# **INVOLVEMENT OF RURAL WOMEN IN BRICK MAKING ACTIVITY** K.SINGH, NEHA, SUNITA AND KRITIKA

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#### ABSTRACT

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Accepted : May, 2008

A study was undertaken in Balak village of Hisar district of Haryana state to determine the physical cost of work of women engaged in brick making activity. The experiment was carried out on 30 women each falling between the age group of 25-40 years. The results revealed that mean age of the respondents was 32.96 years, mean body height was 153.66 cm and mean weight was 51.7 kg. Average time spent in brick making activity was 6 hours per day and on an average women travelled 2km while doing the activity of loading of bricks. The postural analysis showed the highest angle of curve and deviation for cervical and lumber region. Periodic training programmes should be organized to emphasize on educating workers regarding the recognition of musculo-skeletal disorders, importance of rest pauses and maintaining proper posture during brick making activity.

Key words : Posture, Brick making, Heart rate, Grip strength

The women are the back bone of agricultural workforce and they perform most strenuous and back breaking tasks. The world over rural woman are an integral and vital force in the development processes that are the key to socio-economic progress. Rural women as agricultural labour force across much of the developing world produce 35-45% of gross domestic product and well over 50% of the developing world's food.

There are so many sources of employment for women. Women are engaged in agriculture in rural sector and in other side women also actively participate as a labourer in brick making, carpet making, weaving, spinning, papad making. Because of low literacy rate, a large section of women are compelled to work at brick kilns. During the activity, they adapt unnatural body posture leading to physiological stress and they face many types of musculo-skeletal problems, ultimately decreasing the efficiency of women. Therefore, considering the critical problem of women at work, an attempt was made to ergonomically study the physiological stress of women working at brick kilns which includes physical fitness, time and activity profile.

## **METHODOLOGY**

The study was carried out on 30 physically fit women involved in brick making activity, each falling between the age group of 25-40 years. The experiment was conducted in the month of October-November. During the experiment various parameters viz., time and activity profile, physiological and biochemical stress were studied.

## Assessment of physiological stress Heart rate :

Heart rate was recorded using polar Vantage NV Heart rate monitor. In the morning resting heart rate/min of the respondents for 5 min was recorded and after that she started her activity and her working heart rate/min and rating of perceived exertion (RPE) were recorded for 20 min. After that they were asked to take rest and their recovery heart rate/min and RPE were recorded till complete recovery or up to maximum of 10 minutes. At the end of the day the working heart of respondent was recorded for 20 minutes besides RPE after that respondents were on rest and the recovery heart rate/ min and RPE was recorded till complete recovery or upto maximum of 10 minutes.

### Energy expenditure and TCCW :

From the average values of heart rate, energy expenditure, total cardiac cost of work (TCCW) and physiological cost of work for brick making were calculated with the help of formulae given by Varghese et al. (1995) as below :

Energy expenditure  $(kJ/min) = 0.159 \times AHR-8.72$ 

Physiological cost of work = --

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Total time of