

Assessment of musculo-skeletal problems of women entrepreneurs performing tailoring activity-drafting and cutting

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■ **ABSTRACT** : Workers involved in sewing activities such as cutting, drafting, attaching sari fall and embroidery may be at risk of developing musculo-skeletal disorder. Hence, the present study was conducted to assess the musculo-skeletal problems by women entrepreneurs while performing tailoring activity drafting and cutting. The present study was carried out in Parbhani town of Marathwada region in Maharashtra state. Purposive random sampling was followed to select thirty subjects between age range of 25-35 years who were involved in tailoring enterprise and performing drafting and cutting of the sari blouse. M.A.U multipurpose tailoring stand developed by AICRP, Family Resource Management, College of Home Science was used as new technology. The results revealed that in traditional method that all the selected entrepreneurs who performed the tailoring activity drafting and cutting experienced pain in neck, shoulder joints and lumbar region. Whereas in improved method, all the entrepreneurs expressed that they did not experienced any kind of pain at neck and shoulder parts while performing drafting and cutting activities by improved method. It can be concluded from the data that musculo-skeletal disorders were less experienced when the work was performed by improved method.

■ **KEY WORDS** : Musculo-skeletal problems, Assessment, Tailoring, Drafting, Cutting

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Growing environment of fashion, styles of clothing etc. demand greater expectation from the tailoring industries. Workers involved in sewing activities such as cutting, drafting, attaching sari fall and embroidery may be at risk of developing musculo-skeletal disorder. Musculo-skeletal disorder may be characterized by pain, numbness and a lack of mobility in the affected area, usually the hands, shoulders and backs. Sewing related injuries have been documented in the areas of sewing station performing fine work or scissor work and material handling among others. Wright and Susan (2001) found that a well designed convenient sewing area large or small saves time and energy. Several studies have shown that operator of sewing machines reports discomfort in the left shoulder, the neck, the back, and the lower extremities (e.g. Vihma *et al.*, 1982; Wick and Drury, 1986; Blader *et al.*, 1991). Musculo-skeletal complaints occurred more frequently among sewing machine operators

especially in neck, shoulders and lower limbs.

■ RESEARCH METHODS

The present study was carried out in Parbhani town of Marathwada region in Maharashtra state. Purposive random sampling was followed to select thirty subjects between the age range of 25-35 years who were involved in tailoring enterprise and performing drafting and cutting of the sari blouse. Questionnaire schedule was developed to note down the responses of the entrepreneurs. M.A.U multipurpose tailoring stand developed by AICRP, Family Resource Management, College of Home science was used as new technology. The activity drafting and cutting of the blouse was considered to know the difference between traditional and improved method. Musculo-skeletal problems encountered by women were recorded by using body map. The incidence of pain was recorded after the completion of

Table 1 : Musculo-skeletal disorders while performing tailoring activity- drafting and cutting

Major parts of the body	Musculo-skeletal disorders experienced in	
	Traditional method	Improved method
	Yes	No
Upper extremities		
Eye	24 (80)	6 (20)
Neck	30 (100)	-
Shoulder joints	30 (100)	-
Wrist	24 (80)	6 (20)
Finger joints	17 (56.67)	13 (43.33)
Cervical region	28 (93.33)	2 (6.67)
Lower extremities		
Lower lumbar region	30 (100)	-
Buttocks	23 (76.67)	7 (23.33)
Thigh muscles	16 (53.33)	14 (46.67)
Calf muscles	17 (56.67)	13 (43.33)
Knee joint	27 (90)	3 (10)
Ankle joint	23 (76.67)	7 (23.33)
	Yes	No
	12 (40)	18 (60)
	-	30 (100)
	-	30 (100)
	3 (10)	27 (90)
	7 (23.33)	23 (76.67)
	1 (3.33)	29 (96.67)
	1 (3.33)	29 (96.67)
	1 (3.33)	29 (96.67)
	1 (3.33)	29 (96.67)
	1 (3.33)	29 (96.67)
	2 (6.67)	28 (93.33)

Note : Figures in parenthesis indicate percentages

the activity. The intensity of pain in the above stated parts of the body was recorded by using the following scale having five points: Very severe (5), Severe (4), Moderate (3), Light (2) and Very light (1) (Ranjwan, 2000).

■ RESEARCH FINDINGS AND DISCUSSION

The musculo-skeletal disorders experienced by women entrepreneurs were assessed while performing the tailoring activity drafting and cutting both in traditional and improved method (Table 1).

Traditional method:

The experiment showed that all the selected entrepreneurs who performed the tailoring activity drafting and cutting experienced pain in neck, shoulder joints and lumbar region. This was followed by 90 and 80 per cent of the entrepreneurs suffered from the pain in knee, eye and wrist joints, respectively. Minimum number of entrepreneurs (56.67%) experienced musculo-skeletal pain in finger joints while performing tailoring activity in traditional method. Minimum number of entrepreneurs (53.33%) suffered with pain in thigh muscles.

Improved method:

All the entrepreneurs express that they did not experienced any kind of pain at neck and shoulder parts while performing drafting and cutting activity by improved method. The pain in cervical region was experienced by minimum number of entrepreneurs (3.33%). Further, the entrepreneurs opined that pain experienced in lower extremities was less experienced compared to the pain experienced in upper extremities while performing the drafting and cutting activities in improved method.

It can be concluded from the data that musculo-skeletal disorders were less experienced when the work was performed by improved method. Musculo-skeletal disorders experienced in traditional method were more at upper extremities of the body than lower extremities. In traditional method, all the entrepreneurs experienced pain at neck, shoulder and lumbar region.

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