" Anmol Publications Pvt. Ltd., New Delhi.

2. Faulkner, M.D., Reed, G.N. and Brown, D.D. (1969): Report to the Government of India on Increasing Milling Outturns of Rice from Paddy in India, September.
3. Gupta, H.P. (1966): "Rice Bran", Seminar on Modern Technology of Rice Milling, EIRMA, p.27.
4. Kar G.C and Mishra S.N. (2004), "Agro industries & economic development", Deep & Deep publications pvt. Ltd.
5. Khajuria Meenakshi & khajuria R.K. (2010), "Second Green Revolution- Prospects & Challenges", Kurukshetra Vol 58, No.5, March 2010, pp 19-20.
6. Mohanty B. K. (2010), "Agricultural Growth- It's time for Gene Revolution", Kurukshetra, Vol 58, No 9, March 2010, pp 3-4.
7. Nayak Purusottam (1996), "Problems and Prospects of Agro based Industry: A Case Study", Journal of Assam University, Vol.1, No.1, 1996, pp 22-28.
8. Patro Bhagabata and Nayak Preyasi (2002), Employment Implications of Agro- based industries in India; Agro industries & economic development; Deep & Deep publications Pvt. Ltd.
9. Thoreia Mohamed Mahmoud et al A study to occupational health hazards among assiut spinning factory workers.
10. R.Mohapatra, Occupational Health Hazards and Remedies, page no:1
11. Razlan Musa et al Respiratory health of rice millers in Kelantan, Malaysia.Available from: http://www.tm.mahidol.ac.th/seameo/2000/31_3/31-2471.pdf.
12. K.K.Gulani, Community Health Nursing Principles and Practices, page no: 494, 495.
13. D. Rajasekhar, Suchitra J. Y., Madheswaran S. and G. K. Karanth. AT TIMES WHEN LIMBS MAY FAIL: SOCIAL SECURITY FOR UNORGANIZED WORKERS IN KARNATAKA.