



## HEALTH FITNESS OF MID AGE WORKING WOMEN AND NON-WORKING HOUSE WIVES – A COMPARATIVE STUDY

### KEYWORDS

Health related fitness, working women, and non-working women, housewives.

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### ABSTRACT

The purpose of the present study was to compare health-related fitness of working women (GW) and non-working house wives (GNW) residing in Burdwan and Birbhum districts of West Bengal, India. 200 mid age educated women (N=200; GW=100, GNW=100) between the age 35 and 45 years, who had food habits of similar nature and did not undergo any structured exercise programme in the near past, were selected as subjects for this study. Body composition, aerobic power, flexibility and muscular strength-endurance were the parameters of health related fitness which were assessed by standardized tests and measurement procedures. The Result of the present study revealed that the subjects belonging to both the groups were overweight or obese having mean percentage of body fat 35.42 (%) and 34.91 (%) for GW and GNW respectively. However, no significant differences were found while compared the lean body mass (kg), percentage of body fat (%) and flexibility (cm) of women belonging to GW and GNW ( $p < 0.05$ ). In aerobic power (ml/kg/min) and abdominal strength-endurance (no), working group was found superior to non-working group ( $p > 0.05$ ).

### Introduction

The importance of health related fitness is well recognised today and any form of fitness activity, such as a workout, a sport or life style activity is recommended for positive health. Fitness can be achieved through regular physical activity or workouts and it is directly related to the wellbeing of an individual.

In today's fast-paced lifestyle, people don't get time to look after themselves due to many factors. Especially middle-aged women are even neglected by themselves for their different role and responsibilities and household works. However, they are aware of fact that active lifestyle and attitude is the key factor to wellness and happy life, physical wellness being the most definite aspect of it. A person can achieve physical wellness by developing health-related fitness components (Kilpatrick, 2011).

With this background, it deemed reasonable to compare health-related fitness status of mid-age working women and non-working house wives of Bengalee community.

### Materials and Methods

In the present study two hundred (200) women between the age 35 and 45 years were selected as subjects from Burdwan and Birbhum districts of West Bengal. The mother tongue of the subjects was Bengali, food habits were of similar nature and educational qualification was at least the graduate level. Out of 200, 100 women belonged to working group (GW) while another category of 100 was non-working women housewives (GNW). Housewives were engaged in their house hold works within their family and did not work outside, while selected working women were regular school teachers working away from home.

For the assessment of health related fitness of mid age women chosen parameters were body composition, aerobic power ( $VO_2$  max), flexibility and muscular strength-endurance. Body composition was estimated by 3-site skinfold method (Jackson A. S. & Pollok M, 1985),  $VO_2$  max was assessed by Queen's College Step test (McArdle W. D, 1996), flexibility was assessed by 'sit and reach' test and muscular strength-endurance was assessed by 1-min bent knee 'sit-up test' (Nelson & Johnson, 1985).

To observe the status of health related fitness of the subjects, descriptive statistics was used and to compare fitness level between the two groups, independent t-test was employed. The level of significance was set at 0.05.

### Findings and Results

Personal data of subjects pertaining to descriptive statistics has been presented in table 1.

|                  | Working Women (Mean±SD) | Non-working Women (Mean±SD) |
|------------------|-------------------------|-----------------------------|
| Age (years)      | 38.22±5.92              | 37.95±4.82                  |
| Height (cm)      | 155.19±5.98             | 153.6±5.63                  |
| Weight (kg)      | 61.79±9.61              | 58.66±9.64                  |
| BMI ( $kg/m^2$ ) | 25.63±3.58              | 24.86±3.84                  |

The finding pertaining to descriptive statistics of data on selected parameters has been presented in table 2

|             | LBM (kg)                 |                     | Body Fat (%)             |                     | Aerobic Power (ml/kg/min) |                     | Flexibility (cm)         |                     | Muscular (abdominal) Strength Endurance (no) |                     |
|-------------|--------------------------|---------------------|--------------------------|---------------------|---------------------------|---------------------|--------------------------|---------------------|--|---------------------|
|             | Worki<br>ng<br>Wom<br>en | Hou-<br>se<br>Wives | Worki<br>ng<br>Wom<br>en | Hou-<br>se<br>Wives | Worki<br>ng<br>Wom<br>en  | Hou-<br>se<br>Wives | Worki<br>ng<br>Wom<br>en | Hou-<br>se<br>Wives | Worki<br>ng<br>Wom<br>en                     | Hou-<br>se<br>Wives |
| <b>Mean</b> | 39.28                    | 38.07               | 35.42                    | 34.91               | 36.33                     | 35.40               | 17.24                    | 17.40               | 7.32   | 6.00                |
| <b>SD</b>   | 4.46                     | 4.69                | 6.42                     | 6.47                | 1.81                      | 1.63                | 2.81                     | 2.93                | 5.02   | 3.93                |
| <b>SEM</b>  | 0.45                     | 0.47                | 0.64                     | 0.65                | 0.18                      | 0.16                | 0.28                     | 0.29                | 0.50   | 0.39                |

Table 2 showed that mean lean body mass (kg) of working women and non-working house wives were 39.28±4.46 and 38.07±4.69 while mean % body fat of groups were 35.42±6.42 & 34.91±6.47 respectively. It appears that women belonging to both the groups were obese (WHO, 2009). Aerobic power (ml/kg/min), flexibility (cm) and muscular strength-endurance (number) of working women and house wives were, 36.33±1.81 & 35.40±1.63, 17.24±2.81 & 17.40±2.93 and 7.32±5.02 & 6.00±3.93 respectively. It is further observed that, both the groups have poor abdominal strength-endurance which is alarming to their health.

The finding pertaining to comparative statistics of data on selected parameters of both groups has been presented in table 3

| Parameters   | Working Women | House Wives | Mean Difference | SED  | t-ratio      |
|--|---------------|-------------|-----------------|------|--------------|
|  | Mean          | Mean        |                 |      |              |
| Lean Body Mass (kg)  | 39.28         | 38.07       | 1.21            | 0.65 | 1.86         |
| Body Fat (%)   | 35.42         | 34.91       | 0.51            | 0.91 | 0.55         |
| Aerobic Power (ml/kg/min)  | 36.33         | 35.40       | 0.92            | 0.24 | <b>3.79*</b> |
| Flexibility (cm)   | 17.24         | 17.40       | 0.16            | 0.41 | 0.39         |
| Abdominal Strength Endurance (no)                                      | 7.32          | 6.00        | 1.32            | 0.64 | <b>2.07*</b> |
| <b>t<sub>.05</sub> (198) = 1.97</b> * <b>Significant at 0.05 level</b> |               |             |                 |      |              |

Table 3 revealed that there were significant mean difference between working women and house wives' groups in aerobic power and abdominal strength endurance and in both the parameters working ladies showed better result. But no significant difference was observed between groups in lean body mass, % body fat and flexibility.

The reason for better aerobic power and abdominal strength-endurance of working group might be due to more occupation-related physical activities including walking, lifting/carrying etc. performed by GW regularly at work place or on the way. On the other hand, house wives who are usually engaged in house-hold activities regularly in our society, undergo insufficient physical work. Both the groups are found obese for not being aware of energy balance.

The finding of this study is supported by the findings of other researchers such as Cecily Luncheon, Matthew Zack, M P(2005), Sung-Mo Park, Yi-Sub Kwak, and Jin-Goo Ji (2015). The findings of better fitness of working women in comparison to non working women corroborates with the findings of Annie Palstam, Jan L Bjersing and Kaisa Mannerkorpi (2012). However, this observation contradicts with the conclusion of Fatihe Kerman Saravi, Ali Navidian, Shahindokht Navabi Rigi and Ali Montazeri (2012).

### Conclusion

Physical activity in everyday life can enhance health fitness subject to adequate dosage. Both the groups do physical activity for livelihood at home or at the work place or the both, but inadequate in terms of energy balance and development of health-related fitness. Thus stereotyped lifestyle is also a major health risk factor.

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