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Feeling of discomfort perceived by rural women while working in the existing kitchen arrangements

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ABSTRACT

Feeling of discomfort perceived by rural women while working in the existing kitchen arrangements was studied by taking 40 households from the selected village of district Kanpur Nagar through Multistage random sampling procedure. It was observed that the highest mean height of the respondent was found 154.87 cm belonged of the age group of 20- 30 years. Less than fifty percent belonged to the normal body weight having BMI ranging from 18.5-25.0 according to Garrow's scale category (1987). The highest mean score (2.37) was found for washing of vessels and IInd ranking (2.3) found for collection of water, grinding of masala and rolling/ roasting of chapatti activities. The respondents found maximum stress in performing grinding of masala activities showing highest S.D. *i.e.* 30.66. It was also observed that almost all rural women were performing kitchen activities in sitting posture.

Key words : Discomfort, Arrangement, Rural women.

Women's work demanding a high degree of physical effort leads of fatigue and frustration. However, the amount of energy spent, demonds upon the type of activity, and manner in which it is performed. To perform any activity, body segments has to be manipulated in the space, resulting change in posture. 'Posture' can be defined in the general way as the organization of bodily segments in the space according to the gravity of force. Organization of work surface or storage space is also considered important for decreasing the cost of work. Designing of a functional storage need special consideration of anatomical measurements of the users. With a faulty design of kitchen storage shelves, even the normal person without primary anatomical or physical defects develop degenerative tissue changes and decreased output with maximum input.

A good working posture is one in which the body is well balanced and the person works comfortably without stretching or bending any part of the body. Its also reduces the physiological cost of work and fatigue to minimum, whereas incorrect posture for long time might cause several musculo-skeletal problems in the long run. Poor standing or sitting posture may result in permanent change in spine, in positions of the joints, ligaments and muscles and in location of the organs of the body. The present study was conceptuated with the specific objective to know the feeling of discomfort perceived by rural women while working in the existing kitchen arrangements.

METHODOLOGY

The multistage random sampling procedure was adopted for selection of sample in Kanpur district. One block (Sarsaul) was selected purposively and two villages Badi Maholi and Chhoti Maholi were selected as the study area. Twenty rural women were selected from each village. Total 40 women were selected in the study area.

Dependent and independent variables were used to find out the musulo-skeltal problems and postural stress. Anthropometric scale was used for measuring human body dimension and Quetlets index was used to find out the physical fitness of women. A three point rating scale given by Varghese *et al*. (1995) was used to record the perceived postural stress.

Table 1 Shows that 45 per cent respondent belonged to the age group of 20- 30 years. The highest mean height (154.87 cm) was found belonging to the age group of 20 -30 year followed by 153.80 cm from the age group of 41- 50 years and 150.55 cm from the age group of 31.40

Table 1 : Physical characteristics of the respondents according to age groups (N= 40)

Sr. No.	Age	No. of respondents	Mean age (year)	Mean height (cm)	Mean weight (Kg)	Mean BMI	Remarks
1.	20- 30	18 (45)	25	154.87	47.77	20.15	Normal
2.	31- 40	12 (30)	35.5	150.55	48.66	21.62	Normal
3.	41- 50	10 (25)	45.5	153.8	50.10	23.33	Normal

(Figures in parenthesis indicate percentage).

years respectively. The highest mean body weight of the respondents was 50.1 kg belonged to the age group of 41- 50 years which was followed by respondents with mean weight 48.66 kg belonged to the age group of 31-40 years. It was observed from the data that increasing weight with increase in age of the respondents. It was also found that BMI of the respondents belonged to the age group 41- 50 years had highest mean score (23.33).

Table 2 shows that the data collected on height and weight of the respondents were computed for assessing BMI and the respondents were categorized by Garrow's scale (1987). It was found that maximum (57.5%) respondents belonged to the category of 18.5- 25.0 (having normal weight) and 2.5per cent respondents belonged to the category of Grade III (severe) *i.e.* under weight and Grade II(obese).

Table 3 depicted that majority (75%) of the households were having sitting type of kitchen, 15 percent respondents using standing kitchen whereas 10 percent households had both sitting and standing type of kitchen. It shows that still in rural households women prefer sitting posture for performing kitchen activites.

Table 2 : Distribution of respondents on the Basis of BMI classification according to Garrow's scale (1987) N= 40

Sr. No.	BMI class	Presumptive diagnosis	No. of respondents	Percentage
1.	> 16.0	CED Grade III (Severe)	1	2.5
2.	16 – 17.0	CED Grade II (Moderate)	3	7.5
3.	17.0 – 18.5	CED Grade I (Mild)	6	15.0
4.	18.5 – 25.0	Weight normal	23	57.5
5.	25.0- 30.0	Obese (Grade I)	6	15.0
6.	Above – 30	Obese (Grade II)	1	2.5
		Total	40	100

* CED = Choronic Energy Deficient.

Table 3 : Distribution of households according to type of kitchen N= 40

Sr. No.	Type of kitchen	No. of households	Percentage
1.	Sitting	30	75
2.	Standing	6	15
3.	Sitting and standing both	4	10
	Total	40	100

Table 4 depicts that maximum (50%) respondents found with "Acute" postural stress in washing of vessels and minimum (7.5%) stress in cleaning of cereals, cooking of vegetables, boiling of pulses and cooking of rice respectively. "Less acute" postural stress was found in maximum (52.5%) respondents while collection of water whereas minimum (17.5%) respondents found less stress for cooking of rice, respectively. Maximum (75%) respondents were found with "Negligible" postural stress while performing cooking of rice.

From over all discussion it is clear that "Less acute" postural stress were felt by majority of the rural women while performing different kitchen activities such as collection of water, mopping of floor, washing of vessels etc. The highest mean score were found in washing of

Table 4 : Distribution of respondents according to postural stress while performing different kitchen activities

Sr. No.	Kitchen activities	Rating of perceived postural stress			Score	Rank	S.D.
		Acute 3	Less acute 2	Negligible 1			
1.	Collection of fire wood	5 (12.5)	20 (50)	15 (37.5)	1.75	VIII	14.433
2.	Collection of water	15 (37.5)	22 (55)	3 (7.5)	2.3	II	23.965
3.	Cleaning of cereals	3 (7.5)	8 (20)	29 (72.5)	1.1	XII	10.149
4.	Washing of vegetables	-	11 (27.5)	29 (72.5)	1.27	III	15.113
5.	Cutting of vegetables	5 (12.5)	10 (25)	25 (40)	1.27	III	23.49
6.	Grinding of masala	17 (42.5)	18 (45)	5 (12.5)	2.3	II	30.666
7.	Kneading dough	14 (35)	19 (47.5)	7 (17.5)	2.1	VI	19.157
8.	Rolling/roasting chapati	18 (45)	17 (42.5)	5 (12.5)	2.3	II	24.633
9.	Cooking vegetables	3 (7.5)	19 (47.5)	18 (45)	1.62	IX	14.835
10.	Boiling of Dal	3 (7.5)	15 (37.5)	22 (55)	1.52	X	10.599
11.	Cooking of rice	3 (7.5)	7 (17.5)	30 (75)	1.32	XI	10.967
12.	Serving of meal	11 (27.5)	21 (52.5)	8 (20)	2.0	VII	17.616
13.	Sweeping of floor	16 (40)	18 (45)	6 (15)	2.25	IV	21.633
14.	Mopping of floor	14 (35)	21 (52.5)	5 (12.5)	2.22	V	21.362
15.	Washing of vessels	20 (50)	17 (42.5)	3 (7.5)	2.37	I	28.536

vessels, roasting/rolling of chapati, grinding masala and collection of water. Respondents were found to suffer maximum stress for grinding of masala showing heighest S.D.30.66, followed by washing of vessels (S.D.-28.53) and for rolling and roasting of chapatti (S.D.-24.63).

Conclusion:

Hence, it can be concluded that grinding of masala was among the most uncomfortable activity, due to poor designing of kitchen work place. An ergonomically designed work place is necessary, to reduce the fatigue of the worker.

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