Level of Postural Awareness Among Teaching Staff of University of Azad Jammu & Kashmir, Muzaffarabad

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Highlights:

- Postural awareness among faculty of University of Azad Jammu & Kashmir (UAJ&K) was assessed
- Most of the faculty had some knowledge about posture but 68% had average level of postural awareness
- Neck and back pain were found to be common
- Majority of teaching staff used improper positioning during different work.

Abstract:

Background: Postural problems are very common these days among youth including office workers, University staff, students and from other walks of life.

Objective: To evaluate the level of postural awareness and proper positioning during different tasks performed by teaching staff of University of Azad Jammu &Kashmir, Muzzafarabad (UAJ&K).

Methodology: A cross-sectional study with purposive sampling technique was conducted in UAJ&K. In this study 100 faculty members, both male and females, with age between 25 to 55 years were included. 54% were males. The data was analyzed on SPSS version 22.

Results: 63% worked for 4-8 hours daily, 95%, respondents traveled 1-7 hour daily and 61% had knowledge about posture, among them 47% had back and 20% had neck pain. Majority of the teaching staff used improper positioning during different work.

Conclusions: There was moderate level of information regarding correct positioning during work in different environment. They used improper postures which leads to physical abnormality, absenteeism, increased expenditure on their treatment.

Keywords: Posture, travel, Pain, Faulty Position, back pain.

Introduction:

Posture is the attitude assumed by body either when the body is immobile or when it is in motion in relation to the time. Posture is attained as a result of coordinated action of many muscles working to maintain stability.[1-5] Optimal or ideal posture is the state of muscular and skeletal balance that protects the supporting structures of the body against injury or progressive deformity, either at work or rest. It involves the positioning of the joints to provide minimum stress to the body.

Conversely, faulty posture increases stress on the joints.[6-8] The concepts of posture is based on a series of chains which rely on the mechanics of the body in which complications develop anywhere along the body. The disturbance in the chain can lead to abnormality below or above that junction. This generates more strain on the supportive structures. Additionally, persisting postural faults can produce ache, distress, or disability.[9,10]

The American Academy of Orthopedic Surgeons (AAOS) define poor posture as a faulty relationship of the deferent body parts, which creates increased strain on the supporting structures. Moreover, persisting postural faults can result in pain, discomfort, or disability.1 Physical job demands such as, static postures, repetition and forceful exertions have been reported as underlying mechanisms leading to the

development of work related musculoskeletal disorders (WMSDs).[11-15] Hence, the risk factor of bad posture during teaching, classroom environment and daily activities should be addressed at younger age to prevent musculoskeletal injuries in adulthood [16]. There is need to highlight certain issues that are going to be deciding factors for future postural education programs and life style modification awareness programs.

Methodology:

A cross-sectional study was conducted in UAJ&K. A total of 100 participants were recruited. The sample size was calculated from Reosoft Sample size calculator at 95% confidence interval.17 Both male and female teaching staff with age between 25 to 55 years were included. The survey with close-ended, self-administered questionnaire that focused on various positions while working was used as the data collection method. The questionnaire was prepared, keeping in mind the various faulty positions of working staff and was aimed at drawing their attention to their strained positions that can potentially cause pain. The questions were designed so that they evaluate the level of postural awareness by eliciting the details of the body posture of the staff, their manner of working, and the presence or absence of pain. The questionnaire was distributed among the staff after permission from the head of department and written informed consent taken from each respondent. Data was analyzed using SPSS version 16 showing frequency and percentages of different variables.

Results:

There were 54% males and 46% females. All participants were educated; among them 15% were BS/ MSc, 65 % were M.Phil, MS and 20% were Ph.D., Majority (99%) were right handed and most of the participants (63%) worked 4-8 hours daily , 95% respondents traveled 1-7 hours daily (Table 1).

Demographical Detail		Frequency
Gender	Male	54
	Females	46
Education	BS/MSc	15
	M.Phil/MS	65
	Ph.D	20
Dominant Hand	Right	99
	Left	1
Daily Working Hours	1 - 4	19
	4 - 8	63
	8 - 12	16
	12 - 16	2
Traveling	Yes	62
	No	48
Duration of Traveling Daily	>1 hours	7
	2 - 3	49
	4 - 5	29
	6 - 7	10
	Other	5

Table 1: Demographic variables

61% respondents had general information about posture: 9% had poor, 68% had average and 23% had good knowledge and 71% tried to maintain correct posture. Due to bad posture 81% had pain in different regions. The pain in different regions included neck (16%), back (47 %), upper limb (17%) and lower limb (3%) (Table 2).

The graphical date showed that posture during different activities/tasks and the correct positioning used by participants included; exact standing (83%), washing clothes manually (59%), sitting in high (51%), low(43%) back rest chair, driving(65%) and gardening (85%),while keeping weight on high level(61%) ,while carrying an object(70%), carrying bucket(52%), carrying back pack(61%), sleeping posture(83%) and correct mattress(55%) (Figure 1).

Posture Knowledge and Pain		Frequency
Knowledge about Posture	Yes	61
	No	39
Level of postural awareness	Poor	9
	Average	68
	Good	23
Tried to maintain posture	Yes	81
	No	29
Pain related to bad posture	Yes	65
	No	35
Location of pain	Neck	20
	Back	47
	Upper Limb	15
	Lower Limb	3
	Nil	15

Table 2: Posture and pain related variables

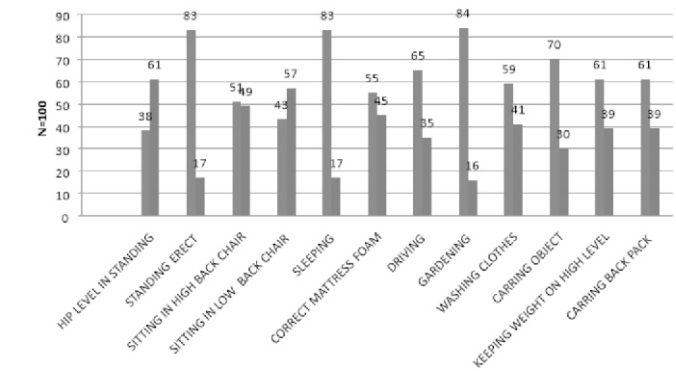

Figure 1 : Posture during different task

Discussion:

In Azad Kashmir, particularly in Muzaffarabad, no study has been conducted on postural awareness with regards to University teachers. So, the information of postural awareness, proper positioning during different tasks performed by teaching staff and its association with pain is unknown. Therefore, there is a need to investigate above mentioned basic information related to the body posture in teaching staff of UAJ&K.

A survey was done in Karachi in which 64.4% of the participants had general information regarding their body posture.[16] The level of postural Awareness is 09% had poor 68% had average and 23% had good in the current is somewhat be similar to to the previous study conducted in Saudi Arabia it showed that 21% poor 67% had average & 11% had good postural awareness. [17]

The posture is directly proportional to the performer's work, if the performers have no knowledge about posture, they can develop different problems. A study was done by Elizabeth Mailoa & Peter Rovani who claimed 56.8% of respondents had complaints of pain[18]. In the current study, 81% participants had pain due to bad posture. These findings are not similar to the above mentioned studies, the participants had less knowledge about posture and they had no proper environment of work, because the AJK is a remote area, and after earthquake the basic infrastructure was demolished so there is no standard work environment for teaching. They also have no proper platform for physical activity.

In current study, the males are more than females, may be due to the decreased number of females in the employment. This is completely different than what is observed in the western countries where there is equality in regards to job responsibilities, work load and amount of stress, and also males in our country are more likely to be subjective to abnormal posture and musculoskeletal problems.

Long traveling effects posture and development of pain due to prolonged & persisted sitting.[19-21]

95% of the respondents travelled 1-7 hours daily. The basic infrastructure of roads in Azad Jammu Kashmir is not meeting the international standards.

The awareness of posture is important to prevent any musculoskeletal disease. The participants of this study mention different locations of pain, among which 47% have backache, 20% have neck pain, 15%

have upper limb pain, and 3% have lower limb pain. The same musculoskeletal problems were identified but showed different margin in Indonesia by Elizabeth Mailoa & Peter Rovani the 25% of complaints of back pain, 23.9% limb pain and 8% of neck.[18]

To our knowledge, it is a pioneer study of its type and included qualified staff. One of the major limitations of this study is that it covered three campuses of UAJ&K instead of all campuses. Distribution of pamphlet regarding the postural awareness was missed; it should be consider in future when it is done on large demographical area for validation of the results.

Conclusions:

Most of the faculty members were unaware of the correct sitting postures during work. They suffered neck pain, low back pain and other pains due to improper posture.

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