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Research Paper :

Physiological indices and physical performance capacity of farm women

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ABSTRACT

The study was planned to assess the health status and the physical performance capacity of farm women by using motorized electronic tread mill under laboratory conditions. Thirty subjects selected for the study were healthy non-pregnant women, agricultural workers, without any cardio-respiratory complaints and within the working age range of 25-45 years. Maximum percentage of the women (43.33%) were in the normal range body mass index range. The estimation of aerobic capacity revealed that 53.33 per cent women were in good fitness range. Highly significant correlation was observed between the exercise time and the independent variables like body weight, body mass index and blood pressure. Age and body weight showed highly significant correlation with the working heart rate during the exercise on the tread mill. It is evident from the study that the selected women were healthy having a good physical endurance capacity.

Key words : Physical fitness, Body Mass Index, Aerobic capacity, Physical endurance capacity

Almost 45.3 per cent of the agricultural labour force consists of women in the countries of south and Southeast Asia. Women are involved in most of the farming and farm related activities, besides their exclusive involvement in domestic chores. Women do the extremely tedious, time consuming and labour intensive activities like sowing, transplanting, weeding, intercultural operations, harvesting, threshing, transport and post harvest management like, shelling, cleaning, grading and processing etc.(Annonymous, 1997). The rural women do almost all jobs manually. Growing scarcity of energy resources in rural areas and its impact on women's workload, health, nutritional status and productive capacity of women are the important areas, which have not received adequate attention from policy planners and related ministries (Kalia, 2004).

Productivity in agriculture is always referred to the crop yield and the quality of inputs required. Human productivity and human performance, especially in women specific activities is the most neglected area in agriculture in developing and under developed countries. The work efficiency and productivity of women are directly related to the health condition and physical work capacity of women, which is specially true when they perform various activities manually in the field of agriculture.

The physical and physiological indices are the most important factors for the work station design and with appropriate technologies for increasing the efficiency and productivity of women in Indian agriculture. The physiological indices or the anthropometric data are most useful in equipment design, furniture design, work area and work station design with regard to height, reach, clearance and adjustability. The physiological indices are applicable for the design of the work, equipment etc. with regard to energy expenditure and work output. The physiological indices will also assist in assessment of the general health condition of the population. Very few studies have ben conducted by various scientists like Gite and Singh (1995), Oberoi *et al*.(1996), Rao *et al*. (2002) etc. which throw some light on the physical characteristics of women in agriculture. The physical performance capacity is the maximum aerobic capacity of the person while performing any activity, which can be measured by using different types of ergometers (Andersen and Rutenfranz, 1987).

The present study has been planned to assess the health status based on anthropometric data and the physical performance capacity of farm women through the use of motorized electronic tread mill under the laboratory conditions.

METHODOLOGY

Sample selection :

The subjects selected for the study were healthy non-pregnant women, agricultural workers, without any cardio-respiratory complaints. The total sample selected for the study was 30 women in the age group of 25 to 45 years.