ARTIKEL PENELITIAN

Ergonomi Tubuh, Posisi Kerja, dan Keluhan Nyeri Pekerja Pabrik di Myanmar

Body Ergonomic, Working Position, and Pain Among Factory Workers in Myanmar

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ABSTRAK
Latar Belakang: Pengetahuan tentang ergonomi tubuh sangat penting bagi pekerja untuk menyesuaikan posis dalam lingkungan kerja, mengurangi risiko cedera, penyakit serta meningkatkan kualitas kehidupan pekerja.Penelitian ini dilakukan untuk mengevaluasi faktor-faktor ergonomis, dan postur yang berhubungan, serta menyelidiki hubungan antara jenis nyeri dan karakteristik posisi kerja. **Metode:** Ada 80 pekerja dari berbagai tempat kerja di Supermarket City Mart, Yangon, Myanmar yang dipilih secara acak sebagai partisipan penelitian ini. Data atribut yang berhubungan dengan subjek seperti perbedaan jenis pekerjaan, postur kerja, jenis nyeri dikaji menggunakan kuesioner. Postur tubuh pekerja diamati langsung sambil diberikan edukasi kesehatan melalui aplikasi zoom meeting. Data dianalisis dengan software SPSS menggunakan metode statistik deskriptif dan korelasional. **Hasil:** Data menunjukkan bahwa pekerja yang paling banyak mengeluh nyeri adalah penjaga toko (27,5%), penjual (26,3%) dan petugas administrasi (27,5%). Adapun tugas pekerjaan terbanyak adalah yang bekerja sebagai pengelola barang penjualan (30,0%) dan paling banyak mengeluh nyeri adalah pekerja yang memiliki pengalaman kerja > 1 tahun (47,5%). Pekerja yang harus bekerja tanpa komputer memiliki persentase terbanyak (55,0%), jenis nyeri yang paling banyak terjadi adalah nyeri pada kaki (27,5%). **Diskusi:** Kurang pemahaman tentang ergonomi tubuh para pekerja mengakibatkan keluhan nyeri yang disebabkan kurangnya gerakan seimbang pada postur tubuh selama jam-jam kerja. Kesadaran dan pemahaman pekerja tentang prinsip ergonomi postur tubuh akan sangat membantu mereka untuk menjaga kesehatannya melalui aktivitas dan perilaku hidup.

Kata Kunci: Ergonomi tubuh, nyeri muskuloskeletal, pekerja, postur tubuh

ABSTRACT
Background: *The knowledge of body ergonomic is very crucial for workers to look for ways to adjust work environment to decrease the risks of injury and illness and improve the quality of our work life. This study is conducted to evaluate the ergonomic factors, and related postures, and investigate relationship between the types of pain and the characteristic of work position.* ***Methods:*** *There were 80 workers from different workplaces in City Mart Supermarket, Yangon, Myanmar who randomly chosen as the participants for this research. The related attribute data to the subjects such as different type of work, work postures, types of pain were obtained through questionnaires. The workers postures are directly observed while giving them the health education via zoom meeting application. Data were analyzed by SPSS software using descriptive and correlational statistical method.* ***Results:*** *The data indicates that the most workers who have problems are the storekeepers (27.5%), sales (26.3%) and officers (27.5%) and the most work tasks are who working as sales items managing (30.0%) and the most who having the problems are the*

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working who has working experience for > a year (47.5%). Workers who must work without computer has most percentage over all (55.0%). The most happened type of pain is foot pain (27.5%). ***Discussion:*** *Lack of body ergonomics in company workers are prolonged due to the lack of movement body postures during their working hours. Therefore, the company workers who are aware of the ergonomic principles of body postures would be a help for them to maintain their health through activities and life longing.*

Keywords: *Body ergonomics, body postures company workers, musculoskeletal pain,*

Introduction

Ergonomic is concern with factory workers and keeping their work environments safe and efficient. The body ergonomic professionals also have been expanded their work to include all types of workers from laborers to office workers, students to seniors. And the ergonomic is concerned with how our environment interacts with our work. It also looks for ways to adjust our environment to decrease the risks of injury and illness, enhance productivity, and improve the quality of our work life (Mary R., DNP 2020).

Most of the adults in Myanmar are likely to work at the age of 20 because some of the adults do not finish their high school years and they rather chose to work as a salesperson or some other blue-collar work. At their young age, they work to earn money to support their life. Some of the youth decide to work at the early age because of their family condition and some of them are working to support their study. So, most of the work time that they must do is from 7 am to 10 pm at night. Due to their long-time work, they had a lot of pain and some long-time injury. The nature of every day work can be whole day work and they do not have time to take enough breaks. (Mizzima Tv, June 6, 2022, M. Celebrity, May 18, 2022).

Research has found that overtime work and the long-time work can harm our bodies and it can have a lot of side effects. As for a person, we need a little bit exercise for a day like walking or something, but for the adults in Myanmar, even start from the early morning, they must prepare to go to work and there is no time to do exercise and after coming back from work, they feel tired due to the whole day working and there also no time to exercise. As for the workers who must work for the day while sitting may have back and neck pain which is mostly associated with their own sedentary lifestyle. Changing positions frequently throughout the day is important to addressing the pain. This simple movement enables your body to move and stretch, a natural inclination that promotes spine health and shifting positions also places less pressure on the spine and enhances blood flow throughout the body (Alexis S Tingan, MD, 2019, Penn Medicine).

Body Ergonomic is the one which can heal the problems that mostly happen on the workers. And there are 8 fundamental ergonomic principles for to get better work performance. (1) Maintain neutral posture, (2) Work in power/comfort

zone, (3) Allow for movement and stretching, (4) Reduce excessive force, (5) Reduce excessive motions, (6) Minimize contact stress, (7) Reduce excessive vibration, and (8) Provide adequate lighting. By developing our body ergonomics and adhering to these fundamental ergonomic principles, we can help the workers to identify risk factors that oftentimes go unnoticed, measure that risk with an objective ergonomic evaluation and implement control measures to reduce or remove the risk factors of ergonomics (Mark M., May 3, 2019).

Figure 1 Perfect posture of carrying/lifting heavy things

To prevent back pain and injury during long time working, people need to have a right posture of lifting heavy things, siting, and standing. Because lifting heavy items is one of the leading causes of back pain and injury in workplace. As a long-time worker, you need to know the right posture of lifting heavy items, and in Figure 1, we can see how to carry the heavy the item in right posture. Don't bine down your body to carry it because when u lift it up, the heavy weight may make your back to get pain due to the weight. As you lift the weight, hold the object close to your body – not near the end of your reach, and this will help to keep the item stable, which can help you avoid back pain. And keep your feet shoulder – width apart for to be a safety lifting and preventing back pain. And bend down you kneel and lift the object with your feet. Remember don't twist your body, and don't carry the heavy object with one side. So, this is how you must carry the heavy item in right posture (Andrew D., MD, Steward Medical Group).

Methods

In research terms a sample is a group of people, objects, or items that are taken from a larger population for measurement. The sample should be representative of the population to ensure that we can generalize the findings from the research sample to the population (Gay B., March 2006). The sample to be taken for this research is the

only a few percent of the total target population from the Supermarket, by taking the data through questionnaires.

This descriptive correlation study of method is conducted in a supermarket of Junction City center located in downtown area of Yangon, Myanmar. Company workers are divided into different part of working area: sales, storekeepers, officers, cashiers with different work experience times. A sample of 80 workers was randomly selected from each of the abovementioned group. After taking permission, a questionnaire including their type of work, work duration, types of musculoskeletal pain related to their work, etc.

The researcher's way of collecting data is selecting just the adults' workers in the city mart supermarket which are a part of the population, and by listing all the adults' workers from the different working area in that supermarket, and totally only 15% of the adults' workers will be sampled. The sample that I need is half of the workers from the populations who have ergonomic problems and already in adulthood who with overtime work. Equipment for this research is right posture of standing, lifting heavy weight and sitting in front of computer for the whole days. I will give health promotion to them how is the right posture by showing them the pictures or explaining them in step by step. After getting the questionnaires information, they were entered to SPSS software (version 25) and were analyzed by Mann-Whitney, Kruskal-Wallis, Spearman, and Kendall correlation tests.

Results

The research finding is answering of the problem statements that formulated before. As, said in the above the researcher want to know whether there is any characteristic of back pain and other long-term injury between the sales-representatives of the body ergonomics. In this research, the researcher did the descriptive correlation method of research about the lack of body ergonomic in the adult workers with their full time working. The researcher involved 80 participants from different working positions (sales, cashier, officer, store workers) from the city-mart supermarket, which is in the downtown area of Yangon, Myanmar. The data was collected through an administration test. The test was done before the health promotion of the body ergonomics problems and how to solve the problems.

The result of the data said that the most who having the problems are the store officers, officers, and sales, and the most work tasks are who working as managing the sales items and selling items (sales workers) and the most who having the problems are the working who has working experience for > a year. Most of them must work without computers, like other working tasks and the most happened type of pain is hand pain.

After administrating the test, the researcher gave health promotions by sending them a video of explaining about the body ergonomics and how they have proper sitting, standing, and carrying things to prevent the back pain and long-term injury.

Demographic Description

In table 1 is shown that among all the work type storekeeper, officers, sales workers have the problem, because among 100 percent storekeepers have problem for 27.5%, officers also have 27.5%, and sales workers have 26.3%. So, all the work types, these 3 work types have faced with the back pain and long-term injuries due to their working positions. In 2001, the Bureau of Labor Statistics reported that more than 372,683 back injury cases involving days away due to their work. Most of the cases are involved with the workers who were aged 25–54 (79%). And there also have two occupational groups which are accounted for more than 54% of back injury cases and most of the type of workers who happened are operators, fabricators, and laborers (38%); and, the precision production, craft, repair (17%), and others (sales, etc.) (Bender BP, Feb 12, 2020, CDC Journals).

Table 1. Descriptive Data of The Type of Work

Type of Work	Frequency	Percent
Storekeeper	22	27.5
Cashier	15	18.8
Officer	22	27.5
Sales	21	26.3
Total	80	100.0

You can see in the Table 2. that the managing shopping items related to store workers, selling items related to sales workers, and checking the number of items related to cashiers have the most characteristic with their works. Among the 100 percent total of work tasks managing the shopping items have 30.0%, selling items have 26.3%, and the last one which must check the number of items is 17.5% in total. A source says that the workers who having ergonomics back pain are mostly the officer workers who work as a network engineering, controlling network connections and others like sales workers, etc. (Bender BP).

Table 2. Descriptive Data of Types of Work Tasks

Types of Work Tasks	Frequency	Percent
IT Daily Check	3	3.8
Assisting For Management	6	7.5
Managing The Shopping Item	24	30.0
Network Engineer	5	6.3
Monitoring Network Connection	7	8.8
Selling Items	21	26.3
Check The Amount of Item	14	17.5
Total	80	100.0

For the work experience, table 3 shows the characteristic of work with the work experience during their working times. In the table, you can see that among them, the workers who mostly having the back

pain problems and long terms injuries are workers who working for > a year and > 6 months. So, in total 100% the highest related characteristic is 47.5% who are having > a year of work experience, and 27.5% of workers who are having > 6 months of work experience. So, it means that the workers who must work > a year of work experience have more significant relationship than others.

Table 3. Descriptive Data of Work Experiences

Work Experiences	Frequency	Percent
< 6 Months	20	25.0
> 6 Months	22	27.5
> A Year	38	47.5
Total	80	100.0

Working Position

For the main work positions while working, table 4 shows that among all of them the workers who must work while standing have the highest percentage of work related to the back pain and long-term injuries problems. So, in total 100%, standing has 46.3%, sitting work positions has 28.7%, and the last one carrying thing has the lowest 25.0%. So, it means that the standing positions have the most significant relationship than others work positions. The cause of work-related pain is often a complex story because there are certain patterns and postures which tend to be consistent throughout a lot of injuries. Work conditions are also involving sustained postures, repetition of similar movement patterns, continual load through a particular area of the body or a sudden increase in an employee's workload tend to leave someone vulnerable to onset of pain (Kieran Watson, Ergonomics-Physiotherapy, 2018). In 1999, nearly 1 million people took time away from work to treat and recover from work-related musculoskeletal pain or impairment of function in the low back or upper extremities. According to Liberty Mutual, the largest workers' compensation insurance provider in the United States, overexertion injuries—lifting, pushing, pulling, holding, carrying, or throwing an object—cost employers $13.4 billion every year (Bender BP, Feb 12,2020, CDC Journals).

Table 4. Descriptive Data of The Types of Positions in Work

Types of Positions in work	Frequency	Percent
Sitting	23	28.7
Standing	37	46.3
Carrying Thing	20	25.0
Total	80	100.0

In this table 5, show which types of working tools are related to and it says that among the two types of tools other types of tools is more related than computer tools. So, in total 100%, other tools are 55.0, and computer is 45.0%. So, it means that most of the workers who must work with other tools (machine, heavy weight carrier) have more significant relationship than the workers who must work with the computers. A source found that there are many potential health risks of working at a computer frequently. But mostly the workers are often adopting to a certain position to see the screen better. Straining your muscles to look at a computer is a common cause of back and neck ache, as your body forced into an unnatural position. This is particularly a problem when people find themselves looking down to see their computer screen rather than adjusting the monitor to match their eye level, and good body posture (CMD Journals, April 6, 2018).

Table 5. Descriptive Data of Types of Tools at Work

Types of tools at work	Frequency	Percent
Computer	36	45.0
Others	44	55.0
Total	80	100.0

Types of Pain

Table 6 shows the most significant relationship between the workers and their working types. In this table, you can see the types of pain which are related to their working. The most pain that the workers faced are foot pain related to the workers who must work standing, lower back pain related to the sitting and carrying things, upper back pain related to the sitting, and the last shoulder related to the officers who must work while sitting for the whole time and must use computers as their working tools. So, as in total 100% - foot pain 27.5%, lower back pain 20.0%, upper back pain 15.0%, and the last shoulder 11.3% have the most significant relationship with the workers. As I said in the upper data explanation, in 2001 the Bureau of Labor Statistics reported that more than 372,683 back injury cases involving days away due to their work. Most cases involved workers who were aged 25–54 (79%), male (64%), and white, non-Hispanic (70%) (Bender BP).

Table 6. Descriptive Data of Types of Pain

Types of Pain	Frequency	Percent
No Pain	2	2.5
Neck	9	11.3
Shoulder	11	13.8
Elbow	6	7.5
Wrist/Forearm	2	2.5
Hand	6	7.5
Upper Back	12	15.0
Lower Back	16	20.0
Foot	22	27.5
Total	80	100.0

In table 7, you will see the characteristic of the workers and the pain during their working period, after the working period, and how the pain interferes their working, life and sleeping. Among the upper body part pain, hand pain, shoulder pain and neck pain have the highest percentage. Over all 100% the workers who having the worse pain situation is hand pain while working has 16.3%, shoulder pain while working and neck pain while working has 26.3%. Upper body part pain, mostly of the workers has no significant relationship with pain and their working positions, but just a few percentages of the pain have significant relationship. A study investigated that the relationship among work-related characteristics, and pain among computer workers, and the result shows that the low back was the most prevalent region of complaint which is around more than half of % (76.9%), and which is also presented in the higher prevalence of neck around 62.5% and low back with the full percentage (100%) pain. There were also observed associations between neck complaint and quality of life; neck complaint and head protrusion; wrist complaint and shoulder angle; and use of a chair back and thoracic pain (Miriam Raquel, April 26, 2014).

Table 7. Descriptive Data of The Upper Body Part Pain

	Less/ No Interference	Same/ Some Interference	Worse/ Stop activities due to pain	Total
Neck Pain While Working Frequency	52	7	21	80
Neck Pain While Working Percentage	65.0	8.8	26.3	100.0
Neck Pain After Working Frequency	59	18	3	80
Neck Pain After Working Percentage	73.8	22.5	3.8	100.0
Neck Pain After a Week Frequency	58	17	5	80
Neck Pain After a Week Percentage	72.5	21.3	6.3	100.0
Pain Interferes the Work Frequency	42	28	10	80
Pain Interferes the Work Percentage	52.5	35.0	12.5	100.0
Pain Interferes After Work Frequency	51	24	5	80
Pain Interferes After Work Percentage	63.7	30.0	6.3	100.0
Pain Interferes the Sleep Frequency	60	14	6	80
Pain Interferes the Sleep Percentage	75.0	17.5	7.5	100.0
Shoulder Pain While Working Frequency	54	5	21	80
Shoulder Pain While Working Percentage	67.5	6.3	26.3	100.0
Shoulder Pain After Work Frequency	60	17	3	80
Shoulder Pain After Work Percentage	75.0	21.3	3.8	100.0
Shoulder Pain After a Week Frequency	67	11	2	80
Shoulder Pain After a Week Percentage	83.8	13.8	2.5	100.0
Shoulder Pain Interferes the Work Frequency	48	23	9	80
Shoulder Pain Interferes the Work Percentage	60.0	28.7	11.3	100.0
Shoulder Pain Interferes After Work Frequency	47	32	1	80

	Less/ No Interference	Same/ Some Interference	Worse/ Stop activities due to pain	Total
Shoulder Pain Interferes After Work Percentage	58.8	40.0	1.3	100.0
Shoulder Pain While Sleeping Frequency	66	12	2	80
Shoulder Pain While Sleeping Percentage	82.5	15.0	2.5	100.0
Elbow Pain While Working Frequency	64	11	5	80
Elbow Pain While Working Percentage	79.0	13.6	6.2	100.0
Elbow Pain After Working Frequency	57	12	11	80
Elbow Pain After Working Percentage	70.4	14.8	13.6	100.0
Elbow Pain After a Week Frequency	45	21	14	80
Elbow Pain After a Week Percentage	55.6	25.9	17.3	100.0
Elbow Pain Interferes the Work Frequency	67	9	4	80
Elbow Pain Interferes the Work Percentage	83.8	11.3	5.0	100.0
Elbow Pain Interferes After Work Frequency	47	14	19	80
Elbow Pain Interferes After Work Percentage	58.0	17.3	23.5	100.0
Elbow Pain Interferes the Sleep Frequency	72	7	1	80
Elbow Pain Interferes the Sleep Percentage	90.0	8.8	1.3	100.0
Wrist/Forearm Pain While Working Frequency	72	1	7	80
Wrist/Forearm Pain While Working Percentage	90.0	1.3	8.8	100.0
Wrist/Forearm Pain After Work Frequency	75	4	1	80
Wrist/Forearm Pain After Work Percentage	93.8	5.0	1.3	100.0
Wrist/Forearm Pain After a Week Frequency	68	7	5	80
Wrist/Forearm Pain After a Week Percentage	84.0	8.6	6.2	100.0
Wrist/Forearm Pain Interferes the Work Frequency	69	8	3	80
Wrist/Forearm Pain Interferes the Work Percentage	86.3	10.0	3.8	100.0
Wrist/Forearm Pain Interferes After Work Frequency	68	7	5	80
Wrist/Forearm Pain Interferes After Work Percentage	84.0	8.6	6.2	100.0
Wrist/Forearm Pain Interferes the Sleeping Frequency	75	3	2	80
Wrist/Forearm Pain Interferes the	93.8	3.8	2.5	100.0

	Less/ No Interference	Same/ Some Interference	Worse/ Stop activities due to pain	Total
Sleeping Percentage				
Hand Pain While Working Frequency	62	5	13	80
Hand Pain While Working Percentage	77.5	6.3	16.3	100.0
Hand Pain After Working Frequency	67	12	1	80
Hand Pain After Working Percentage	83.8	15.0	1.3	100.0
Hand Pain After a Week Frequency	73	4	3	80
Hand Pain After a Week Percentage	91.3	5.0	3.8	100.0
Hand Pain Interferes the Work Frequency	51	22	7	80
Hand Pain Interferes the Work Percentage	63.7	27.5	8.8	100.0
Hand Pain Interferes After Work Frequency	63	15	2	80
Hand Pain Interferes After Work Percentage	78.8	18.8	2.5	100.0
Hand Pain Interferes Sleeping Frequency	71	6	3	80
Hand Pain Interferes Sleeping Percentage	88.8	7.5	3.8	100.0

Lower Body Part

Table 8 shows the lower body part of the pain and the work, in this table you can see the significant relationship between the workers and the work. Among the three, upper back pain has the highest significant relationship. As for the overall percentage, pain during the work has 47.5%, pain after the work has 12.5%, pain after a week has 5.0%, pain interferes the work has 30.0%, pain interferes after work has 10.0%, pain interferes the sleep has 23.8%. Lower part of the body pain has higher significant relationship between the workers and their work more than the upper part of the body. A source found said that the low back pain is a major public health problem that adversely affects the quality of life of workers. But their prevention of LBP in workers in the workplace is very important, only a small number of studies have assessed that the risk factors and epidemiology of LBP among Japanese factory workers who stand as part of their job, and their cross-sectional study investigated that the prevalence of LBP in 691 factory employees who conducted their work while standing, and they observed that the prevalence of LBP lasting for at least 48 hours within a week was 20.0% among participants, with female employees and those with a prior history of LBP having a significantly increased risk of developing LBP, and their findings suggest that the prolonged standing among factory workers poses become the increased risk for LBP (Ohtori S).

Table 8. Descriptive Data of The Lower Body Part Pain

	Less/ no interference	Same/ some interference	Worse/ stop activities due to pain	Total
Upper Back Pain While Working Frequency	21	21	38	80
Upper Back Pain While Working Percentage	26.3	26.3	47.5	100.0
Upper Back Pain After Work Frequency	33	37	10	80
Upper Back Pain After Work Percentage	41.3	46.3	12.5	100.0
Upper Back Pain After a Week Frequency	45	31	4	80
Upper Back Pain After a Week Percentage	56.3	38.8	5.0	100.0
Upper Back Pain Interferes Work Frequency	11	45	24	80
Upper Back Pain Interferes Work Percentage	13.8	56.3	30.0	100.0
Upper Back Pain Interferes Outside of Work Frequency	27	45	8	80
Upper Back Pain Interferes Outside of Work Percentage	33.8	56.3	10.0	100.0
Upper Back Pain Interferes the Sleep Frequency	34	27	19	80
Upper Back Pain Interferes the Sleep Percentage	42.5	33.8	23.8	100.0
Lower Back Pain While Working Frequency	16	27	37	80
Lower Back Pain While Working Percentage	20.0	33.8	46.3	100.0
Lower Back Pain After Work Frequency	35	37	8	80
Lower Back Pain After Work Percentage	43.8	46.3	10.0	100.0
Lower Back Pain After a Week Frequency	47	28	5	80
Lower Back Pain After a Week Percentage	58.8	35.0	6.3	100.0
Lower Back Pain Interferes the Work Frequency	15	42	23	80
Lower Back Pain Interferes the Work Percentage	18.8	52.5	28.7	100.0
Lower Back Pain Interferes Outside of Work Frequency	29	47	4	80
Lower Back Pain Interferes Outside of Work Percentage	36.6	58.8	5.0	100.0
Lower Back Pain Interferes the Sleep Frequency	27	27	26	80
Lower Back Pain Interferes the Sleep Percentage	33.8	33.8	32.5	100.0
Foot Pain While Working Frequency	51	7	22	80
Foot Pain While Working Percentage	63.7	8.8	27.5	100.0
Foot Pain After Work Frequency	57	18	5	80
Foot Pain After Work Percentage	71.3	22.5	6.3	100.0
Foot Pain After a Week Frequency	63	12	5	80

Off work due to pain

Table 9 shows that the workers took some off work due to their pain. Among them, the workers who have the problem with upper back pain took the most day off during their working periods. So, for the 100% upper back pain has 31.3%, lower back pain has 23.8%, and the last foot pain has 17.5%. As the same as above table, the lower part of the body pain has more significant relationship with the work and workers more than the upper part of the body pain. A study was identified that the occurrence of

work absence in workers with back pain was 15.5% in studies with follow-up periods of ≤6 months. The pooled which is also estimate for the proportion of people with back pain returning to work were 68.2%, 85.6% and 93.3%, at 1 month, 1–6 months and ≥6 months. So as the estimated 32% are not back at work in 1 month are at a crucial point for intervention to prevent the workers' long-term work absence in their working days (Jemma Cowen & Chris J man, Occupational & Environmental Medicine of BMJ Journals, 2019).

Table 9. Descriptive Data of The Work Absent/Off Work Due To Pain

Types of Pain	Yes	NO	Total
Neck Pain Take Time Off Work Frequency	5	75	80
Neck Pain Take Time Off Work Percentage	6.3	93.8	100.0
Shoulder Pain Take Time Off Work Frequency	8	72	80
Shoulder Pain Take Time Off Work Percentage	10.0	90.0	100.0
Elbow Pain Take Time Off Work Frequency	6	74	80
Elbow Pain Take Time Off Work Percentage	7.5	92.5	100.0
Wrist/Forearm Pain Take Time Off Work Frequency	8	72	80
Wrist/Forearm Pain Take Time Off Work Percentage	10.0	90.0	100.0
Hand Pain Take Time Off Work Frequency	4	76	80
Hand Pain Take Time Off Work Percentage	5.0	95.0	100.0
Upper Back Pain Takes Time Off Work Frequency	25	55	80
Upper Back Pain Takes Time Off Work Percentage	31.3	68.8	100.0
Lower Back Pain Takes Time Off Work Frequency	19	61	80
Lower Back Pain Takes Time Off Work Percentage	23.8	76.3	100.0
Foot Pain Take Time Off Work Frequency	14	66	80
Foot Pain Take Time Off Work Percentage	17.5	82.5	100.0

Relationships between Level of pain and Nature of Work

By looking this table, you will see the significant relationship between the level of pain and the nature of work. You can see in the table that shows the correlations and the significance, and the main work position shows (-.698 or .000) it means that you work more, and the pain level will worse. If you work less, the pain level will reduce. So that you may see the significant relationship of the work and the level of pain. One of the research also proposes a new form of time-based work-life conflict which occurs through an indirect pathway through which pain negatively impacts time available for non-work activities, and their findings suggest that the organizational work-life balance initiatives should also consider the physicality of work, which can contribute, through musculoskeletal pain, to work-life conflict which means that the work life can harm to get musculoskeletal pain but if we don't work too much we won't. (Lingard & Turner, 2021).

Another source of the article is to describe the relationship between the presence of pain and participation in paid work in people with long-standing spinal cord injury (SCI). The participants of this article are Median age of years, median time since injury was 22 years, and 73% of the participants were male, 69% had complete SCI and 59% had paraplegia, 50% had paid work, 63% reported with the musculoskeletal pain, 49% reported with the neuropathic pain, and 31% reported with the other pain. Self-reported pain-related work limitations were significantly related to WP. So, we can know that the Age, gender, relationship, education, TSI and self-reported work limitations showed a relationship with WP, and the different types of pain were unrelated to WP (Ellen H. Roles).

Table 10. Correlations Data of The Level of Pain and Nature of Work

Control Variables			Job	Work tasks	Main work position
Types of pain	**job**	**Correlation**	1.000	.465	-.698
		Significance (2-tailed)	.	.000	.000
		df	0	77	77

Discussion

The objectives of this study is to assess the characteristics of work and pain of the company workers, to find out that there are any significant relationships between types of pain and the characteristic of work among the company workers in Yangon, Myanmar, to find out what actions are taken for the adults who experience body ergonomics to reduce their problems, to find out how the adults have much knowledge about how to handle their problems, to find out an intervention for their knowledge in treatments for back pain. To gain the objectives of the study, the researcher conducts an experiment study. Based on the research, the study was done into two steps. The first step is the preliminary study where the researcher wants to know the characteristics of the back pain and other long-term injury how they affect their work, after work and while sleeping by administering.

During the test most of the workers who have significant relationship with the back pain and other long-term injuries are store workers, officers, and sales workers. As for the store workers, they must carry heavy things without knowing the right posture of the carrying things, and lifting heavy items is one of the leading causes of injury in the workplace. In 2001, the Bureau of Labor Statistics reported that over 36 percent of injuries involving missed workdays were the result of shoulder and back injuries. When employees use smart lifting practices, they are less likely to suffer from back sprains, muscle pulls, wrist injuries, elbow injuries, spinal injuries, and other injuries caused by lifting heavy objects (Lifting & Material Handling, 2022, UNC).

And as for the officers, they must sit in front of the computers for the whole time and due to their long time sitting and wrong sitting posture, the back pain and other long-term injuries become worse, and the last one is the sales workers who must work while standing for the whole day and due to their wrong positions of standing can hurt their lower part of body. The second step was giving health education to the workers. Work-related upper limb and neck musculoskeletal disorders are one of the most common occupational disorders worldwide. Studies have shown that the percentage of office workers that suffer from MSDs ranges from 20 to 60 per cent. Although ergonomic interventions are likely to reduce the risk of office workers developing work-related upper limb and neck MSDs, the evidence is unclear.

The health education for them is starting from explaining what body is ergonomic, and what can happen when they have lack of body ergonomics and proper position of sitting, standing, and carrying heavy things. The type of health education is sending video to each of the participants. During the test, the most helpful problem is to give the health education about body ergonomics to them and what they should do for that. After the health education, most of them reduce their pain level after the health education. But some still having the long-term problem but during the health education, it's already explained how to reduce the long-term injury so that they reduce their problems by changing their lifestyles.

During the health education, what we have done is about the body ergonomics, what can happen when we have lack of body ergonomics, and how we have can reduce the long-term injury by explaining them how to carry the heavy things, proper sitting positions, and the proper standing positions to reduce their long-term injury (Merriam W., 2019). And the goal of the ergonomics includes like reduce the work- related injury and illness, because it can help to contain the workers' compensation costs for the employers, and the research said that the association between work and injury and illness is centuries old. So, the body ergonomics is good for the people who work overtime work and long-time work duration (Mary R., DNP, 2020).

And what is included in the health educations is the exercise and it is also one of the things that can help the neck and back pain for the workers. And most of my participants are adults so they also have their own knowledge how to handle their problems, but some of them don't know. So, after I have done my health education, some said they also do like this to reduce their pain during the working time or during their off days. The proper sitting, standing positions and carrying things are the most important things that they should know. But some of them don't know but they have got enough knowledge after what I have done in my health education process. Adults' workers are also having enough knowledge how they must handle their problems of pain and their working positions. As a full-time worker they should need to have enough knowledge which is related to their working positions.

Conclusion

This study indicates that there is a significant relationship between the characteristic of work and types of pain. Hopefully, this research contributed to an understanding of the relationship between the work-related pain and the types of pain among the company workers, and the awakening awareness of the ergonomics among the company workers. It is also hoped that the experiences of the participants could be used to know more about the right postures of the sitting, standing, and lifting/carrying things during their working times, and the things that can help them to reduce their work-related pain.

Knowledge about body ergonomics significantly important to be disseminated to the company workers. The understanding and training on the right postures of lifting/carrying things, sitting and standings are important. Continues study on work safety through to identify relevant strategies necessary for the company workers who have lack of body ergonomics and have work related pain

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