ORIGINAL ARTICLE e-ISSN: 2349-0659 p-ISSN; 2350-0964

To Assess Postural Discomfort of School Students using Virtual Pedagogy

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Abstract

Posture is usually defined as the relative arrangement of the parts of the body. It was observed that school teachers worked continuously in one posture for long hours. Constantly, they suffered from discomfort in different parts of their body, especially in the shoulders, knees, back, lower back, and upper back, which mainly prevent them from continuing their work. **Aim:** The purpose of this study was to assess the postural discomfort of the teachers using virtual pedagogy. With this background, this study was carried out with the objectives to assess. **Objective:** The postural discomfort faced by school teachers across gender. **Methods:** The sample size was 100 school students and sample was collected from Lucknow city using interview schedule along with a technique for measuring postural discomfort scale prepared by Corlett, E.N. and Bishop, R.P. (1976). The collected data were coded, scored, tabulated, and analyzed using relevant descriptive statistics frequency, percentage, mean and standard deviation, and relational statistics like correlation. The sample was collected through random and purposive random sampling technique. The data calculated were analyzed using frequency, percentage, and correlation. **Results:** There is no significant difference between gender and postural discomfort of respondents.

Keywords: Discomforts, Middle childhood, Pedagogy, Postural

Asian Pac. J. Health Sci., (2022); DOI: 10.21276/apjhs.2022.9.4S.21

Introduction

Posture can be defined as the position of all the body segments observed at a specific moment. Adequate posture occurs when the body is kept in balance with the least expenditure of energy possible.[1]Postural discomfort encompasses a lot more than a static pose. It is the result of chronic bad habits as we perform daily activities. Particularly, if we consistently engage in repetitive motions, or maintain a position for posture can be defined as the position of all the body segments observed at a specific moment. Adequate posture occurs when the body is kept in balance with the least expenditure of energy possible. Postural discomfort encompasses a lot more than a static pose. It is the result of chronic bad habits as we perform daily activities. Internet technology has been considered as important medium for many aspects in our lives including academic learning. [2] Technology has proliferated society. Although it has many benefits, there are also risks particularly for youth.[3] Particularly, if we consistently engage in repetitive motions, or maintain a position for prolonged period, our body begins to compensate for the activity. This throws the rest of the body out of alignment. Postural discomfort is a condition where pain is felt in the lower back; however, there is no significant damage or trauma to tissue. Patients with postural discomfort only experience an ache or pain during activities placing sustained stress on normal tissue. Comfort and discomfort indicates an increase in physical discomfort during the work day.[4] The sitting posture is determined by several factors including the workplace design,the characteristics of the chair and desk, the visual and manual requirements of the occupational task.[5]

The postural discomfort map developed by Corlett (1995) is a psychophysical assessment technique that aims to map the presence of discomfort or pain perceived by workers. In this evaluation, workers mark the level of discomfort on a personal scale according to the subdivision of the existing body segments into a pre-elaborated human figure.[6]

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How to cite this article: Mishra N, Agrawal S, Sharmila K. To Assess Postural Discomfort of School Students using Virtual Pedagogy. Asian Pac. J. Health Sci., 2022;9(4S):109-111.

Source of support: Nil.

Conflicts of interest: None.

Received: 19/03/2022 **Revised:** 17/04/2022 **Accepted:** 15/05/2022

Aim/Objective

The purpose of the study was to assess the postural discomfort faced by students using virtual pedagogy.

Review of Literature

Jeong and So (October 5, 2020)

This study examined the difficulties of running online physical education classes in the context of coronavirus disease 2019 (COVID-19) and used the findings to develop an efficient operation plan to address these difficulties. A qualitative case study method employing phenomenological procedures to collect and analyze the data was used. The difficulties of operating middle and high school online physical education classes for the 1st time included in the study. To address the identified problems and facilitate the efficient operation of online physical education classes, changes in strategic learning methods are needed to understand online physical education.

Methodology

The study was conducted in Lucknow city, Uttar Pradesh, India. The sample comprised 100 students above 11 years distributed

Table 1: Age-wise distribution

Age of the respondents	*Respondents (Students), n=100*	
	Boys (68)	*Girls (32)*
11–12 Years	51 (51.0)	11 (11.0)
12–13 Years	17 (17.0)	21 (21.0)

Figures in parenthesis indicate percentage

Table 2: Distribution of the respondents on the basis of class taught

Standard of the respondents	*Respondents students, n=100*	
	Boys (68)	*Girls (32)*
6th	37 (37.0)	9 (9.0)
7th	23 (23.0)	12 (12.0)
8th	8 (8.0)	11 (11.0)

Table 3: Distribution of the respondents on the basis of devices used by the respondents

Devices used by the respondents	*Respondents students, n=100*				*Total*
	Boys (68)		*Girls (32)*		
	Yes	*No*	*Yes*	*No*	
Computer	20 (20.0)	48 (48.0)	13 (13.0)	19 (19.0)	
Laptop	27 (27.0)	41 (41.0)	17 (17.0)	15 (15.0)	
Tablet	9 (9.0)	59 (59.0)	6 (6.0)	26 (26.0)	
Smart Phone	57 (57.0)	11 (11.0)	28 (28.0)	4 (4.0)	

across gender. Research design of the study was descriptive in nature. Purposive random sampling technique was used to select the sample. Descriptive (percentage and frequency) and relational statistics analysis of variance were calculated to analyze the data. Postural discomfort scale prepared by Corlett and Bishop (1976) with the self-constructed interview schedule was used to measure the mental wellness of teachers.

Results and Discussion

Table 1 describes the distribution of the respondents on the basis of age. The result shows that (51.0%) were boys and (11.0%) were girls from the age group of 11–12 years and (17.0%) were boys and (21.0) were girls from the age group of 12–13 years.

Table 2 describes the distribution of respondents on the basis of class they taught. Result shows that (37.0%) students are boys and (9.0%) students are girls studies in 6th class. About (23.0%) students are boys and (12.0%) students are girls studies in 7th class and (8.0%) students are boys and (11.0%) students are girls studies in 8th class.

Table 3 describes the distribution of the respondents on the basis of devices used for online class. The result shows that majority of students preferred laptop and smart phone. Few respondents were using computer and very few used other devices as tablet.

Table 4 describes the distribution of the respondents on the basis of online teaching hours. The result shows that (22.0%) male teachers and only (2.0%) female teachers are engaged in 1–3 h teaching and (28.0%) male teachers and (32.0%) female teachers are engaged in 3–5 h teaching and (14.0%) male teachers and only (2.0%) female teachers are engaged in 5–7 h online teaching.

Respondents (students)		
Online learning hours	*Respondents (students) n=100*	
	Boys (68)	*Girls (32)*
1–3 h	18 (18.0)	12 (12.0)
3–5 h	32 (32.0)	17 (17.0)
5–7 h	18 (18.0)	3 (3.0)

Table 4: Distribution of the respondents on the basis of online teaching hours

Teaching hours	*Respondents, n=50*	
	Male (n=32)	*Female (n=18)*
1–3 h	11 (22.0)	1 (2.0)
3–5 h	14 (28.0)	16 (32.0)
5–7 h	7 (14.0)	1 (2.0)

Table 5: Distribution of the respondents faced by postural discomfort

Postural discomfort	*Respondents, n=100*			
	Boys (68)		*Girls (32)*	
	Yes	*No*	*Yes*	*No*
Neck	53 (53.0)	15 (15.0)	27 (27.0)	5 (5.0)
Shoulders	50 (50.0)	18 (18.0)	20 (20.0)	12 (12.0)
Mid back	19 (19.0)	49 (49.0)	8 (8.0)	24 (24.0)
Lower arms	17 (17.0)	51 (51.0)	8 (8.0)	24 (24.0)
Lower back pain	45 (45.0)	23 (23.0)	18 (18.0)	14 (14.0)
Upper back	16 (16.0)	52 (52.0)	8 (8.0)	24 (24.0)
Upper arms	14 (14.0)	54 (54.0)	8 (8.0)	24 (24.0)
Buttock	19 (19.0)	49 (49.0)	12 (12.0)	20 (20.0)
Thighs	15 (15.0)	53 (53.0)	6 (6.0)	26 (26.0)
Legs	14 (14.0)	54 (54.0)	5 (5.0)	27 (27.0)

Table 6: ANOVA value of postural discomfort between different age group

Categories	*Age*	*Mean*	*Df*	*F*	*Sig*	*Conclusion*
Neck	11–12 years	1.8	99	0.55	0.45	S
	12–13 years	1.7				
Shoulders	11–12 years	1.7	99	1.2	0.26	S
	12–13 years	1.5				
Upper back	11–12 years	1.2	99	0.25	0.87	S
	12–13 years	1.2				
Upper arms	11–12 years	1.1	99	0.24	0.62	S
	12–13 years	1.2				
Mid back	11–12 years	1.2	99	0.094	0.76	S
	12–13 years	1.3				
Lower arms	11–12 years	1.2	99	0.01	1.0	S
	12–13 years	1.2				
Lower back	11–12 years	1.6	99	0.91	0.34	S
	12–13 years	1.5				
Buttocks	11–12 years	1.3	99	0.91	0.34	S
	12–13 years	1.3				
Thighs	11–12 years	1.2	99	0.14	0.70	S
	12–13 years	1.1				
Legs	11–12 years	1.2	99	0.34	0.56	S
	12–13 years	1.1				

Table describes the distribution of the respondents on the basis of online learning hours. The result shows that (18.0%) boys students and only (12.0%) girls student are engaged in 1–3 h teaching and (32.0%) boys students and (17.0%) girl students are engaged in 3–5 h teaching and (18.0%) boys students and only (3.0%) girl students are engaged in 5–7 h online teaching.

Table 5 described distribution of the respondents on the basis of postural discomfort faced by them. The majority of the students faced in neck and shoulder pain few respondents were also in lower back pain and buttock pain and very few were of other like legs, thighs, upper back, and arms pain.

Table 6 shows that there exists no significant difference in postural discomfort of the respondents (students) across different age group.

Conclusion

The study was done to assess the mental wellness and postural discomfort of students and teachers during online class. The

findings show that the majority of women face problems in their back and lower arms and the majority of the men face problems in their neck and shoulders. The majority of the male were more energetic and sometime female fells disappointed. There was a significant difference their postural and discomfort across gender. Results revealed that teachers and students in virtual pedagogy faced many discomforts. They suffer several times with network issues and strain on eyes. They faced different types of postural discomfort such as pain in neck, shoulder, lower back, mid back, lower arms, and legs. They suffer from different types of problem due to vulnerable conditions such as they have to manage their home chores and with their eating times. Due to online classes, they face long sitting problems, back pain, headache, and eye weakness.

Acknowledgment

The authors express their gratitude to all of the participants in this study. The authors additionally acknowledge all the scholars whose publications are cited and included in the manuscript's references for their valuable support.

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