CERVICAL AND LUMBAR PAIN AMONG FACULTY OF MEDICAL COLLEGES OF NORTHERN PHILIPPINES: A SURVEY OF PREVALENCE AND RISK FACTORS

HEINRICH L. CUTARAN
PRINCESKAIRA DE OCAMPO
MICAH ELLA V. GUILLERMO
Student-Researchers
Bachelor of Science in Physical Therapy
DAISY LIZA B. TACCAD, PTRP, MPH
Research Adviser and Faculty Member
Medical Colleges of Northern Philippines
Alimannao, Penablanca, Cagayan Philippines

ABSTRACT: *Integrating online learning has increased computer usage among teachers, potentially impacting their posture and causing muscle tension and pain. We conducted a descriptive inferential research study using a questionnaire as the main data-gathering instrument to investigate this. We assessed pain intensity using a numeric rating scale and evaluated the range of motion with a universal goniometer. Our findings showed that most respondents were young women without children, working long hours without wearing heels. They experienced neck and lower back discomfort, especially during prolonged sitting. Postural assessments revealed forward head position, uneven shoulder posture, decreased natural spine curvature, and posterior pelvic tilt. Respondents exhibited reduced flexibility in cervical forward bending, lateral bending, slight rotational limitations, and normal lumbar forward bending. Pain correlations indicated variations based on sex, office hours, and footwear choices, with moderate correlations observed for cervical pain and heel height. Range of motion analysis indicated differences in cervical flexibility based on sex and office hours, and lumbar range of motion correlated with office hours. Factors such as sex, office hours, and footwear choices are crucial in understanding and addressing workplace pain. Prolonged periods of sitting in front of a screen can exhaust the neck and back muscles, leading to muscle imbalance and poor body posture. Surprisingly, our study did not find a correlation between wearing heels in the workplace and body pains. On close analysis, working in a seated position with a high workload for more extended periods significantly contributes to long-term neck and back pain. Additionally, longer working hours notably affect the range of motion, particularly flexion. Prolonged sitting during work negatively impacts individuals' flexibility.*

Keywords: *Cervical Pain, Low Back Pain, Poor Posture, Ergonomics, Teachers, Instructors, Level of Pain, Pain Experience*

INTRODUCTION

The COVID-19 pandemic has led to a significant increase in online learning, requiring educators to adopt remote teaching practices and rely heavily on digital platforms. This shift has resulted in extended hours of desk-based work, primarily using desktop computers and laptops. However, this prolonged exposure to suboptimal ergonomic conditions has raised concerns about the physical well-being of university teachers. Existing research highlights the prevalence of musculoskeletal issues, particularly in the neck and lower back regions, among office workers. Poor posture during tablet use has been associated with increased cervical pain risk, and the combination of extensive sitting and inadequate posture has also been linked to increased risks of low back pain. Despite the integration of blended learning models, these concerns persist, underscoring the need to address the physical well-being of educators engaged in remote teaching.

The primary objective of this study is to examine and identify the prevalence of cervical and lumbar pain among faculties within Medical Colleges in the Northern Philippines. The study aims to elucidate the risk factors associated with these discomforts, particularly in the context of the widespread shift to online education and remote work practices prompted by the pandemic. By shedding light on the extent of these issues and their underlying causes, the study aims to contribute to the development of strategies and interventions that can enhance the ergonomic conditions and overall well-being of educators engaged in remote teaching. The research aims to bridge existing knowledge gaps by providing insights into the physical challenges posed by the current education landscape and proposing measures to mitigate their impact.

STATEMENT OF THE PROBLEM

This research study's main objective was to thoroughly investigate and provide knowledge about the current prevalence of cervical and lumbar pain among the faculty members of the Medical Colleges of Northern Philippines. The study also sought to discern and delineate the risk factors that could contribute to the manifestation and aggravation of such conditions.

1. What is the profile of the respondents? In terms of:
    1.1 Age
    1.2 Sex

1.3 Number of children
1.4 Number of office hours
1.5 Height of heels in inches

2. What is the frequency of pain experience of the respondents? As to:
   2.1 Cervical Pain (Neck Pain)
   2.2 Lumbar Pain (Back Pain)
3. What is the assessment of the respondents on their pain levels?
   As to:
   3.1 Cervical Pain (Neck Pain)
   3.2 Lumbar Pain (Back Pain)
4. What is the assessment of the respondents on the intensity of their workload?
5. What is the postural evaluation of the respondents? As to:
   5.1 Anterior View
   5.2 Lateral View
   5.3 Posterior View
6. What is the Range of Motion evaluation of the respondents? As to:
   6.1 Cervical Spine
   6.2 Lumbar Spine
7. How does the profile of the respondents affect the respondents' pain experience, pain levels, postural evaluation, and range of motion evaluation?

RESEARCH METHODOLOGY

This study utilized a Descriptive Inferential Research design to investigate the prevalence and risk factors of cervical and lumbar pain among faculty members of Medical Colleges of Northern Philippines during online and blended learning classes. A total of 80 teaching staff were invited to participate, with 62 respondents needed. A questionnaire was used as the main data-gathering tool, consisting of 20 questions and a numeric Rating Scale. The Universal Goniometer was used to gather data on the range of motion for cervical and lumbar areas. Data collection procedures involved obtaining permission from the Dean of College of Physical Therapy, submitting a survey questionnaire, and obtaining consent from respondents. Data was analyzed using statistical techniques, including frequency and percentage, weighted mean, and Pearson moment correlation coefficient. The results were presented in tabulated forms and interpreted to understand the prevalence and risk factors of cervical and lumbar pain among the faculty of MCNP.

RESULTS AND DISCUSSION

Table 1. Frequency Count and Percentage Distribution of the Respondents Profile

AGE	**FREQUENCY**	**PERCENTAGE**
22 – 25	12	40
26 – 29	12	40
30 – 33	1	3.3
34 - 37	3	10
38 - 41	2	6.7
SEX		
Male	11	36.7
Female	19	63.3
No. of Children		
No child	22	73.3
One - Three	8	26.7
No. of Office Hours		
8 – 9 hours	29	96.7
10 – hours above	1	3.3
Height of Heels in Inches		
No heels	19	63.3
One - Three	10	33.3
Four - Five	1	3.3

The data reveals that a significant portion of the institution's employees are of the millennial and Gen Z age groups, with 40% falling within the 22-25 and 26-29 age groups, respectively. This demographic trend suggests that a significant number of instructors are relatively young, aligning with the trend of younger generations seeking career opportunities in academic roles. The gender distribution among respondents is 63.3% females, while 36.7% are males, reflecting the higher representation of women within the workforce. Parental status is also a significant factor, with 73.3% of respondents not having children and 26.7% having one to three children. This indicates that most instructors are either single or belong to Generation Y (millennials), prioritizing career advancement and personal goals over traditional family roles. Working hours for instructors are 97.7% of the standard working hours in the country, which exposes them to factors associated with low back pain (LBP) due to prolonged standing or sitting. The study suggests that prolonged sitting for more than 8 hours could contribute to the risk of LBP, emphasizing the potential impact of extended work hours on physical health. The height of heels worn by respondents in the school setting is also a significant factor, with 63.3% of respondents choosing not to wear heels at school, while only 3.3% opting for 4-5-inch-tall heels. Instructors' preference for comfort over fashion is evident, as they choose not to wear heels on campus to avoid discomfort and potential foot pain.

Table 2Distribution on the Assessment of the Respondents on their Pain Levels

PAIN LEVELS	**CERVICAL PAIN**		**LUMBAR PAIN**	
	Frequency	**Percentage**	**Frequency**	**Percentage**
No pain	16	53.33	6	20
Tolerable pain	13	43.33	13	43.33
Most intense pain imaginable	1	3.33	11	36.67
TOTAL	**30**	**100**	**30**	**100**

Table 2 reveals 53.33% or 16 of them had no discomfort and 3.33% of 1 of 30 had the worst pain. This shows that most responders had no neck discomfort at school. As posture, health, and working circumstances like teaching experience, static head-down position, elevated arm over shoulder, extended sitting duration, and hypertension were connected to shoulder and neck discomfort. However, regular physical exercise prevents shoulder and neck discomfort, preventing persistent cervical/neck pain. (Temesgen, M.H., Belay, G.J., Gelaw, A.Y. et al., 2019). Also, table 1 demonstrates that 43.33%, or 13 of 30, of respondents have bearable discomfort at work, whereas 20%, or 6 do not. This suggests that most respondents suffer mild back discomfort completing schoolwork, and few have no back pain. The lumbar back, or lower back, is where LBP occurs. Study-related work, extended sitting, standing posture, and improper furnishings are the primary causes of LBP in schoolteachers. Previous studies revealed that office facilities at teachers' jobs decreased low back discomfort. Low back discomfort was less common in teachers with office space. The absence of office facilities may indirectly lead to a shortage of suitably sized and shaped chairs and tables for instructors, resulting in suboptimal sitting postures that harm the lower back (Beyen et al. 2013).

Table 3 Distribution on the Assessment of the Respondents on the Intensity of their Workload

Intensity of their Workload	**FREQUENCY**	**PERCENTAGE**
High demand	9	30
Very high demand	21	70
TOTAL	**30**	**100**

Table 3shows 70% or 21 out of 30 of them has very high demand workload, while 30% or only 9 of them says that they have a high demand workload. Furthermore, teachers are overworked and stressed due to this hidden work that exists and a real fact experience (Dibbon, 2004), indeed, teachers are preoccupied and overloaded with duties and responsibilities whether it is teaching and non-teaching related tasks. Some of these are taxing and demanding which compel several teachers to bring and finish it at home (Tancinco, 2016). From a global perspective, Sugden (2010) affirmed that most of the teachers' workloads are increasing in numbers, non-teaching assignments are now extensive in amount, and sometimes designated with a particular work in which they are not well-honed. Such examples are the numerous meetings, seminars, conferences, administrative and/or school paper works.

Table 4 Distribution on the Postural Evaluation of the Respondents in Anterior View

VARIABLES	**FREQUENCY**	**PERCENTAGE**
HEAD		
Aligned	12	25
Forwarded	18	75
SHOULDER		
Even	10	33.33
Uneven	20	66.67
SCOLIOSIS		
Left/Right	1	3.33
Unremarkable	29	96.67
PELVIS	**0**	**0**
HIPS	**0**	**0**
KNEES	**0**	**0**

Table 4 shows 29 (96.67%) unremarkable. In the study of Yang J., et al. (2022), no previous studies have used a prospective design to examine the association between physical activity and the onset of scoliosis, so it is unclear whether any observed association reflects the fact that physical activity is a risk factor for development and/or progression of pain. According to Kataria J, et al. (2020), scapular location is significant since chalkboard instructors often work above. Schoolteachers commonly read, mark assignments, and write on blackboards with their heads down. The position used while utilizing a chalkboard seems to tire the musculoskeletal structure, rendering them high-risk for occupational-related neck discomfort. Mechanical neck discomfort may modify postural behavior during extended sitting jobs like computer usage, thus the research should determine whether it is connected with scapular position in teaching professionals. According to Silva, N. R., & Almeida, M.A. (2012), upper limb complaints (shoulder, elbow, arm, wrist, and hands) are related to writing on the board, which elevates the shoulder due to the board's position, and teachers' repetitive movements. When correcting homework, the repeated movement of the hands and wrist, along with poor posture (up, down, sideward), causes attrition in tendons, ligaments, and osseous structures and may induce tenosynovitis. As for Yang J., et al. (2022), no previous prospective studies have examined the association between physical activity and the onset of scoliosis, so it is unclear if any observed association reflects the fact that physical activity is a risk factor for pain development and progression.

Table 5Distribution on the Postural Evaluation of theRespondents in Lateral View

VARIABLES	FREQUENCY	PERCENTAGE
HEAD		
Aligned	10	33.33
Forwarded	20	66.67
THORACIC		
Slightly Increase	9	30
Decrease	1	3.33
Unremarkable	20	66.67
LUMBAR		
Increase	9	30
Decrease	13	43.33
Unremarkable	8	26.67
PELVIS		
Posterior Tilt	12	40

Anterior Tilt	10	33.33
Unremarkable	8	26.67
KNEES	**0**	**0**

Table 5 shows 20 (66.67%) with advanced heads and 10 (33.33%) with aligned heads. This shows the advanced head dominates. Teaching is also a high-incidence occupation, according to Iqbal, Z. et al. (2013). Stress is caused by the shift from traditional to new teaching techniques. During the epidemic, computers, laptops, and mobile phones are used more for online education. Long-term computer usage produces static posture, which causes neck and shoulder discomfort and may progress to neck and upper limb issues, including forward head position. It also increases postural muscular tension, compressing the spine. Female gender, growing age, long working hours, history of injury, and frequent head-down position are risk factors for neck discomfort. The lateral view of their thoracic position shows 20 or 66.67 unremarkable and 9 or 30% somewhat decreased. This shows respondent's thoracic spine has enlarged, which may cause back extensor weakness. According to De Vitta et al. (2022), thoracic spine discomfort affects 15-35% of individuals globally across various age categories. TSP is linked to physical, physiological, psychological, and behavioral risk factors, according to studies. There is also considerable evidence that physical exercise, sedentary behavior, and mental wellness affect spine health. In its previous global guidelines evidence review, the WHO judged all these variables essential. In the lateral view, 13 (43.33%) of responders had reduced lumbar lordosis, whereas 8 (26.67%) were unremarkable. This shows that responders' lumbar lordosis reduced, causing discomfort. According to Atlas AP et al. (2017), 50% to 70% of individuals have low back pain. Teachers are at risk for musculoskeletal problems. Prolonged standing, sitting, poor ergonomics, and stress may cause such diseases. The table also illustrates the pelvis distribution in lateral view, with 12 or 40% having posterior tilt and 8 or 26.67 percent normal. This suggests most responders have posterior tilted pelvis. This is a pelvic imbalance with hip muscle weakness or tightness. In lower back pain (LBP), the "sway back" posture is visible. This postural deviation causes hip, knee, and ankle flexion to compensate for stomach and back muscular weakening. Thus, this syndrome causes pelvic tilt and muscular adaptations to reduce stomach and back muscle weakness (McGregor, A. H., & Hukins, D. W. L., 2009).

Table 6 Frequency and Percentage Distribution on the Postural Evaluation of the Respondents in Posterior View

VARIABLES	FREQUENCY	PERCENTAGE
HEAD	**0**	**0**
SHOULDER		

Even	10	33.33
Uneven	20	66.67
PELVIS		
Posterior Tilt	12	36.81
Anterior Tilt	10	33.74
Unremarkable	8	29.45
HIPS	**0**	**0**
KNEES	**0**	**0**

Table 6shows 20 or 66.67 percent has uneven while 10 or 33.33 percent has even shoulders. This means that majority of the respondents has uneven shoulders. And as stated by M.A et. Al (2012), schoolteachers represent an occupational group, which are exposed and appears to be at the risk of suffering shoulder and/or neck pain (SNP) due to their daily work tasks. In a single day, a wide variety of duties and responsibilities may be carried out by schoolteachers which involve significant use of head down postures, such as prepare lessons, frequent reading, assessing/marking students and writing on blackboard under unfavorable working conditions, especially in low-middle income countries (LMIC's). While performing such daily tasks repeatedly for a long period of time using abnormal posture; they might develop pain or discomfort around shoulder/neck body segments. Moreover, in pelvis wherein 12 or 36.81 of them has posterior tilted pelvis while only 8 or 29.45% of them were unremarkable. This means that majority of the respondents' pelvis were in posterior tilt position which also contribute to their lumbar pain. As stated by McGregor, A. H., & Hukins, D. W. L. (2009), in LBP there is a noticeable sway back posture due to the weakness or tension within the muscles around the hip.

Table 7 Frequency and Percentage Distribution on the Range of Motion Evaluation of the Respondents in Terms of Cervical

VARIABLES	**FREQUENCY**	**PERCENTAGE**
FLEXION		
Slight Hypo mobility	3	10
Hypo mobility	27	90
EXTENSION	**0**	**0**
Left Lateral Flexion		
Slight Hyper mobility	1	3.33

Normal	19	63.33
Slight Hypo mobility	10	33.33
Right Lateral Flexion		
Slight Hyper mobility	3	10
Normal	16	53.33
Slight Hypo mobility	11	36.67
Left Rotation		
Normal	4	13.33
Slight Hypo mobility	23	76.67
Hypo mobility	3	10
Right Rotation		
Normal	1	3.33
Slight Hypo mobility	28	93.33
Hypo mobility	1	3.33

Table 7shows 28 or 93.33 of the respondents' cervical range of motion have slight hypo mobility towards rotation to the right, while 1 or 3.33 have normal and hypo mobile right rotation and slight hyper mobility towards left lateral flexion. This implies that limitation on cervical range of motion is present with pain. Extensive research findings revealed a noticeable correlation between pain and the range of motion (ROM) in the cervical area. Specifically, participants experiencing pain exhibited a discernible reduction in active cervical ROM during both extension and flexion movements when compared to those who did not report any pain. These observations suggest a significant association between the presence of pain and the pronounced decrease in the flexion and extension capabilities of the cervical region. Therefore, individuals with cervical pain commonly experience limitations in their ability to freely move their neck in both forward (flexion) and backward (extension) directions, thereby indicating a direct influence of pain on the range of motion in the cervical area (Kim, D.-H., Kim, C.-J., & Son, S.-M., 2018).

Table 8 Frequency and Percentage Distribution on the Range of Motion Evaluation of the Respondents in Terms of Lumbar

VARIABLES	FREQUENCY	PERCENTAGE
FLEXION		
Normal	19	63.33

Slight Hypo mobility	11	36.67
EXTENSION		
Normal	5	16.67
Slight Hypo mobility	25	83.33
LEFT LATERAL FLEXION		
Normal	7	23.33
Slight Hypo mobility	23	76.67
RIGHT LATERAL FLEXION		
Normal	6	20
Slight Hypo mobility	24	80

Table 8shows 25 or 83.33 of them has slight hypo mobility towards extension and only 5 or 16.67 of normal extension. This implies that there is an evident limitation in the lumbar range of motion in the presence of pain. It is plausible that the development of lower back pain (LBP) among participants can be attributed, at least in part, to a restriction in this particular motion and subsequent stiffness in the lower back region. Indicating a prospective association between a reduction in lateral flexion range of motion (ROM) and the onset of LBP. These results are consistent with and support the conclusions drawn in a previously conducted systematic review of case control studies.Therefore, it can be inferred that limitations in the lateral flexion ROM contribute to the development of LBP, underscoring the importance of maintaining optimal flexibility in this plane of motion to minimize the risk of experiencing lower back pain (Sadler, S. G., Spink, M. J.,Ho, A., Jonge, X. J. D., & Chuter, V. H., 2017).

Table 9 Effect of the Profile of the Respondents to their Level of Pain

		PAIN LEVELS	
VARIABLES		**CERVICAL PAIN**	**LUMBAR PAIN**
AGE	p-value	.360[b]	.572[b]
	r-value	.173[a]	.108[a]
	r-square value	.030	.012
SEX	p-value	.018[b]	.032[b]
	r-value	.430[a]	.393[a]
	r-square value	.185	.154

NUMBER OF CHILDREN	p-value	1.000[b]	.858[b]
	r-value	.000[a]	.034[a]
	r-square value	.000	.001
NUMBER OF OFFICE HOURS	p-value	.384[b]	.113[b]
	r-value	.165[a]	.295[a]
	r-square value	.027	.087
HEIGHT OF HEELS IN INCHES	p-value	.018[b]	.077[b]
	r-value	.428[a]	.328[a]
	r-square value	.183	.108

The table 9 shows sex and height of heels shows a statistical correlation with the respondents' cervical pain levels, and sex also shows a statistical correlation with lumbar pain levels. Furthermore, sex and height of heels explain a low to moderate correlation to the respondents' pain levels in terms of cervical and lumbar area. Numerous epidemiological studies have provided substantial evidence supporting the notion that women exhibit a higher prevalence of various chronic pain disorders when compared to men. This gender disparity has prompted extensive clinical and experimental investigations, which have consistently revealed notable sex-specific discrepancies in pain sensitivity and pain threshold. Although the precise mechanisms responsible for these differences remain to be fully understood, recent focus has turned to the plausible influence of gonadal hormones on the processing of pain signals, thereby offering a logical avenue for further exploration and research in this field (Maurer, A. J., Lissounov, A., Knezevic, I., Candido, K. D., & Knezevic, N. N., 2016).

Table 10 Effect of the Profile of the Respondents to their Postural Evaluation

Variables		**Age**	**Sex**	**Number Of Children**	**Number Of Office Hours**	**Height Of Heels In Inches**
ANTERIOR VIEW						
HEAD	p-value	.436b	.656[b]	.872[b]	.227[b]	.605[b]
	r-value	.148a	.085[a]	.031[a]	.227[a]	.098[a]
	r-square value	.022	.007	.001	.052	.010
SHOULDER	p-value	.836b	.797[b]	.780[b]	.161[b]	1.000[b]
	r-value	.039a	.049[a]	.053[a]	.263[a]	.000[a]
	r-square value	.002	.002	.003	.069	.000

SCOLIOSIS	p-value	.397b	.456[b]	.556[b]	.856[b]	.286[b]
	r-value	.160a	.141[a]	.112[a]	.034[a]	.201[a]
	r-square value	.026	.020	.013	.001	.040
LATERAL VIEW						
HEAD	p-value	.836[b]	.797[b]	.780[b]	.161[b]	1.000[b]
	r-value	.039[a]	.049[a]	.053[a]	.263[a]	.000[a]
	r-square value	.002	.002	.003	.069	.000
HORACIC	p-value	.044[b]	.680[b]	.628[b]	.494[b]	.389[b]
	r-value	.370[a]	.079[a]	.092[a]	.130[a]	.163[a]
	r-square value	.137	.006	.009	.017	.027
LUMBAR	p-value	.353[b]	.994[b]	.087[b]	.110[b]	.908[b]
	r-value	.176[a]	.001[a]	.318[a]	.298[a]	.022[a]
	r-square value	.031	.000	.101	.089	.000
PELVIS	p-value	.206[b]	.810[b]	.142[b]	.163[b]	.529[b]
	r-value	.237[a]	.046[a]	.274[a]	.261[a]	.120[a]
	r-square value	.056	.002	.075	.068	.014
POSTERIOR VIEW						
SHOULDER	p-value	.836[b]	.797[b]	.780[b]	.161[b]	1.000[b]
	r-value	.039[a]	.049[a]	.053[a]	.263[a]	.000[a]
	r-square value	.002	.002	.003	.069	.000
PELVIS	p-value	.206[b]	.810[b]	.142[b]	.163[b]	.529[b]
	r-value	.237[a]	.046[a]	.274[a]	.261[a]	.120[a]
	r-square value	.056	.002	.075	.068	.014

Table 10shows that the variables are not statistically significant. To further explain, all the variables does not affect the posture of the respondents in terms of head, shoulder, and scoliosis posture in the anterior view. Also, the table is showing that age is the only variable to affect the respondents' posture in terms of thoracic curve in lateral view, but it only shows a low correlation. It implies that age significantly case spinal curvatures in the thoracic region. In the study of Zappala (2021), he found out that aging is significant contributor on thoracic kyphosis, where his study says that it was significantly smaller in individuals younger than 40. The data above explaining that the variables are not statistically significant. To further explain, all the variables does not affect the posture of the respondents in terms of shoulder and pelvis posture in the posterior view.

Table 11 Effect of the Profile of the Respondents to their Range of Motion Evaluation

Variables		Age	Sex	Number Of Children	Number Of Office Hours	Height Of Heels In Inches
CERVICAL						
FLEXION	p-value	.591[b]	.904[b]	.792[b]	.745[b]	.833[b]
	r-value	.102[a]	.023[a]	.050[a]	.062[a]	.040[a]
	r-square value	.010	.001	.003	.004	.002
LATERAL FLEXION (LEFT)	p-value	.865[b]	.589[b]	.933[b]	.679[b]	.152[b]
	r-value	.032[a]	.103[a]	.016[a]	.079[a]	.268[a]
	r-square value	.001	.011	.000	.006	.072
LATERAL FLEXION (RIGHT)	p-value	.977[b]	.944[b]	.538[b]	.009[b]	1.000[b]
	r-value	.005[a]	.013[a]	.117[a]	.468[a]	.000[a]
	r-square value	.000	.000	.014	.219	.000
ROTATION (LEFT)	p-value	.769[b]	.039[b]	.827[b]	.946[b]	.793[b]
	r-value	.056[a]	.378[a]	.042[a]	.013[a]	.050[a]
	r-square value	.003	.143	.002	.000	.002
ROTATION (RIGHT)	p-value	.570[b]	.152[b]	1.000[b]	1.000[b]	.215[b]
	r-value	.108[a]	.268[a]	.000[a]	.000[a]	.233[a]
	r-square value	.012	.072	.000	.000	.054
LUMBAR						
FLEXION	p-value	.620[b]	.980[b]	.956[b]	.456[b]	.290[b]
	r-value	.094[a]	.005[a]	.010[a]	.141[a]	.200[a]

	r-square value	.009	.000	.000	.020	.040
LATERAL FLEXION (LEFT)	p-value	.062[b]	.710[b]	.415[b]	.069[b]	.172[b]
	r-value	.345[a]	.071[a]	.154[a]	.337[a]	.256[a]
	r-square value	.119	.005	.024	.113	.066
LATERAL FLEXION (RIGHT)	p-value	.419[b]	.466[b]	.105[b]	.043[b]	.264[b]
	r-value	.153[a]	.138[a]	.302[a]	.371[a]	.211[a]
	r-square value	.023	.019	.091	.138	.044

Table 11shows no. of office hours affects the right cervical lateral flexion of the respondents, while sex is the only variable to affect respondents' left cervical rotation. Though it is not well defined in other research, neck pain accompanied with episodic migraine shows a significant difference compared when women were headache-free. X Furthermore, as defined by Yoo (2011), suggest that using computer of more than 6h per day was a contributor to limiting the available range of motion. We believe that a person who suffers in pain would significantly lower their available range of motion, could be secondary to muscle tightness or strain.The table 10 shows no. of office hours is the only one affecting the respondents' (R) lateral flexion of their but with a low correlational. Thus, the variables do not significantly affect the respondents' range of motion in terms of lumbar. In general knowledge, based on previous research have suggest that 6h or more working using a computer significantly lower the range of motion (Yoo, 2011).

CONCLUSIONS

This study finds out that online teaching has increased instructors' time spent on computers and laptops, leading to postural alterations and muscle stress. A study of 30 instructors found that prolonged sitting and heavy workloads can cause long-term neck and back discomfort. Lumbar pain is more common than cervical discomfort, and longer working hours reduce flexion range of motion. However, the study has limitations, such as low response rates and lack of data on instructors' sitting hours, work per sitting, and handedness. Future research should address these limitations to better understand the impact of extended job sitting on flexibility and ergonomics.

RECOMMENDATIONS

Based on the findings of this research paper, it is evident that a highly demanding workload requiring long hours of sitting can contribute to the development of back pain and poor posture habits. Therefore, the researchers propose that the productivity level of employees, particularly in teaching

positions, should be evaluated in terms of teaching effectiveness and efficacy while sitting.In order to mitigate the negative effects of prolonged sitting, the researchers recommend that university teachers incorporate mobility exercises into their routine during working hours. Simple low back and neck stretching exercises can help alleviate muscle tension and promote better posture. Additionally, educators should be more conscious of their posture while sitting and make a concerted effort to maintain proper alignment. It is important for them to be aware of the appropriate sitting posture and ensure that their working area is set up at a level that corresponds to their respective sitting position.By implementing these suggestions, teachers can take proactive steps to improve their well-being and reduce the likelihood of developing neck and low back pain as well as postural issues associated
with a sedentary work environment.

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