

A COMPARATIVE STUDY OF HEALTH AND NUTRITIONAL STATUS AMONG HOUSEWIVES AND WORKING WOMEN OF NORTH BENGAL

¹Dr. Swapna Ray Barma ²Dr. Pintu Sil

^{1&2} Assistant Professor, Govt. College of Physical Education for Women Dinhata, West Bengal, India

ABSTRACT

The purposes of the study were to find out health and nutritional status of the housewives and working women in North Bengal region and their comparison with each other. A total of 225 house wives (HW) and 225 working women (WW) in between the age of 35 to 45 years were selected randomly from different region of CoochBehar, Jalpaiguri and Darjeeling district of North Bengal and comparison was done between these two groups. Height, Body weight, body fat percentage (PBF) and body mass index (BMI) were considered as variables for measurement of health and nutritional status in the present study. All the variables were measured with the standard tools and equations. Mean and Standard deviation were calculated as descriptive statistics and to find out the inter group difference t-test was conducted. Result shows that HW group were superior in weight, PBF and BMI than WW. Result also shown that body fat Percentage (PBF) of WW group was in normal category but for HW group it was over than the normal zone. Result also revealed that HW group was in over weight zone in respect of BMI but WW group was in the normal zone in this category. All the mean difference between these two groups was found statistically significant in this study. From the results it was concluded that in the North Bengal region of India working women (WW) had superior health status than the housewives (HW).

Key Words: Health, Nutritional Status, Housewives, Working Women and North Bengal Region.

INTRODUCTION:

Personal health is a dynamic state of human being. It is influenced by four multiple factors, such as – heredity, environment, personal behaviour and access to professional health care practitioners and other health services. Good health is very much important for normal works in daily life and also for the professional works. Housewives were engaged in their households' works where as the working women were engaged with professional works in their respective field. Each group of women had different life style and workloads for which they might have different fitness level as well as different health status. Present study was designed to find out the health and nutritional status of housewives and working women of North Bengal region of India

and their comparison. Purpose of the study was to know the difference of health and nutritional status of these two groups of women. Findings will be helpful to plan and prepare the health chart, diet plan and fitness schedule for the housewives and working women of this region of West Bengal, India.

MATERIALS AND METHODS:

A total of 225 housewives (HW) and 225 working women (WW) in between the age of 35 to 45 years were selected randomly from different region of CoochBehar, Jalpaiguri and Darjeeling district of North Bengal.

Health and nutritional status was assessed by calculating BMI and body fat percentage (PBF) of the subject. For this purpose height and weight were measured by stadiometer and weigh machine. BMI was calculated through the anthropometric equation ($BMI = Wt (kg) / Ht^2 (m)$). Body fat percentage was also measured by standard anthropometric equation (McArdle, 1996) and all the anthropometric parameters used in this equation were measured using steel tape.

Central tendency and standard deviation were used as descriptive statistics for this study. Significance of the difference between two means was computed by using t-test. Level of significance was considered only 0.05 level for this study. All statistical calculations were done using standard statistical software.

RESULTS AND FINDINGS:

Mean and SD of weight, BMI and body fat percentage (PBF) were presented in Table-1 and result of t-test have presented in table-2. Table-1 shows that mean value of weight, PBF and BMI for HW were higher than WW group. Table-2 indicated that these mean differences (t-value) were significant statistically (< 0.05) for weight, body fat percentage (PBF) and body mass index (BMI) between these HW and WW groups.

Table-1: Mean value and SD of different health parameters for HW and WW

Category of Subjects	Weight (kg)		B.M.I. (kg/m ²)		Body Fat (%)	
	Mean	S.D	Mean	S.D	Mean	S.D
HW	59.17	±6.14	25.94	±2.61	30.33	±3.88
WW	42.33	±4.19	19.41	±1.69	21.74	±2.17

Table-2: t-values for different variables for HW and WW

Variables	t-value	Remarks
Weight	19.58	Significant at 0.05 level
B.M.I.	18.14	Significant at 0.05 level
Body Fat %	16.84	Significant at 0.05 level

DISCUSSION OF FINDINGS:

In the present study health and nutritional status was assessed with the weight, B.M.I and percentage of body fat (Figure-1). Figure-1 shows that mean values were higher for HW group than the WW group for all variables. McArdle et al. (1991) mentioned that after age 30 to 40 years there is a decrease in lean body weight but fat weight increases. Mean weight of HW and WW group found in this study were similar with the findings of several studies. Bandyopadhyay (2007) found mean body weight around 55.75kg in the Bengali sedentary female at the age of 35-44 years. Koley et al. (2009) observed the body weight 58.94 Kg of sedentary female and 43.44 Kg for the labourer women in Punjab State, India. Saha Roy (2010) reported around 56.63 Kg weight in the middle-aged (40 to 55 years) women in West Bengal. Upadhyay et al. (2011) assessed 48.76 Kg mean body weight in the 36-45 years old of rural women. Higher mean value for weight in HW group than the WW group was might be due to the lower expenditure of calories by the daily activities performed than the working women group. Higher intake of calories in the form of daily food is more in HW whereas working labor class women expense more due to perform more works.

B.M.I. is a fitness determinant which is valid, convenient and easy to use in the detection of unfavorable health indices (Cheine et al., 1989). According to WHO classification (WHO, 2006) BMI value of adult person within the range of 18.50 to 24.99 is normal and healthy (Table-3). Tahara et al. (2002) found that B. M.I. score of (18-59) years Japanese adults female was 21.4 kg/m². Misra et al. (2005) reported that average B.M.I. score was 26.1 (± 3.7) for 29-59 years old sedentary women. In this study, the mean B.M.I. value of house wife group was higher than the normal category and it was in over weight zone where as the BMI value of WW group was in normal and healthy zone. Result shows that HW had slightly higher health risk than the WW group in North Bengal region. Less physical works and more consumption of calories might be the main reason behind this fact.

Table-3: Health status in respect of BMI

Health status	BMI Value
Grade-3 Obesity (Health Risk very much increased)	Over 40.00
Grade-2 Obesity (Health Risk much increased)	35.00 to 39.99
Grade-1 Obesity (Health Risk increased)	30.00 to 34.99
Over Weight Zone (Health Risk slightly increased)	25.00 to 29.99
Normal Weight Zone (Health Risk Low)	18.50 to 24.99
Under Weight Zone (Health Risk slightly increased)	16.10 to 18.49
Severely Under Weight zone (Health Risk very much increased)	Below 16.00

The percentage of body fat for HW group was higher than the WW groups in this study. The amount of body fat percentage of an individual is closely related to physical activity of the individual concerned; HW group usually perform lesser amount physical activity than the WW group. Blair et al. (1981) reported that less amount of physical activity deposit greater amount of body fat. Finding of the present study for body fat percentage was in close proximity with the

other leading researches. Wimberley et al. (2001) reported that B.F. % of sedentary and active middle-aged (30-50s) women were 28.8 ± 6.8 and 18.9 ± 4.9 respectively. Stanforth et al. (2004) observed that the B.F. % of black and white adult (17 to 65 years) women is 36.1 and 29.9 respectively. Joshi et al. (2008) found the B.F. % was 31.99 ± 3.92 in young students within the age of 18 to 21 years.

CONCLUSION:

1. Housewives had higher body weight than the Working Women in the North Bengal region of India.
2. Working Women had superior health status than Housewives in respect of BMI and Body fat Percentage.

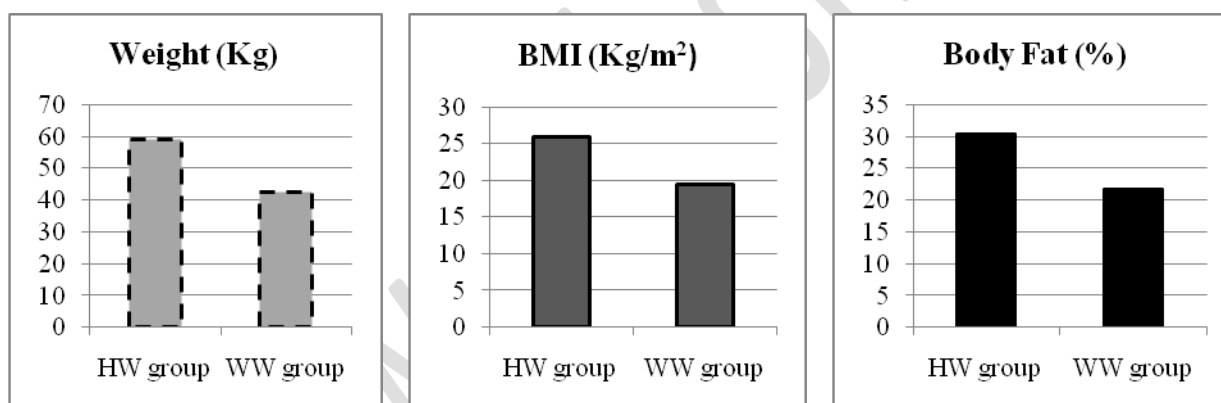


Figure-1: Weight, BMI and Body Fat % of HW and WW group of women

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