COMMON MUSCULOSKELETAL PROBLEMS IN UNDER GRADUATE PHYSIOTHERAPY STUDENT’S – A PREVALENCE STUDY.

1*Amisha Anand Angle and 2Shweta Satish Devare Phadke

1Intern, BPTh, School of Physiotherapy, D.Y. Patil University, Navi Mumbai.
2PhD, Associate Professor, School of Physiotherapy, D.Y. Patil University, Navi Mumbai.

*Corresponding Author: Dr. Amisha Anand Angle
Intern, BPTh, School of Physiotherapy, D.Y. Patil University, Navi Mumbai.

ABSTRACT
According to literature musculoskeletal pain in student life is quite common. To screen work related musculoskeletal pain in students we conducted this survey study using Nordic Musculoskeletal Questionnaire. Backpack, sitting in uncomfortable posture for long time, heavy patients lifting may trigger work related musculoskeletal pain. Imbalance in bio mechanics of body, improper posture, weak muscles and/or less endurance may increase chances of injury. Data was collected randomly, for this one time study. According to survey the most common affected area is lower back, the neck and least is shoulder. Further evaluation of the reason behind the cause can be done. Exercises like mobility, isometrics, stretches and strengthening can be recommended. This survey will help physiotherapy students in prevention of work related injuries and to design preventive strategies for pain and activity loss in physiotherapy students.

KEYWORDS: Physiotherapy students, musculoskeletal health disorder, Nordic Musculoskeletal Questionnaire.

INTRODUCTION
Musculoskeletal disorders (MSDs) consist of minor physical disabilities. This term is used to describe a variety of conditions that affect the muscles, bones and joints. The severity of the musculoskeletal disorders can vary. Pain and discomfort may interfere with everyday activities. Musculoskeletal disorders are extremely common and risk increases with age and repeated trauma. Early diagnosis is the key to ease pain while potentially decreasing further bodily damage.[1] Work-related musculoskeletal disorders (WMSDs) are a group of painful disorders of muscles, tendons and nerves. Injuries resulting from overuse and those that develop over time. Work activities which are frequent and repetitive or activities with awkward postures cause these disorders which may be painful during work or at rest. Musculoskeletal problems results from repetitive activities and minor trauma.

The Nordic Musculoskeletal Questionnaire (NMQ) was developed from a project funded by the Nordic Council of Ministers. Aim was to develop and test a standardized questionnaire for use in epidemiological studies. The tool was not developed for clinical diagnosis. The Nordic Musculoskeletal Questionnaire can be used as a questionnaire or as a structured interview. However, significantly higher frequencies of musculoskeletal problems were reported when questionnaire was administered as part of a focused study on musculoskeletal issues and work factors than when administered as part of a periodic general health examination.[2] we are investigating musculoskeletal problems in Bachelor of Physiotherapy students using NMQ questionnaire.

The students have load of carrying books, improper posture while studying. Improper posture while taking history or treating patients can cause musculoskeletal problems. When sitting or sleeping there may be improper posture which may lead to musculoskeletal problems.

At any point of time physiotherapist should have good healthy strong muscles. they take care of everybody’s health and to treat them. they may tend to ignore their own musculoskeletal health. Our survey will help physiotherapy student to identify common musculoskeletal problem and to design prevention tools for the same.

MATERIAL AND METHODOLOGY
- Research Approach: Cross sectional survey study.
- Study Design: The data for this study was collected by direct interview method with help of NM questionnaire.
DATA REPRESENTATION AND ANALYSIS

**Graph 1- Chronic pain in all students.**

<table>
<thead>
<tr>
<th>Joints</th>
<th>Lower back</th>
<th>Neck</th>
<th>Shoulder</th>
<th>Upper back</th>
<th>Ankle/foot</th>
<th>Knee</th>
<th>Wrist/hand</th>
<th>Hip/thigh</th>
<th>Elbow</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of students</td>
<td>56</td>
<td>50</td>
<td>28</td>
<td>24</td>
<td>17</td>
<td>16</td>
<td>9</td>
<td>9</td>
<td>3</td>
</tr>
</tbody>
</table>

**Inference:** Lower back pain is most prevalent in all students in chronic pain.

**Graph 2- Acute pain in all students.**

<table>
<thead>
<tr>
<th>Joints</th>
<th>Lower back</th>
<th>Neck</th>
<th>Upper back</th>
<th>Shoulder</th>
<th>Knee</th>
<th>Ankle/foot</th>
<th>Wrist/hand</th>
<th>Elbow</th>
<th>Hip/thigh</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of students</td>
<td>26</td>
<td>20</td>
<td>16</td>
<td>12</td>
<td>7</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

**Inference:** Lower back pain is most prevalent in all students for acute pain.
Graph 3 - Loss of activity in all students.

<table>
<thead>
<tr>
<th>Joints</th>
<th>Lower back</th>
<th>neck</th>
<th>Upper back</th>
<th>knee</th>
<th>shoulder</th>
<th>Hip/thigh</th>
<th>Ankle/foot</th>
<th>Wrist/hand</th>
<th>elbow</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of student</td>
<td>22</td>
<td>12</td>
<td>10</td>
<td>9</td>
<td>6</td>
<td>5</td>
<td>5</td>
<td>4</td>
<td>2</td>
</tr>
</tbody>
</table>

**INFEERENCE** - Loss of activity was most common due to low back pain.

Graph 4 - Pain prevalence in physiotherapy students.

<table>
<thead>
<tr>
<th>All years.</th>
<th>1st year</th>
<th>2nd year</th>
<th>3rd year</th>
<th>4th year</th>
</tr>
</thead>
<tbody>
<tr>
<td>chronic</td>
<td>18</td>
<td>22.20</td>
<td>18</td>
<td>30.20</td>
</tr>
<tr>
<td>acute</td>
<td>8</td>
<td>9.50</td>
<td>8</td>
<td>11.40</td>
</tr>
<tr>
<td>Loss of activity</td>
<td>8</td>
<td>9.90</td>
<td>4</td>
<td>6.80</td>
</tr>
</tbody>
</table>

**INFEERENCE** - 4th year students are more prevalent for chronic pain and acute pain than any other year.
DISCUSSION
In our study we have chosen Under Graduate students of Physiotherapy from D Y Patil University of Nerul (E), for screening common musculoskeletal problems by universally accepted Nordic musculoskeletal questionnaire. Our total sample size was 112. It’s a cross sectional survey study. Data was collected by direct interview method with consent. Age group from 18-21 year old students with no h/o medical, surgical and trauma to musculoskeletal system.

For data analysis we divided students year wise. In 1st year students Lower back is most affected area for chronic pain, Lower back and Upper back is most affected area for acute pain and loss of activity was due to Lower back In 2nd year students Lower back is most affected area for chronic pain, Neck is most affected area for acute pain and loss of activity was due to lower back. In 3rd year students Lower back is most affected area for chronic pain, acute pain and loss of activity. In 4th year students Neck is most affected area for chronic pain, Lower back is most affected area for acute pain and loss of activity.

From Graph 1:- Lower back pain is most prevalent in all student in chronic pain. From Graph 2:- Lower back is most prevalent in all student for acute pain. From Graph 3:- Lower back pain is most prevalent in all student for loss of activity.

From Graph 4:- 4th year students are more prevalent for acute pain and chronic pain than any other year.
Thus from this we can inferred that low back is most vulnerable area for physiotherapy students.

CONCLUSION
1. The highest chronic and acute pain is seen in 4th year students
2. Highest loss of activity is in 2nd year students
3. From 1st-4th year BPT students, the most affected area is low back.

ACKNOWLEDGEMENT
I take this opportunity to express my sincere gratitude to those people without whose support and concern, this project would not have been a great success.

I am extremely thankful to Dr. Unnati Pandit, Head of Department of Physiotherapy of D.Y.Patil University, who has bestowed upon me her valuable advice and given me the permission to initiate the project in this institution.

I am also extremely thankful to my guide, Dr. Shweta Phadke, Associate Professor of D.Y.Patil University.

And last but not the least, the colleagues of our batch who deserve a word of thanks for their co-operation.