



# A STUDY OF PSYCHOLOGICAL COST OF WORK OF FEMALE INVOLVED IN DIFFERENT OCCUPATIONAL ACTIVITIES.

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## **ABSTRACT:**

Occupational health is specifically concerned with safety and well-being of the workers. Its motive is to improve productivity, using optimum level of human cost in comparison to outcome. In normal circumstance, occupational stress appears as an unavoidable part of working life. It is a situation where the work related factors interact with the human factors in such a way that the individual is deviated from her normal functioning. A strong relationship exists between the occupational stress of workers and their productivity. The occupational stress was directly connected with overloaded work of an individual. Hear study shows that all respondents had dual work household as well as earning outside of home so the respondents had found in more stress full condition.

## **INTRODUCTION:**

Women have a great responsibility to play as homemakers. Technical and Industrial advancement on one side have made life easy. While on the other side the role of women has also changed considerably. It is not only the functions of the family change with general social changes, but the roles of various members within the family also change. Family life is no more the same as it used to be. Homemaker's responsibilities have changed considerably. The efficient management and running of the today needs specialized knowledge, wide experience and new types of skills. The homemaker also needs knowledge to use new kinds of materials and equipment most advantageously.

Women play a dynamic role in their home activities-as wives; as mothers responsible for the development of their children and as homemaker in charge of the operation of their homes. In recent times, with the increase in educational facilities and widespread changes women have gradually started taking employment outside the home. They have now an added major role-that of a wage earner.

Thus the management of the home is no more a question of house-keeping; it calls for a scientific attitude towards management as applied to the home. Women has additional responsibilities along with home that is their career and economic earning. The study was based on the aim of “To study physiological cost of work of female involving different occupation activity.”

## Methodology:

This study was based on serve and experimental method. Female was selected as sample of the study and 150 female selected from different occupational group such as female engaged in construction work, gruhudhyog, office work, household work and dairy firmly. Those all females were home maker also. For calculating physiological cost of work of female investigator used cardiovascular system. For measuring digital heart rate meter pulse oxy meter was used. The body mass index was also considered as a factor for considering health of female. Thirty female from each group were selected investor taking three reading of each object. Investigator taking morning blood pressure and resting heart rate first then heart rate during working condition. Age, body mass index, types of occupation and use of improved device considered as a variable of the study.

## Result and Discussion:

table-1: body mass index of the respondents.

| Sr no. | Range of B.M.I     | Respondents Distribution |    |                              |       |                   |      |
|--------|--------------------|--------------------------|----|------------------------------|-------|-------------------|------|
|        |                    | Below B.M.I<br>18.5%     |    | Normal B.M.I<br>18.6%to24.9% |       | Above B.M.I 24.9% |      |
|        |                    | F                        | %  | F                            | %     | F                 | %    |
| 1      | Construction       | 30                       | 20 | 00                           | 00    | 00                | 00   |
| 2      | Self- Employment   | 00                       | 00 | 25                           | 16.67 | 5                 | 3.33 |
| 3      | Service            | 00                       | 00 | 26                           | 17.33 | 4                 | 2.67 |
| 4      | Household Activity | 00                       | 00 | 20                           | 13.33 | 10                | 6.67 |
| 5      | Dairy Farming      | 00                       | 00 | 30                           | 20    | 00                | 00   |

Data expressed that 20 percentage of construction work were below body mass index. While 16.67, 17.33, 13.33, and 20 percentage of office work and self- employment were normal B.M.I.

B.M.I shows the normal physical strength of the respondents.

table-2: activities performed by respondent's construction.

| Sr.no | Activities                   | Frequency Distribution |     |    |    |
|-------|------------------------------|------------------------|-----|----|----|
|       |                              | Yes                    |     | No |    |
|       |                              | F                      | %   | F  | %  |
| 1     | Transportation of mud-basket | 30                     | 100 | 00 | 00 |
| 2     | Caring the bricks            | 30                     | 100 | 00 | 00 |
| 3     | Transportation of mortars    | 30                     | 100 | 00 | 00 |
| 4     | Passing the concrete mixers  | 30                     | 100 | 00 | 00 |
| 5     | Transportation of Water      | 30                     | 100 | 00 | 00 |

|    |  |    |     |    |    |
|----|--|----|-----|----|----|
| 6  | Transportation of bags of sand of cement | 30 | 100 | 00 | 00 |
| 7  | Climbing leader with heavy load          | 00 | 00  | 00 | 00 |
| 8  | Concrete over the floor                  | 00 | 00  | 00 | 00 |
| 9  | Cleaning of equipment                    | 00 | 00  | 00 | 00 |
| 10 | Sprinkling of water                      | 00 | 00  | 00 | 00 |

The revealed that majority 100 percentage respondents performing activities of construction work that is transportation of mortars, passing the concrete mixer, transportation of water and transportation bags of sand or cement. The respondents work not performing climbing leader with heavy load, concrete over the floor, cleaning of equipment and sprinkling of water activities. The time were not performing accurate for activities because it was depend on the work and decide by the owner or contractor.

table-3: physiological cost of the respondents for construction.

| Sr.no | Activities                               | Time | Average pulse rate |        | K.jul | K.cal | Energy |
|-------|--|------|--------------------|--------|-------|-------|--------|
|       |  |      | Before             | After  |       |       |        |
| 1     | Mud-basket                               | 30   | 77.54              | 110.77 | 6.24  | 1.43  | 42.9   |
| 2     | Caring the bricks                        | 30   | 77.00              | 113.68 | 6.43  | 1.47  | 38.7   |
| 3     | Transportation of Mortars                | 30   | 78.2               | 102.4  | 5.63  | 1.29  | 44.7   |
| 4     | Passing the concrete mixer               | 30   | 77.54              | 105.54 | 5.83  | 1.34  | 44.1   |
| 5     | Transportation of bags of sand or cement | 30   | 78.15              | 113.6  | 6.52  | 1.41  | 40.2   |
|       | Average                                  | 90   | 77.68              | 109.19 | 6.13  | 1.38  | 42.12  |

Data expressed that physiological cost of the work at construction site for different activities. The respondents performed activities for whole day or eight hours but here limitation was that cost was calculate for 30 min. Only for selected activities. The energy expiration was 44.7 kcal for transportation of bags of sand or cement 44.1 kcal for caring the bricks, 42.9 kcal for transportation of mortars, 40.2 kcal for passing the concrete mixer and 38.7 kcal for mud-basket activities.

table-4: activities performed by self-employment respondents.

| Sr.no | Activities       | Time   | Before | After  | K.jul | K.cal | Energy |
|-------|------------------|--------|--------|--------|-------|-------|--------|
| 1     | Dough making     | 30 min | 77.30  | 98.30  | 5.21  | 1.19  | 35.7   |
| 2     | Rolling Khakhra  | 30 min | 90.06  | 103.13 | 6.62  | 1.52  | 45.6   |
| 3     | Roasting Khakhra | 30 min | 78.03  | 99.03  | 5.35  | 1.23  | 36.9   |
| 4     | Stuffing         | 30 min | 76.00  | 82.40  | 3.87  | 0.89  | 26.7   |
| 5     | Sev making       | 30 min | 77.00  | 101.07 | 5.43  | 1.24  | 37.2   |
|       | Average          | 90 min | 79.67  | 96.78  | 5.29  | 1.21  | 36.42  |

Data expressed physiological cost of for gruhudhyog. In which respondents work for eight hours but reading was taken for 30 minutes for different activities. The energy expenditure was 45.6 kcal for rolling khakhra, 37.2 kcal for sev making, 36.9 kcal roasting khakhra, 35.7 kcal for Dough making and 26.7 kcal for staffing for samosa or kachori.

table-5 physiological cost of work of respondents of office work.

| Sr.no | Activities | Time | Before | After | K.jul | K.cal | Energy |
|-------|------------|------|--------|-------|-------|-------|--------|
| 1     | Writing    | 30   | 73.71  | 96.09 | 4.77  | 1.09  | 32.7   |
| 2     | Typing     | 30   | 73.08  | 94.07 | 4.56  | 1.04  | 31.2   |
| 3     | Filling    | 30   | 74.03  | 82.07 | 3.68  | 0.84  | 25.2   |
|       | Average    | 30   | 73.60  | 90.95 | 4.33  | 0.99  | 29.7   |

Data related that energy expenditure for office work respondents. Work was classified in to different activities like writing, typing, and filling. The energy was expressed in writing 32.7 kcal 31.2 kcal in typing and 25.2 kcal in falling work.

table-6: table showing an average physiological cost of work by cardiovascular system in selected household activities.

| Sr.no | Name of Activities | Average time(min.) | Average heart rate |                | Energy expenditure | Types of work    |
|-------|--------------------|--------------------|--------------------|----------------|--------------------|------------------|
|       |                    |                    | Before activity    | After activity |                    |                  |
| 1     | Washing Cloth      | 59.4               | 74.1               | 127.07         | 103.22             | Heavy            |
| 2     | Cloth keep in line | 12.6               | 73.63              | 96.77          | 14.49              | Light            |
| 3     | Sweeping           | 17.5               | 74.03              | 111.13         | 24.99              | Moderately heavy |
| 4     | Mopping            | 26.73              | 73.8               | 114.13         | 39.74              | Moderately heavy |
|       | Total              | 116.23             | 295.56             | 449.1          | 182.44             |                  |
|       | Average            | 29.05              | 73.89              | 112.27         | 45.61              |                  |

Table expressed that of work found by cardiovascular method. Washing cloth action increase more heart rate than sweeping and mopping action. According to vergheseet al. , 1995 classification of work load by cardiovascular method washing action was heavy type work, sweeping and mopping moderately heavy in work and cloth keep in line was light in work.

table-7: showing an average physiological cost of work by cardiovascular system in selected dairy farming activities.

| Sr.no | Activities                     | Time   | Before | After  | K.jul | K.cal | Energy |
|-------|--------------------------------|--------|--------|--------|-------|-------|--------|
| 1     | Feeding of Animal              | 30 min | 78     | 85     | 5.21  | 1.19  | 35.7   |
| 2     | Cleaning of teats              | 30 min | 78     | 99.03  | 5.35  | 1.23  | 36.9   |
| 3     | Milking                        | 30 min | 76     | 85.99  | 6.62  | 1.52  | 45.6   |
| 4     | Bathing of Animals             | 30 min | 76     | 82.90  | 3.87  | 0.89  | 26.7   |
| 5     | Supplying milk to dairy center | 30 min | 75     | 101.07 | 5.43  | 1.24  | 37.2   |
|       | Average                        | 90     | 76.2   | 89.9   | 5.29  | 1.21  | 36.42  |

Data observed that average physiological cost of work of the respondents who were engaged dairy farming activities. The female performed activities such as feeding of Animal, Cleaning of teats, Milking, Bathing of Animals, Supplying milk to dairy center. The 36.42 Kcal used for dairy farming activities in which milking activity consume highest energy of the respondents.

table-8: physiological cost of work of respondents per day during work.

| Sr.no | Occupation           | Work Duration | pulse  |        | Energy expenditure |          | Total physiological cost of work |
|-------|----------------------|---------------|--------|--------|--------------------|----------|----------------------------------|
|       |                      |               | Before | After  | K Jul/min          | Kcal/min |                                  |
| 1     | Construction         | 90            | 77.68  | 109.19 | 6.13               | 1.38     | 42.12                            |
| 2     | Self-employment      | 90            | 79.67  | 96.78  | 5.29               | 1.21     | 36.42                            |
| 3     | Service              | 30            | 73.60  | 90.95  | 4.33               | 0.99     | 29.7                             |
| 4     | Household Activities | 90            | 73.89  | 112.2  | 7.14               | 1.50     | 44.61                            |
| 5     | Dairy Farming        | 90            | 76.2   | 89.9   | 5.29               | 1.21     | 36.42                            |

Data expressed that average consumption of consuming energy of respondents were rank according expenditure of energy on which household energy consume highest energy of the respondent. Second position of energy consumption show construction work then dairy farming and self-employment stood at same position and office work consume vary lace energy consumption.

Sharma 2010 reported in study that type of work found by cardiovascular method, washing cloth action increase more heart rate than sweeping and mopping action. According to Varghese et al, 1995 classification of work load by cardiovascular method washing action was heavy type work, sweeping and mopping moderately heavy in work and cloth keep in line was light in work.

Study concludes that self-employment work was consumed more energy than construction work and service. So investigation proved that homemaker, construction work and house hold work was more energy consuming work than office work.

## Conclusion:

Occupational health is specifically concerned with safety and well-being of the workers. Its motive is to improve productivity, using optimum level of human cost in comparison to outcome. In normal circumstance, occupational stress appears as an unavoidable part of working life. It is a situation where the work related factors interact with the human factors in such a way that the individual is deviated from her normal functioning. A strong relationship exists between the occupational stress of workers and their productivity. The occupational stress was directly connected with overloaded work of an individual. The study shows that all respondents had dual work household as well as earning outside of home so the respondents had found in more stress full condition.

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