

Health hazards of women workers involved in cashewnut industry

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Meghalaya is one of the states of North East India where cashewnut cultivation and processing is an important new area in case of agro-industrial development. In the world scenario, India occupies a premier position contributing about 43 per cent of the cashewnut production. In North East India cultivation of cashewnut is mainly found in Meghalaya, Assam and Tripura. In Meghalaya particularly western part due to sandy loam, heavy rainfall, along with natural well drained provision as because of hilly terrain, cultivation of cashewnut is a most suitable cash crop. There are many cashewnut industries set up in these areas to process raw cashewnut. The finished products from the industries are sold in the entire North-East India besides west Bengal. These cashewnuts rank among the best in taste. In fact, it has been certified as the best in Asia in taste (Anonymous, 2007).

The raw cashew has a very acid content (caustic oil) which can burn the skin and produces noxious fumes when heated and, therefore, it is required to undergo an elaborate process of sun drying, roasting, breaking (shelling), heating and peeling to become suitable for consumption. The labour intensive processes are breaking (shelling) and peeling of brown skin where women are the majority of workers.

They perform extremely tedious time and labour intensive work resulting in fatigue and drudgery. All the time

unnatural squatting posture on a fourfold gunny bag are adopted by the women labour while performing these activities which create severe musculo-skeletal problems such as back pain, knee pain, arthritis, cervical pain, joint pain etc. The long static posture demands high physiological cost and low productivity. Due to the adoption of long static sitting posture on the ground, they always suffer from paraesthesia (tingling) in legs which may lead to many nerve and musculo-skeletal problem.

A study was envisaged by selecting 20 women workers purposively from one cashewnut industry of Meghalaya within the age group of 20 – 50 years. The mean age of women workers was 35.6 years, weight is 45.91 kg. with 153.75 cm height. VO_2 max of the respondent was 22.88 and body mass index (BMI) was 19.52 which can be considered as normal category.

The widely accepted definition of health is that given by the WHO (1984), which is “Health is a state of complete physical, mental and social well-being and not merely an absence of disease or infirmity”. So, the aim of occupational health is “the promotion and maintenance of the highest degree of physical, mental and social well-being of workers in all occupations” (Park, 2009).

In this occupation health hazards expressed by the women worker in the activity were collected, causative

Table 1: Health hazards of women labour involved in shelling activity of cashew nut industry

Health hazard	Causative factor	Types of hazards
Pain in fingers and wrist, wounds in finger	Continuous breaking of cashew shell and lack of proper equipment (wooden mallet)	Physical
Pain in lower and upper arm, elbow, and shoulder joint	Working of arms in repetitive fashion	Physical
Upper and low back pain	Adoption of continuous sitting posture on gunny bag	Physical
Pain in knee and upper leg/thigh, tingling in calf muscle, lower leg and toe.	Bending of leg for hours	Physical
Neck stiffness	Bending of neck for long duration	Physical
Eye strain	Lack of visibility	Environmental
Skin infection, dermatitis on fingers and toes, discolouration and tanning of palms	Contact of caustic acid and ash for long duration	Chemical
Respiratory Problem	Inhalation of ash	Environmental
Fatigue	Bad posture, repetitive work, no provision of fans, lack of artificial and natural lighting, no proper ventilation	Physical as well as environmental

factors were analyzed and type of hazards was noticed (Table 1). In the activity of shelling cashewnut, they had lots of physical hazards including pain in fingers, wrist, wounds in fingers, pain in joints, upper and lower extremities due to continuous breaking of cashew shell, lack of proper equipments (only wooden mallet), working of arms in repetitive fashion (prone to repetitive strain injury, RSI), adoption of continuous sitting posture on gunny bag, bending of leg for hours and complained about neck stiffness due to bending on neck for long hours. Mild to severe pain was observed even in the low back and upper back of the workers due to the adoption of prolong strenuous sitting posture on gunny bag. Prolonged static postures cause ergonomic stresses leading to severe musculo-skeletal disorders specially low back pain (Pachal and Sashtri, 2000). Remaining in one posture for a long duration while performing a task, can increase the likelihood of injury. Static exertion combines force, posture and duration to create a condition that increases the chances of acquiring a cumulative trauma disorder (CTD). There are some environmental health hazards due to lack of natural and artificial lighting, the lighting in a workplace if not sufficient for the work task, may result in workers assuming awkward postures to accomplish work tasks and a loss of product quality and also eye strain etc. The working environment was dusty as they used ash for shelling the cashew shell which may lead to respiratory problem in near future. It was also noticed that there was no provision of fans, therefore, prevailing hot and humid condition, leads fatigue easily. In 2001, Zend *et al.* and in 2002, Borah and Oberoi noted the significant effect of

temperature and relative humidity in physiological responses. As the environmental temperature and humidity increase, heart rate of women workers also increase for both outdoor and indoor activities. There is a chemical health hazards also because of contact of caustic acid which comes out from cashew shell after roasting and women labours have to break the shell of cashew after sprinkling ash on that. They had the skin contact of caustic acid as well as ash for long duration which may lead to skin infection, dermatitis on fingers and toes, discolouration and tanning of palms etc (Table 1).

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■ REFERENCES

- Annnymous (2007). Cashew nut cultivation picking up in India state of Assam. *The Assam Tribune*, 19th April, 2007.
- Borah, S. and Oberoi, K.** (2002). Physiological workload of farm women involved in selected dairy activities. Ph.D. Thesis, Punjab Agricultural University, Ludhiana (PUNJAB) INDIA.
- Pachal, T. and Sashtri, B.S.** (2000). Evaluating ergonomic stress amongst welders in a steel industry. In: Mazumdar, D. and W. Salvamurthy (eds) *Advances in ergonomics, occupational health and safety*. New age International (P.) Ltd., NEW DELHI, INDIA.
- Park, K.** (2009). *Preventive and social medicine*. M/s Banarsidas Bhanot, Jabalpur (M.P.) INDIA.
- Zend, J.P., Upadhyay, R.K., Umrikar, S.H. and Murali, D.** (2001). Ergonomics of farm women's drudgery. Paper presented in International Congress on Humanizing Work and Work Environment – 2001, IIT, MUMBAI, INDIA.

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