Effectiveness of Myanmar Massotherapy In The Management of Shoulder Pain *(Amsa Shula)* Due To *Sandhigata Vata*

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ABSTRACT

- Study was aimed to find out the effect of Myanmar massotherapy in the management of shoulder pain (*Amsa shula*) patients due to *sandhigata vata"* admitted to in-patient department and out-patient department, Traditional Medicine Teaching Hospital, Mandalay.

- Shoulder pain due to *sandhigata vata* is a common condition noticed by many individual in their daily life.
- And it’s also common clinical problem in traditional medicine.

- Study design of this study was hospital based quasi-experimental study.
- Study period was started from 1st September 2014 to 31st August 2015.

- Total 40 subjects after getting informed consent who were chosen according to the inclusion criteria, and radiological assessment (X ray of shoulder joint) was carried out in patients for exclusion criteria.

- The treatment duration of this study for each patient was 21 days and registered patients of shoulder pain were prescribed for oral administration of TMF 33 in tablet form (2 g) two times per day with warm water after having meal for 21 days.

- The effectiveness of Myanmar massotherapy was measured with pain, nerve pain, tenderness, crack, inflammation and range of movements (abduction, flexion, external rotation and internal rotation) by using goniometer on day 7, day 14 and day 21.
- Statistical analysis on paired t-test and General Linear Model method was done by using SPSS stastistics (version 21).

Effect of Myanmar massotherapy had relieved from

- pain 62% (p = 0.000), nerve pain 48% (p = 0.000),
- tenderness 61% (p = 0.000), inflammation 33% (p = 0.000),
- abduction 56% (p = 0.000), flexion 52% (p = 0.000),

- external rotation 50% (p = 0.000) and internal rotation 45% (p = 0.000).
- But there was no significant in crack.

- Out of 40 patients after completion of treatment 2 (5%) patients were marked improvement, 31(77.5%) patients were moderate improvement and 7 (17.5%) patients were mild improvement.

- There were not any patients in cure and unchange improvement level.
- Base on the finding results, it can be stated that Myanmar massotherapy can be provided to get better outcome in the management of shoulder pain due to *sandhigata vata*.

Introduction

- Shoulder pain is a worldwide health problem and leads to high costs for the individual and society (Grooten, 2006).
- Shoulder pain *(Amsa shula)* is derangement of "v*ata" dosha* which is vitiated and gets to locate at the shoulder joint.

- Myanmar massotherapy was also used for the treatment of shoulder pain and was one of the important components in the system of Myanmar traditional medicine which prevent and treat disease by applying pressure to certain pressure point on the body with massotherapist's hand (Department of Physical Medicine, 2005)

- According to Traditional Medicine Teaching Hospital data, shoulder pain patients increasingly visited to Traditional Medicine Hospital in every year.
- In clinical practice of traditional medicine, therapeutic procedure of massotherapy has been used for shoulder pain treatment, but no clinical study has been done yet in Traditional Medicine Teaching Hospitals Mandalay.

- It was necessary to conduct clinical research for these therapeutic procedures which can provide systematic and rational treatment for shoulder pain (*Amsa shula)* patients in the future.
- According to the finding and the result of this study, it was useful as a treatment guide and rational prescription in treating shoulder pain (*Amsa shula)*.

Objectives

General Objective

- To study the effectiveness of Myanmar Massotherapy in the management of shoulder pain *(Amsa shula)* due to *sandhigata vata*

Specific Objectives

- 1. To assess the serial changes in clinical features of *sandhigata vata* at the shoulder on day 7, day 14 and day 21
- 2. To compare the effectiveness of Myanmar Massotherapy in the management of shoulder pain due to *sandhigata vata* in day 0 with day 7, day 14 and day 21

Research Methods

- Study Design : Hospital based quasi experimental study
- Study Site : IPD and OPD patients in 100 bedded TMTH, Mandalay
- Study Period : One year (from 1st September 2014 to 31st August 2015)

- Study Population : Patients with clinical features of shoulder pain due to *Sandhigata vata* who fulfill with inclusion and exclusion criteria.
- Sampling Method : Sample was selected according to inclusion criteria(consecutive sampling)
- Sample Size : 40 patients

Selection criteria

Inclusion criteria

(1) Patients presenting with shoulder pain (*amsa shula*) due to *sandhigata vata* for less than 1 year duration

(2) Both genders

(3) Age between 21 to 70 years

Exclusion criteria

(1) Pregnancy

(2) Severe hypertension (Systolic blood pressure ≥180 / diastolic blood pressure ≥ 109 mmHg)

(3) Known history of diabetes mellitus

(4) History of previous surgery on affected shoulder joint

(5) Dislocation or fracture on the affected shoulder proved by X-ray

Operational Definitions

❖ **Myanmar massotherapy**

- is a special type of manipulation in which a well-trained traditional medicine practitioner is treating a patient by applying manual pressure, holding, rubbing, stroking and causing movements to the body soft tissues and skin with the use of sesame oil, to promote circulation, relaxation and pain relief within a limited time in a serial sections according to the degree of patient's suffering.

❖***Sandhigata vata***

means vitiated *vayu* affecting the shoulder joint with pain and other clinical features such as *hanti sandhigata* (loss of function), *atopa* (crepitus), *prasarana akunchana pravruthisavedana* (pain in movement) and/or *shotha* (inflammation).

In this study, the patients with shoulder pain due to *sandhigata vata* will be selected if the patient with shoulder pain and 2 other clinical features with the duration less than 1 year.

❖Materials

- For assessment - Goniometer
- For massage - Massage table, Knee high chair
- For oral medication - TMF-33

❖Methods

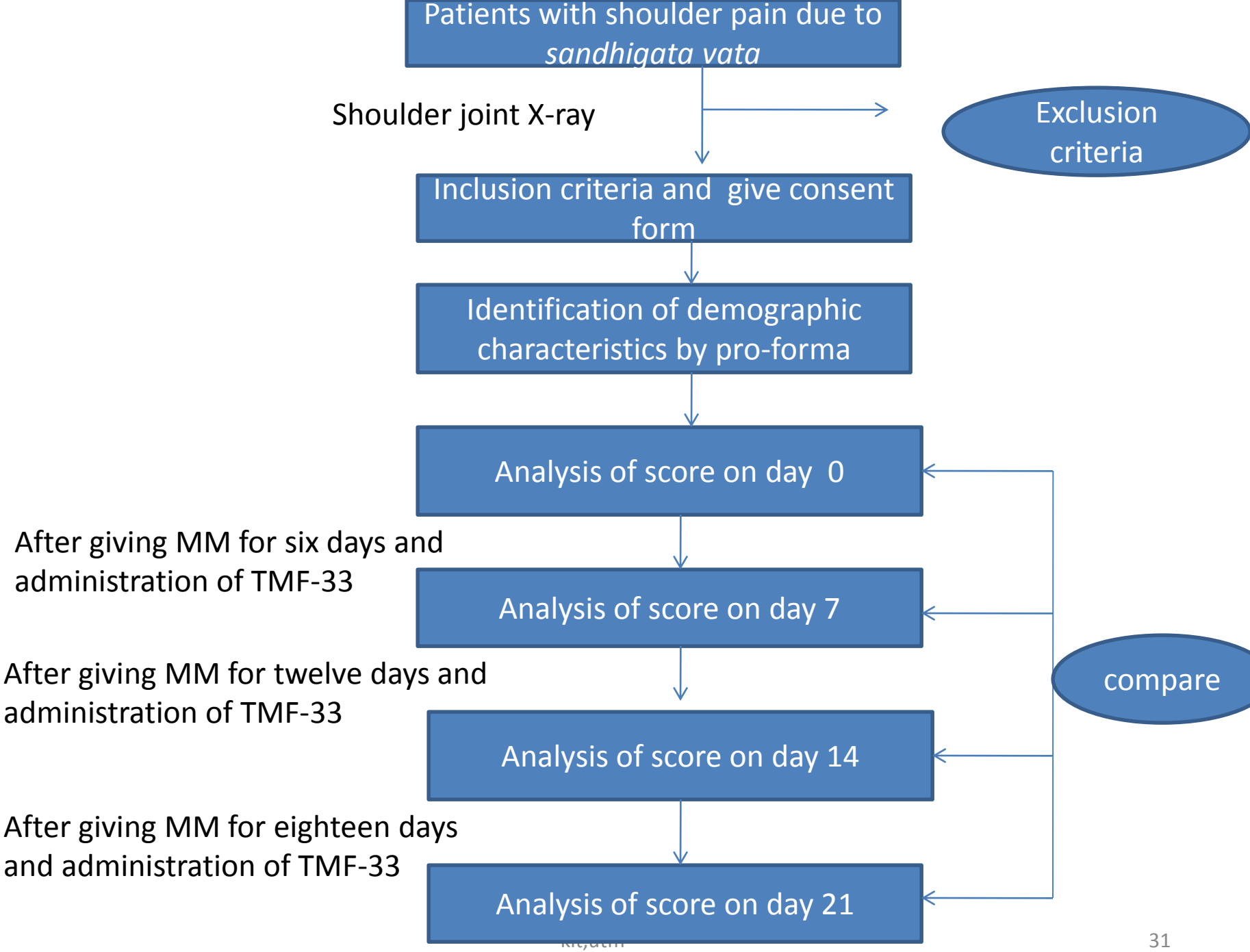
- After obtaining permission from Protocol Board and ERC (Ethics Review Committee) of University of Traditional Medicine, the subjects were selected according to inclusion criteria.
- Radiological assessment (X –ray of shoulder region, Anterio-posterior and Lateral views) was carried out for the exact diagnosis as well as for exclusion.

- All patients were taken an oral administration of TMF-33 in tablet form (2g) with warm water after meal for two times in a day during study period. These drugs were supplied by TMTH, Mandalay. Then, the patients were treated by Myanmar massotherapy. The total duration of the treatment was last for 21 days.

- The treatment was given for six consecutive days and every 7^{th}day was being free from any treatment.
- Assessment of signs and symptoms were done on day 0, day 7, day 14 and day 21.
- UL-1, UL-2, UL-3, UL-4, UL-5, UL-10, UL-11, and HN-21, HN-22 will be applied by thumb pressure and UL-8 and UL-9 will be applied by three-finger pressure.

- UL-6, UL-7 and UL-12 will be applied by two digit pressure (pressure with opposed thumb and index finger).
- Medium pressure will be applied in all points. Depth of pressure should be increased gradually with great care. Depth of pressure also depends on the client's tolerance

- Pressure application on each point lasts for five seconds and the pressure is repeated for five times.
- Depending on the patient's body build, nature of disease and selected pressure points, duration of massotherapy session usually varies from 20 to 30 minutes.
- Method of manipulation were made Pressing manipulation, Kneading manipulation, Grasping manipulation, traction manipulation, shaking manipulation, and rotation manipulation.


Patients with shoulder pain due to *sandhigata vata*
Shoulder joint X-ray
Exclusion criteria
Inclusion criteria and give consent form
Identification of demographic characteristics by pro-forma
Analysis of score on day 0
After giving MM for six days and administration of TMF-33
Analysis of score on day 7
After giving MM for twelve days and administration of TMF-33
Analysis of score on day 14
After giving MM for eighteen days and administration of TMF-33
Analysis of score on day 21
compare

Data Collection and Data Analysis

The record of the result was taken on every 7th day. Data was analyzed by paired T test and General Linear Model method by using SPSS statistics (version 21).

Ethical Consideration

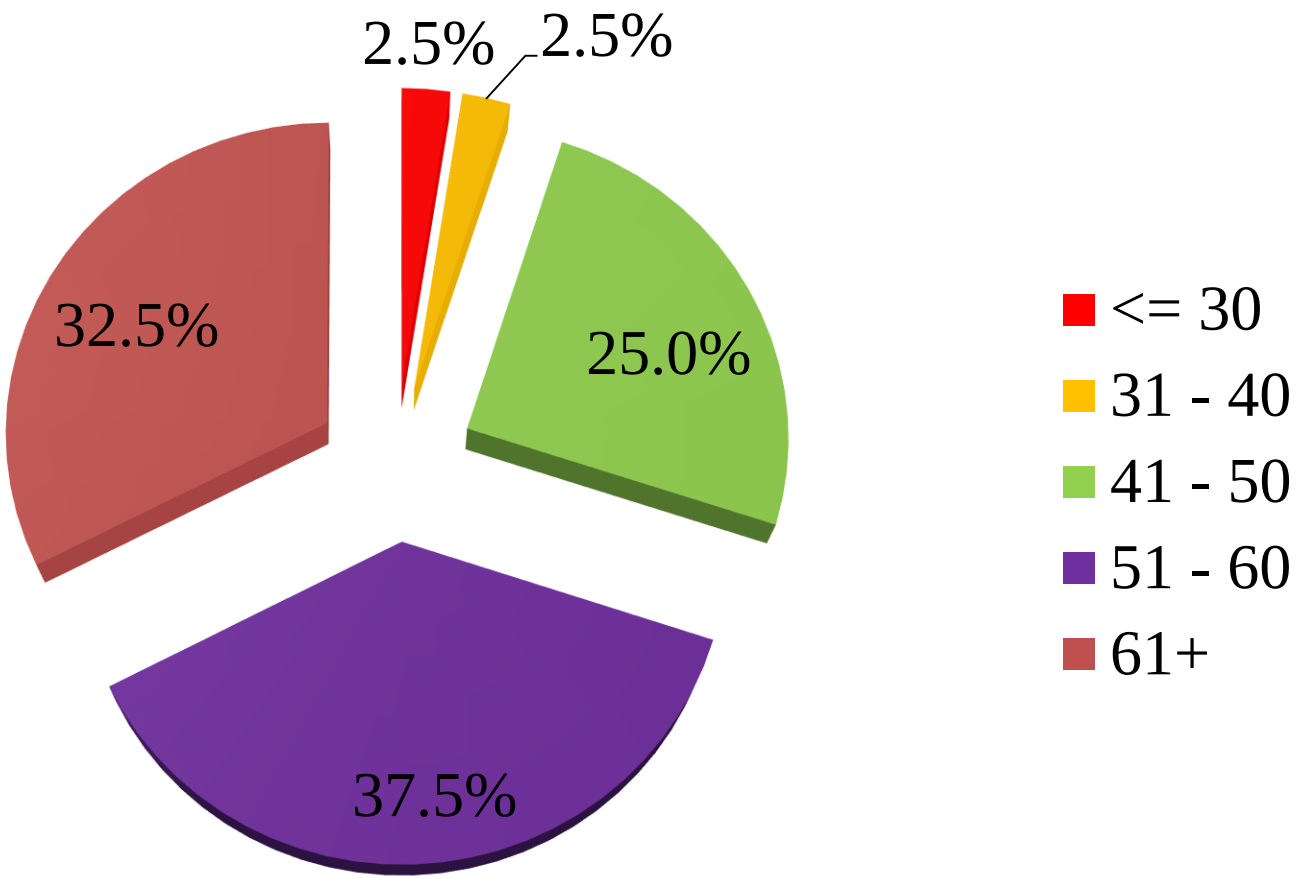
- This study was conducted after approved by Ethics Review Committee (ERC).

Results

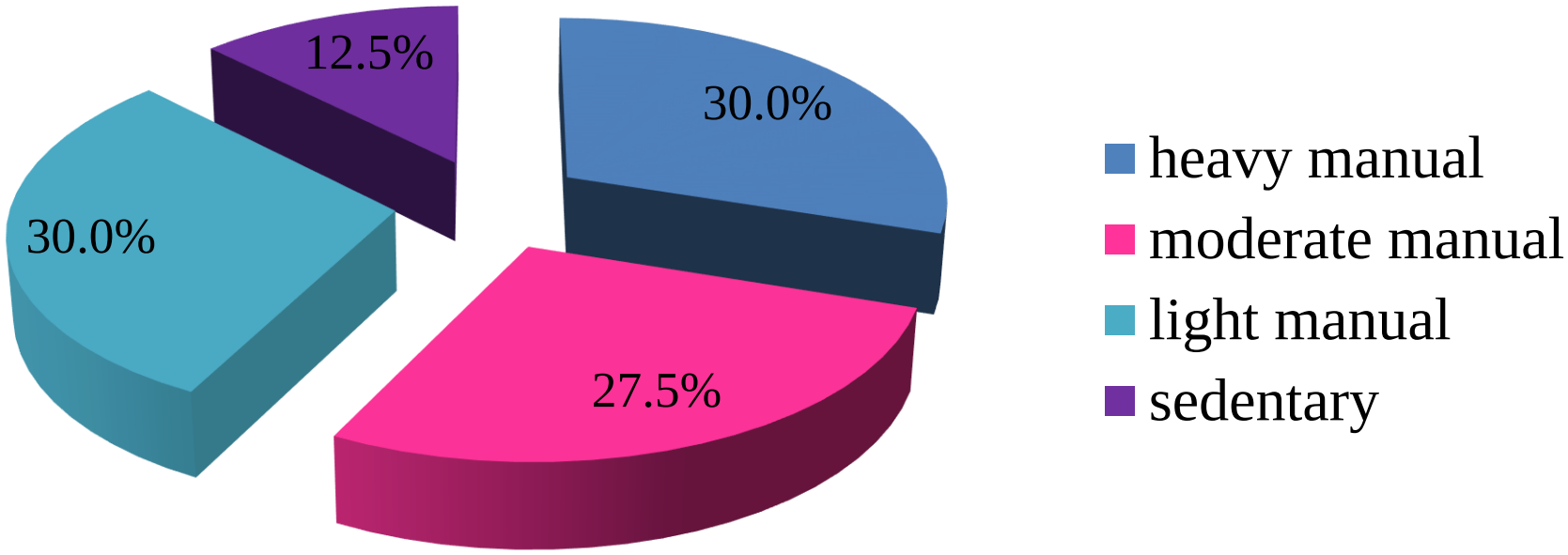
- Total 44 patients were registered for the present study, among them 40patients (91.0%), had completed their treatment and 4patients (9.0%) were drop out.
- The maximum 57.5% patients were female while the rest of the patients 42.5% were male.

Result Finding

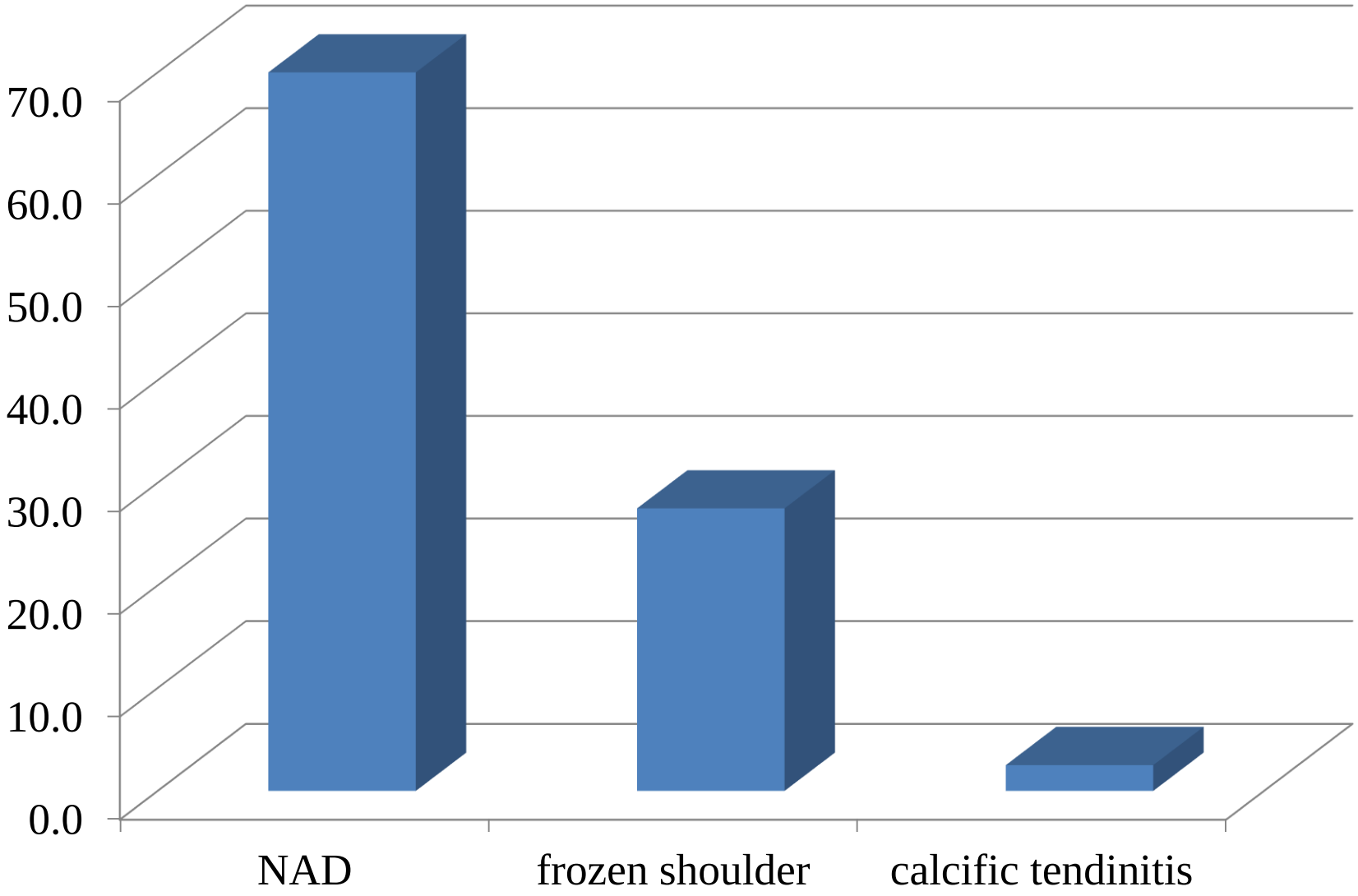
- Age distribution

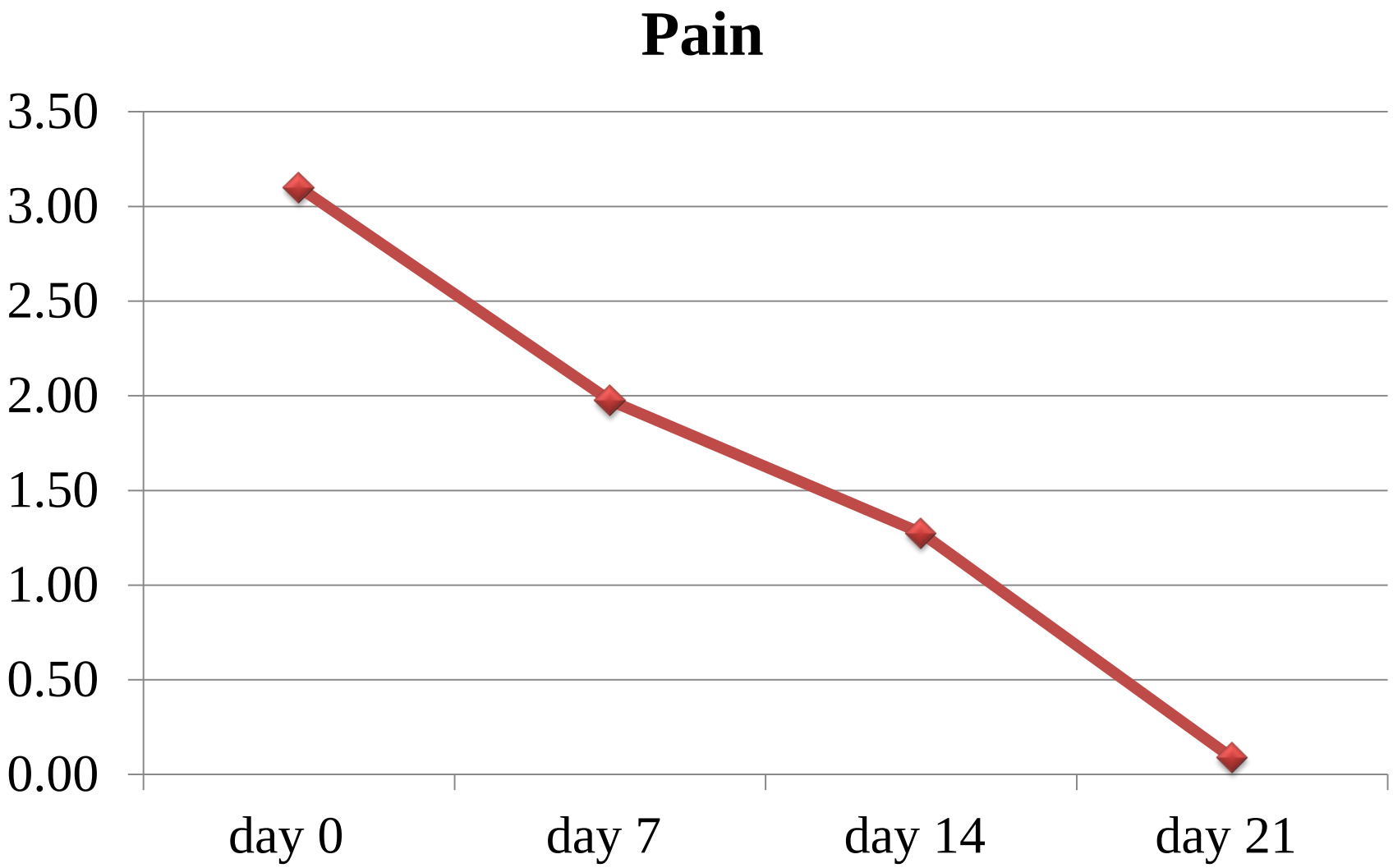


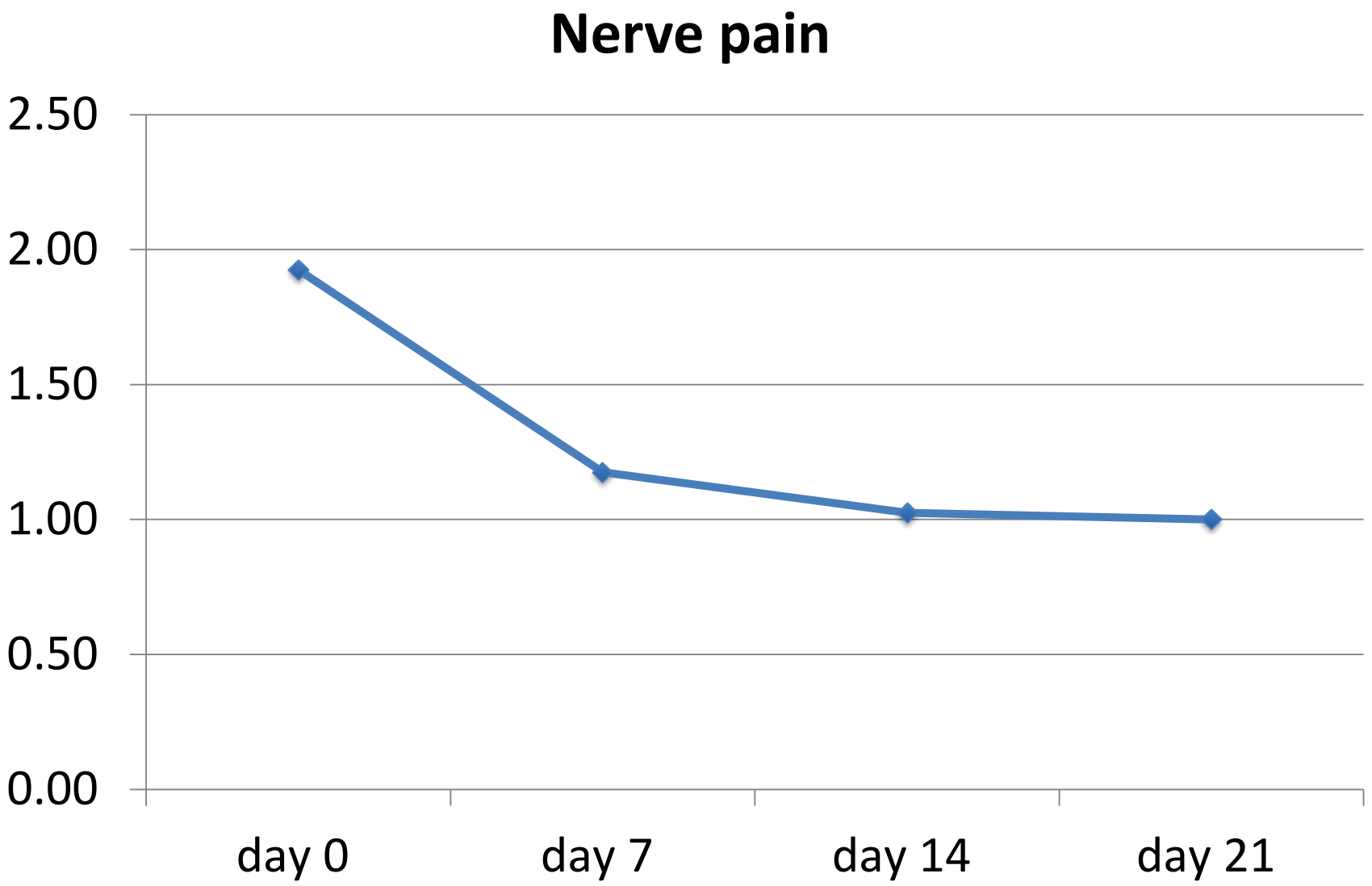
Occupation

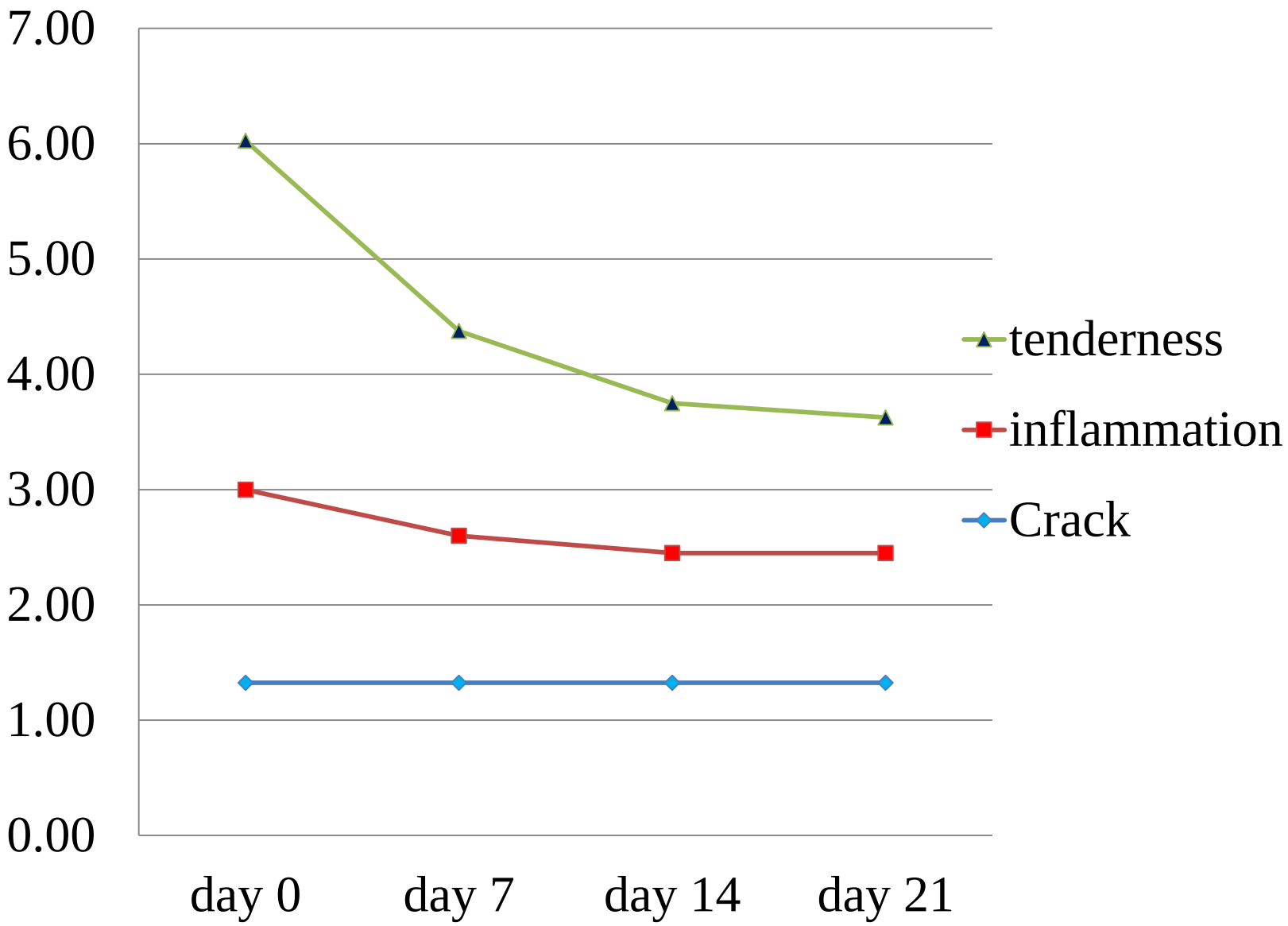

12.5%
30.0%
30.0%
27.5%
heavy manual
moderate manual
light manual
sedentary

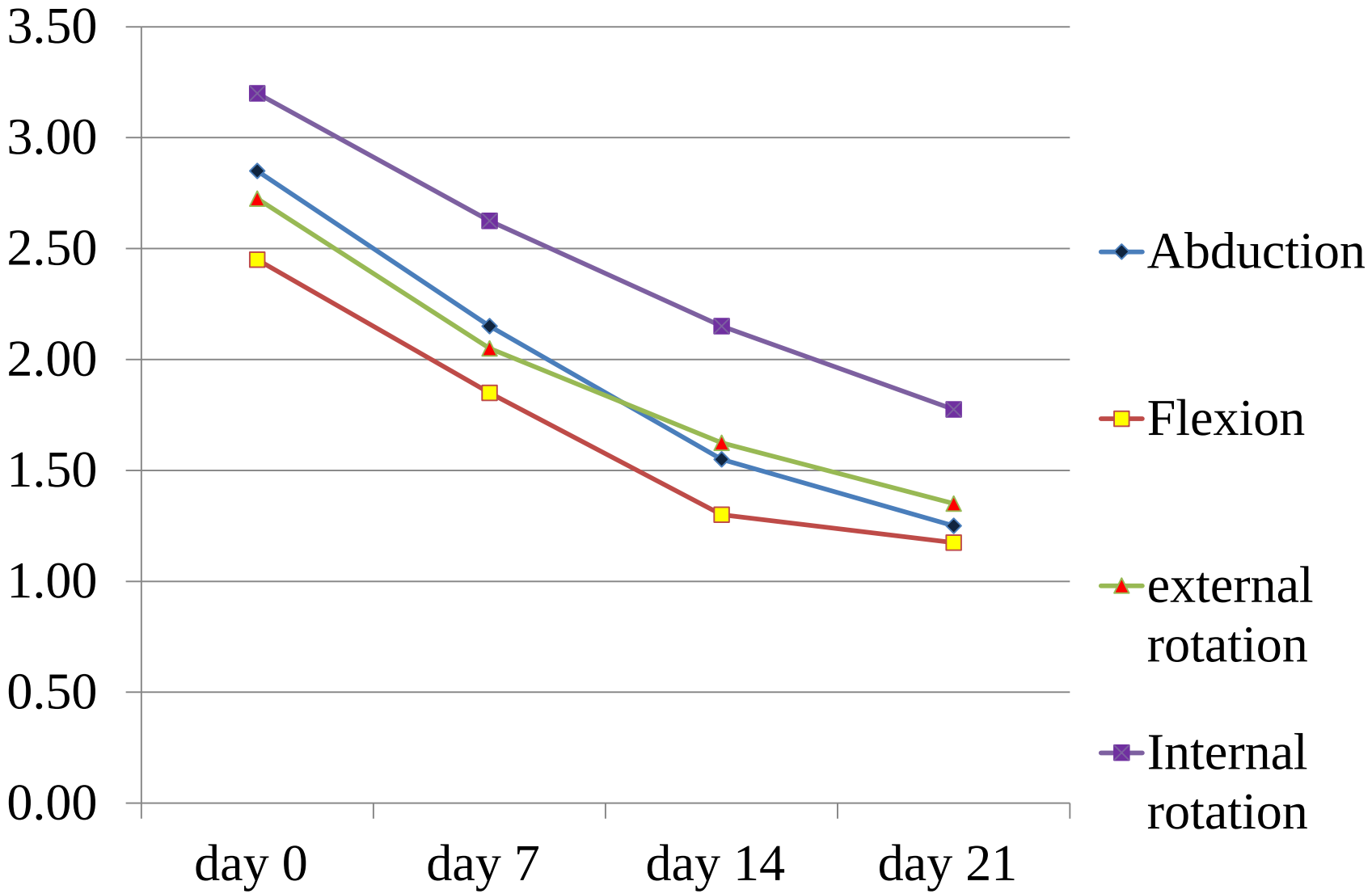
X-ray finding



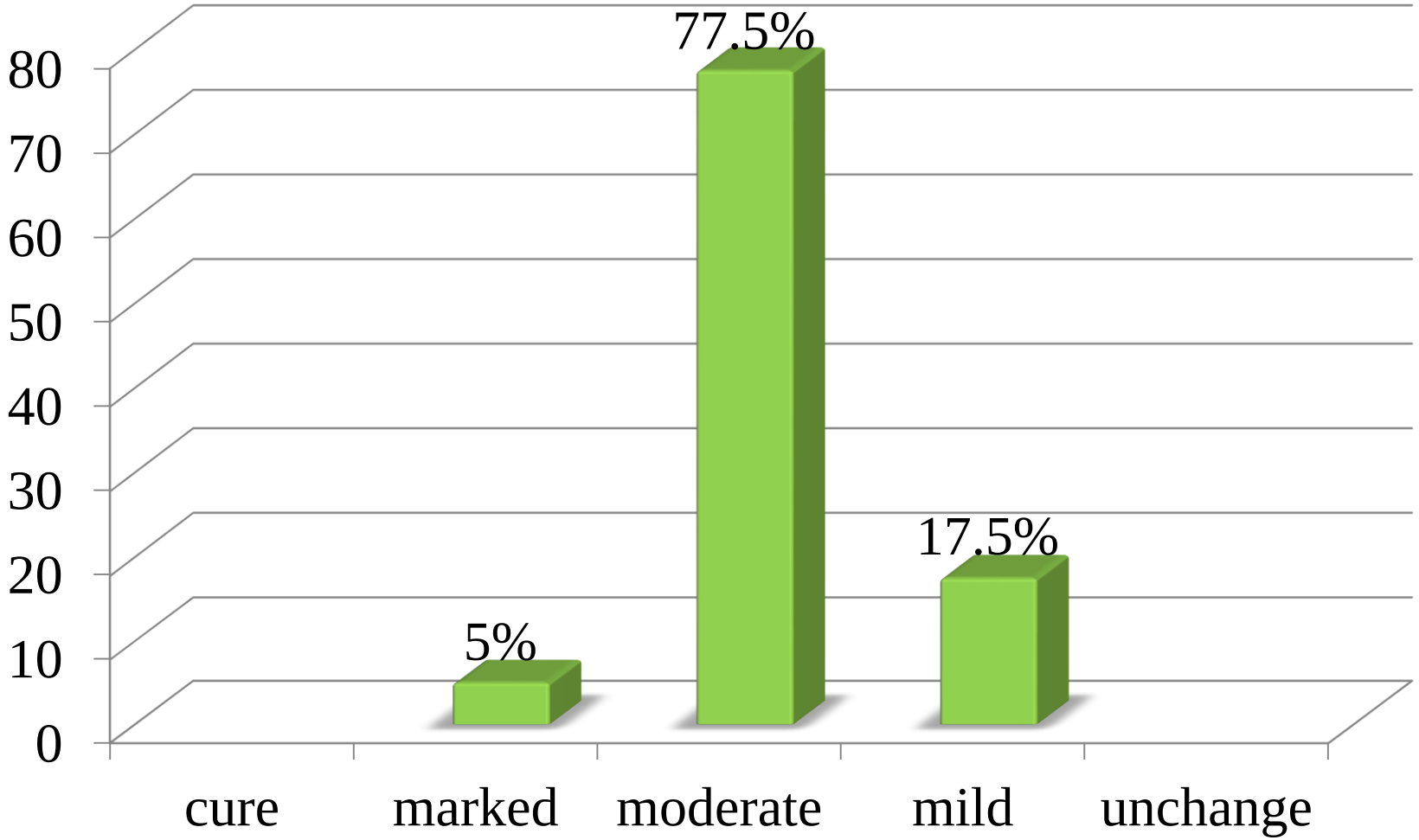

Pain
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
day 0
day 7
day 14
day 21


Nerve pain
2.50
2.00
1.50
1.00
0.50
0.00
day 0
day 7
day 14
day 21


7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
day 0
day 7
day 14
day 21
tenderness
inflammation
Crack


3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
day 0
day 7
day 14
day 21
Abduction
Flexion
external rotation
Internal rotation

Overall effect of Myanmar massotherapy for shoulder pain patients base on the percentage



Discussion

- female patients were more prone to the disease because of they were frequently perform repeated efforts by lifting the upper limbs thus causing a biomechanical stress on the shoulder predisposing them to injuries such as household work, sedentary, and triviality.

Discussion

- These data showed that most of patients were found in 51 to 60 years this may due to degeneration, acute injury or pathology and nature of job.
- more patients were found in 61 to 70 years this may due to degenerative changes.

- The onset of shoulder pain has a strong correlation with adult age, possibly due to the fact that aging is associated with degenerative processes and changes of the shoulder and rotator cuff tendon, which may explain the increase in symptom reporting as age.
- According to the traditional medical concept this ages were in initial stage of *vata prakopa*. *Vata dosha* dominates in this age group by taking a pivot role for *dhatu kshaya* and it is stated as degenerative changes.

- most of the patients 30% were both heavy manual such as labour, yeoman and housewives and light manual such as housewives and triviality
- occupation is very important factor in the aetiology of shoulder pain.
- Treatment outcome of shoulder pain due to *sandhigata vata* was associated with the respective occupation according to statistical report in this study.

- According to the x-ray results 70% of patients were in non-abnormal detected so there were no specific aetiology (*nidana)* factors for Sandhigata vata.

- After 7 day treatment, pain relieved 36.12%, pain relieved 58.7% at day 14 and pain relieved 61.9% at day 21.
- According to comparison of improvement before treatment and after treatment, it was statistically highly significant ($p<0.000$).

- After 7 day treatment, nerve pain relieved 38.8%, it relieved 46.6% at day 14 and it relived 48.2% at day 21.
- According to comparison of improvement before treatment and after treatment, it was statistically highly significant ($p<0.000$).

- After 7 day treatment, tenderness relieved 41.2%, it relieved 57% at day 14 and it relived 61% at day 21.
- According to comparison of improvement before treatment and after treatment, it was statistically highly significant ($p<0.000$).
-

- After 7 day treatment, inflammation relieved 24%, it relieved 32.7% at day 14 and day 21.
- According to comparison of improvement before treatment and after treatment, it was statistically highly significant (p<0.000).

- There was no improvement of signs and symptoms of crack in assessment days.
- Based on the results of this study, there was no statistically significant in crepitus.

- After 7 day treatment, limit of abduction relieved 24.5%, it relieved 45.6% at day 14 and it relived 56.1% at day 21.
- According to comparison of improvement before treatment and after treatment, it was statistically highly significant (p<0.000).

- After 7 day treatment, limit of flexion relieved 24.4%, it relieved 46.9% at day 14 and it relived 51.8% at day 21.
- According to comparison of improvement before treatment and after treatment, it was statistically highly significant (p<0.000).

- After 7 day treatment, limit of external rotation relieved 25%, it relieved 40.2% at day 14 and it relived 50.5% at day 21.
- According to comparison of improvement before treatment and after treatment, it was statistically highly significant (p<0.000).

- After 7 day treatment, limit of internal rotation relieved 17.8%, it relieved 32.8% at day 14 and it relived 44.3% at day 21.
- According to comparison of improvement before treatment and after treatment, it was statistically highly significant ($p<0.000$).

- Overall effects of Myanmar massotherapy on shoulder pain patients are showing results with moderate improvement of 77.5%.
- Myanmar Massotherapy used in this study was cost effective, easily available and less side effect.

- Base on the finding results, it can be stated that Myanmar massotherapy can be provided to get better outcome in the management of shoulder pain due to *sandhigata vata*.

Conclusion

- According to this clinical study, the improvement of signs and symptoms before and after treatment, improved with high and significant *p value* (*p*=0.000). However, there was no significant in relation with massotherapy and crack in shoulder pain.

- The treatment outcome after day 21 was moderate improvement level (77.5%).
- Based on the results of this study, it pointed out that there was serial improvement by providing Myanmar massotherapy in the management of shoulder pain due to *sandhigata vata* patients.
- It can be concluded that Myanmar massotherapy is safe and moderate effective in the management of shoulder pain due to *sandhigata vata*.

- Although Myanmar massotherapy is well-indicated for the shoulder pain patients, further studies with other different types of therapy or combined therapies such as acupuncture, *panchakarma* therapy should be done.
- By doing so, comprehensive and quality assurance treatment regimen on shoulder pain can be performed on future.

Acknowledgements

- First and foremost, I would like to reveal my deep respect to all members of Post-Graduate Academic Board of studies for giving permission to carry out this study.

- I am thankful to Director General, Department of Traditional Medicine, Ministry of Health, Professor Dr. Than Maung, Rector (Retired), University of Traditional Medicine and Dr. Theim Kyaw, Director (Admin), Department of Traditional Medicine, Ministry of Health for providing the opportunity to conduct this study and invaluable guidance.

- I am indescribable words to give thanks giving my supervisors, Daw Nwè Nwè Ye, Lecturer, Department of Physical Medicine and Dr. Linn Zaw Win, Assistant Lecturer, Department of Microbiology/ Pathology, University of Traditional Medicine for supporting with their immanent thinks and kind help to get superfine supplements, encouragement for carrying out the study.

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UL-1

UL-2

UL-3

UL-4

UL-5

UL-6

UL_7

UL-8

UL-9

UL-10

UL-11

UL-12

HN-21

HN-22

Thank You

Assessment criteria for the total affect

% improvement $= \frac{(\text{score at entry} - \text{score at completion})}{\text{Score at entry}}$ x100

- Cure - Above 80% relief in signs and symptoms
- Marked improvement - 61% to 80% relief in signs and symptoms
- Moderate improvement - 41% to 60% relief signs and symptoms
- Mild improvement - 21% to 40% relief in signs and symptoms
- Unchanged - < 20%