



ORIGINAL RESEARCH PAPER

Physiotherapist

NATURE AND PATTERN OF NECK AND SHOULDER PAIN IN HOME ECONOMIST AT JHANSI (U.P.)

KEY WORDS: NECK PAIN SHOULDER PAIN

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ABSTRACT

INTRODUCTION: To identify the anatomic site, nature, pattern & severity of neck and shoulder pain among housewives, find out incidence of pain, find out recurrence of neck and shoulder pain, to determine which activities are more prone to aggravate the neck and shoulder pain. To survey awareness of neck and shoulder pain among housewives at Jhansi (U.P.) **OBJECTIVE OF STUDY:** To identify nature and pattern of neck and shoulder pain at wives by Random Sampling done in the Jhansi City, UP. **METHODOLOGY:** Housewives completed a questionnaire about their neck and shoulder pain related questions, movement and pain related questions, ADL problems related question. **OUTCOME MEASURES:** Questionnaire form, Neck & Shoulder Assessment **CONCLUSION:** In conclusion, the survey shows that out of 51 women, around 50% housewives suffer from neck and shoulder pain with either a moderate score of 10-20% or a median score of 40-50%.

CHAPTER - 1

INTRODUCTION

In recent years the concept of status of health has been considered more aggressively, and therefore, more attention has been paid to the integration of the different aspects of health quality in health assessment.

"Musculoskeletal disorders" include a wide range of inflammatory and degenerative conditions affecting the muscles, tendons, ligaments, joints, peripheral nerves, and supporting blood vessels. Body regions most commonly involved are the low back, neck, shoulder, forearm, and hand, although recently the lower extremity has received more attention."

It is believed that job is one of the most effective factors on women's quality of life. Women are often responsible for tasks such as dusting, washing bathrooms and toilets, cleaning windows and mirrors and beds that can lead to contact with a variety of physical contact stress and consequently MSDs and but of course taking care of whole family needs.

The previous studies suggest that the prevalence of musculoskeletal pain among women are more common than men. Considering the effect of women's health on the overall family health and with regard to lack of coordination in shared responsibility of men and women in family and considering women's employment as a minor role alongside the major role of housekeeping.

A housewife's main duties are managing the family, caring for and educating her children, cooking and storing food, buying goods, cleaning and maintaining the home, sewing clothes for the family, etc. It is ironical that a woman employed within the home is referred to as a housewife, and outside the home, as a working woman. In both situations, the woman is working but how the woman is referred to, is based on the working place. The duty of the housewife is to take care of the day-to-day chores within the home. Balancing work and family life has become a major issue for women.

According to sociologists, housework or household chores are facilitating factors for creating a comfortable environment for family members, taking care of and rearing children, and providing the family's necessary requirements and needs. House-keeping is quite different from other occupations because it is a non-paid job that is done in isolation. Household chores are not usually regulated by national laws,

and are repetitive and endless. Definition based on anatomical location The International Association for the Study of Pain (IASP) in its classification of chronic pain defines cervical spinal pain as pain perceived anywhere in the posterior region of the cervical spine, from the superior nuchal line to the first thoracic spinous process.

Acute neck pain usually lasts less than 7 days, sub-acute neck pain lasts more than 7 days but less than 3 months, and chronic neck pain has a duration of 3 months or more.

Neck pain was more prevalent among women and prevalence peaked in middle age. Shoulder pain is the third most common musculoskeletal disorder experienced by the general population and accounts for approximately 16% of all musculoskeletal complaints. Shoulder pain is believed to have a multi-factorial etiology, as several risk factors contribute to its development. Most studies have demonstrated that age is a considerable risk factor for shoulder pain.

In this thesis the term non-specific neck pain is used, Non-specific neck pain does not include trauma related neck pain, cervical radiculopathy or detailed pathoanatomic origin to the neck pain. The term idiopathic neck pain is sometime used, meaning that there is no obvious origin for the pain.

Women seem to be particularly at risk with a higher prevalence of upper limb and shoulder MSDs than men. women seem to be particularly at risk with a higher prevalence of upper limb and shoulder MSDs than men shoulder, including calcifications, bursitis, acromioclavicular arthritis, rotator cuff tears, sub-acromial impingement, of which 8 (2.6%) on the dominant side, 4 (1.3%) on the non-dominant side and 14 (4.6%) bilaterally (Table 6). Both shoulders were normal in two hundred and seventy-six subjects (91.4%). As with the other assessments, the prevalence of anatomical abnormalities tended to increase with age, both for the dominant and the nondominant arm.

Ageing had a statistically significant effect on the prevalence of shoulder MSDs, whether reported or objectively diagnosed, which concurs with existing data on the increase of shoulder tendinopathies with age.

Neck pain is common in rheumatological practice. Assessment of outcome is difficult without objective measures. A Northwick Park neck pain questionnaire using

nine five-part sections has been devised to overcome this problem. The Shoulder Pain and Disability Index (SPADI) is a self-administered questionnaire that consists of two dimensions, one for pain and the other for functional activities. This study was designed to survey nature and pattern of neck and shoulder pain of the housewives/HOME ECONOMIST.

OBJECTIVES OF STUDY

To identify anatomical site, nature, and pattern, severity of neck and shoulder pain in housewives and find incidence of neck and shoulder pain to determine which type of pain is prone to face during household activities.

NEED OF STUDY

To Assess the problem % stage in housewives & their mental status.

To Explain the difficulties related to their household Activities.

CHAPTER - 2

REVIEW OF LITERATUR

Sumit Kalra Barkha Bhatnagar at the high prevalence of MSDs among housewives suggests that housework could be an independent risk factor contributing to the development of musculoskeletal disorders among women. Another reason for this result could be due to some essential biomechanical parameter and features of housework such as child care, care-giving, food preparation and cleaning that paid for doing them at home, the results are in accordance with study done by Babak Fazli et al on Iranians' Housewives(2015) which also suggests that the prevalence of MSDs in Iranian housewives is very high & ergonomic training and informing the housewives about the risk factors of MSDs could prevent and postponed the occurrence of these disorders.

It can be concluded from the present study that selected housewives were having MSDS in one or more body region last 12 months and last seven days. Severity of MSDs is also high for last 12 months.

Fatihe Kerman Saravi, Ali Navidian although not significant, the findings from this study showed that employed women reported better health status than the housewives in all domains of quality of life except for physical functioning. The findings also highlighted the fact that the differences were more related to psychological health (role emotional, vitality and mental health) rather than physical health. In fact employment status provided a better psychological health for women when it was compared to non-employed women. Unfortunately we did not collect the data on type and employment conditions, but it is argued that not all employment conditions could provide health benefits for women.

Jaime Guzman , Scott Haldeman and many authors approach the study of neck pain in a way which suggests a view that all neck pain has a local pathologic cause, and that this cause can be identified and treated. Other authors seem to consider neck pain as a primarily nonorganic problem with psychological and social roots.

There is also a tendency to separate neck pain into categories based on their linkage to particular events or precipitating factors such as whiplash-associated disorders (WAD),⁶ occupational neck pain, sports-related neck pain,⁸ and neck pain of unknown origin (often called "nonspecific neck pain"). These varied approaches often imply different etiological models for neck pain.

Victoria Misailidou, Paraskevi Malliou, Questionnaires that incorporate assessments of pain include the Extended Aberdeen Spine Pain Scale (ASPS),⁴⁶ the Bournemouth Questionnaire (BQ),⁴⁷ the Cervical Spine Outcomes

Questionnaire (CSOQ),⁴⁸ the Current Perceived Health 42 Profile (CPH42),⁴⁹ the NDI,^{42,50-52} the Northwick Park Neck Pain Questionnaire (NPQ),⁵² the Problem Elicitation Technique (PET),⁵² and the Whiplash Disability Questionnaire (WDQ)⁵³ (Table 2). The Aberdeen Back Pain Scale was extended to fit to patients with neck and upper back pain, and it measures pain behavior during various activities and rest. Authors suggest that the scale is reliable, valid, and responsive.⁴⁶ The modified BQ covers the salient dimensions of the biopsychosocial model of pain; and it is reliable, valid, and responsive to clinically significant change in patients with nonspecific neck pain.

Fariba Khosravi a , Zahra Amir et al a total of 500 women, with an average age of 54.57 ± 8.09 years, were included in the study. The demographic data are summarized in .The majority of the participants were housewives (81%) who were menopausal (71.9%). The data analyses revealed that the point and lifetime prevalence rates of shoulder pain in middle-aged Iranian women were 18.6% and 27.6%, respectively. A history of shoulder trauma was recorded in 4.8% of the participants. Of the women with lifetime shoulder pain, 4.6% reported seeking medical treatment, 6.6% had received physiotherapy, and 0.4% had undergone a surgical procedure for their shoulder pain.

Roberto Meroni*, Michele Scelsi et al Despite the growing numbers of women reporting upper limb MSDs, very little information can be found in the current literature quantifying the prevalence of shoulder pain in working-age female population. Indeed, in their 2010 report, the European Agency for Safety and Health at Work called for more research into upper limb MSDs occurring in higher-risk groups such as women, younger and temporary workers, as these groups have not benefited from specific study. In general, women seem to be particularly at risk with a higher prevalence of upper limb and shoulder MSDs than men. Possible explanations for the gender difference in prevalence are that male and female workers have different exposure to risk factors, that women have a lower pain threshold and that they might be more prone to express pain and symptoms. Another possible hypothesis to explain this apparent disparity is that many of these female patients are suffering from non specific pain, for which psychological or psychosocial factors have been invoked.

Sheilah Hogg-Johnson, Gabrielle van der Velde et al⁶ Neck pain is common. Nonmodifiable risk factors for neck pain included age, gender, and genetics. Modifiable factors included smoking, exposure to tobacco, and psychological health. Disc degeneration was not identified as a risk factor. Future research should concentrate on longitudinal designs exploring preventive strategies and modifiable risk factors for neck pain.

HARILAL A SANTHOSH V A et al² The research study examined stress levels among working women and housewives, and the factors leading them to stressful situations. The analysis shows that stress levels are high for working women when compared with housewives, and both of them have a relationship. The stress levels of women (both housewives and working women) and financial position of their family have a relationship. Stress is a part of human life; sometimes it can motivate us and help us to become more productive. Stress will increase our ability to be alert, productive, energised and face challenges and dangerous situations. But too much stress is harmful to us. This stress will create tension, anxiety, fatigue and burnout. In order to avoid stress from negatively impacting our lives, we need to increase knowledge about stress and also use stress management techniques. The study offers insights to working women and housewives to understand the determinants of stress. It will also help organisations and spouses in effective management of women's dual role in work and personal life.

This research study can become the base for further studies to be conducted by researchers, academicians and organizations for further understanding of stress levels among women.

Roach KE, Budiman-Mak E et al [new7] The Shoulder Pain and Disability Index (SPADI) is a self-administered questionnaire that consists of two dimensions, one for pain and the other for functional activities. The pain dimension consists of five questions regarding the severity of an individual's pain. Functional activities are assessed with eight questions designed to measure the degree of difficulty an individual has with various activities of daily living that require upper-extremity use. The SPADI takes 5 to 10 minutes for a patient to complete and is the only reliable and valid region specific measure for the shoulder.

A. M. LEAK, J. COOPER et al The questionnaire is presented in the Appendix. The questions cover many activities which are likely to be affected by neck pain. Each section contains five statements of increasing difficulty and the patient is asked to tick only the one box which most closely describes their current situation.

R. R. Habib , K. El Zein et al ¹¹ Housework is traditionally a labour performed by women. It involves routine and compulsory household maintenance tasks (cleaning, cooking, purchasing, etc.) and family care duties (child rearing and other care giving responsibilities) that require substantial physical, emotional and intellectual. Studies have found that housework can be more energy intensive than some types of paid work.

Professor David Coggon, MRC Lifecourse et al ¹² Pain in the neck and/ or shoulder(s) is a common problem in people of working age, and an important cause of disability. Like other regional pain, it may arise from identifiable musculoskeletal pathology - for example, cervical spondylitis or subacromial bursitis. However, the relationship of such abnormalities to symptoms is imperfect and their occurrence in association with pain does not necessarily imply that they are responsible for it.

CHAPTER - 3

METHODOLOGY

AIM OF STUDY

To determine survey nature and pattern of neck and shoulder pain in home economist at Jhansi (U.P.)

OBJECTIVES OF STUDY

- To identify anatomical site, nature, and pattern, severity of neck and shoulder pain in housewives .
- To find incidence of neck and shoulder pain.
- To determine which type of pain is prone to face during household activities.

STUDY DESIGN

The study was a Simple random sampling from the Jhansi (U.P.). the study was conducted in the short period of time, The questionnaire complaints for housewives reports the neck and shoulder pain sustain in daily household activities.

SAMPLE SIZE

The survey was conducted on 51 housewives at Jhansi (U.P.)

STUDY DURATION

Data were collected over a time approximately 1 month .

SAMPLE TECHNIQUE

Simple random sampling from the Jhansi (U.P.) was used to get sample for this study. 51 housewives were taken randomly and their consent was taken.

SELECTION CRITERIA

Inclusion Criteria

1. Age group of between 25 to 45.
2. Jhansi (U.P.) Housewives.
3. Minimum of six weeks of nonspecific neck and shoulder pain.
4. Dominant pain area in the neck and shoulder region.

Exclusion Criteria

1. Surgery in the spine or shoulder.
2. History of trauma or neurological problems.
3. Any job profile.
4. History of any mental or Psychological disorder.
5. Any drugs dependency.
6. Fracture in the spine or shoulder.

Out come measures

Questionnaire form

- Northwick park neck pain questionnaire
- Shoulder Pain and Disability Index (SPADI)

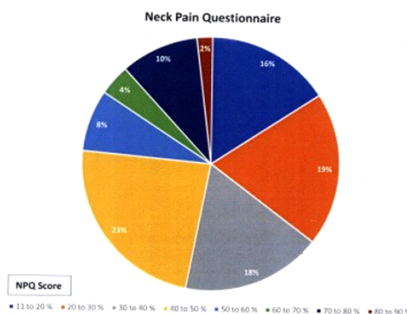
PROCEDURE

Before data collection the purpose and procedure was fully explained and informed. Consent was obtained from each participant, 51 housewives were identified as potential participants for this study undergoing as a housewives in Jhansi (U.P.).

Two questionnaires were made and given to each women randomly to know the nature and pattern of neck and shoulder pain in home economist at Jhansi (U.P.).

CHAPTER - 4

DATA ANALYSIS



Graph 01 : Graphical representation shows that distribution of Neck Pain according to NPQ Score

NPQ Score	Total Number of Women
11 to 20 %	8
20 to 30 %	10
30 to 40 %	9
40 to 50 %	12
50 to 60 %	4
60 to 70 %	2
70 to 80 %	5

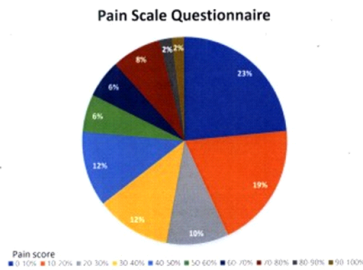
The above table shows the number of women with different percent of NPQ score. 8 out of 51 women suffer with neck pain intensity between 11-20%.

10 out of 51 women suffer with neck pain intensity between 20-30%. 9 out of 51 women suffer with neck pain intensity between 30-40%.

12 out of 51 women suffer with neck pain intensity between 40-50%. 4 out of 51 women suffer with neck pain intensity between 50-60%.

2 out of 51 women suffer with neck pain intensity between 60-70%.

5 out of 51 women suffer with neck pain intensity between 70-80%. 1 out of 51 women suffer with neck pain intensity between 80-90%.

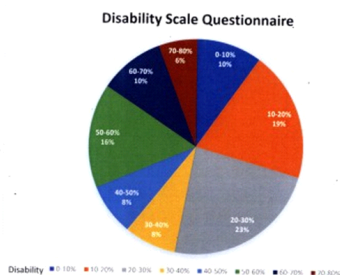


Graph 02 : Graphical representation shows that distribution of Pain Scale according to SPADI Score

Pain Score	Total Number of Women
0-10%	12
10-20%	10
20-30%	5
30-40%	6
40-50%	6
50-60%	3
60-70%	3
70-80%	4
80-90%	1
90-100%	1

The above table shows the number of women with different percent of SPADI pain score.

- 12 out of 51 women suffer with SPADI Pain scale between 0-10%.
- 10 out of 51 women suffer with SPADI Pain scale between 10-20%.
- 5 out of 51 women suffer with SPADI Pain scale between 20-30%.
- 6 out of 51 women suffer with SPADI Pain scale between 30-40%.
- 6 out of 51 women suffer with SPADI Pain scale between 40-50%.
- 3 out of 51 women suffer with SPADI Pain scale between 50-60%.
- 3 out of 51 women suffer with SPADI Pain scale between 60-70%.
- 4 out of 51 women suffer with SPADI Pain scale between 70-80%.
- 1 out of 51 women suffer with SPADI Pain scale between 80-90%.
- 1 out of 51 women suffer with SPADI Pain scale between 90-100%.



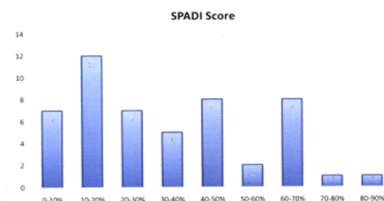
Graph 03 : Graphical representation shows that distribution of Disability Scale according to SPADI Score

Disability scale	Total Number of Women
0-10%	5
10-20%	10
20-30%	12
30-40%	4

40-50%	4
50-60%	8
60-70%	5
70-80%	3

The above table shows the number of women with different percent of SPADI Disability score.

- 5 out of 51 women suffer with SPADI disability score between 0-10%.
- 10 out of 51 women suffer with SPADI disability score between 10-20%.
- 12 out of 51 women suffer with SPADI disability score between 20-30%.
- 4 out of 51 women suffer with SPADI disability score between 30-40%.
- 4 out of 51 women suffer with SPADI disability score between 40-50%.
- 8 out of 51 women suffer with SPADI disability score between 50-60%.
- 5 out of 51 women suffer with SPADI disability score between 60-70%.
- 3 out of 51 women suffer with SPADI disability score between 70-80%.
- None of the women suffer with SPADI disability score more than 80%.

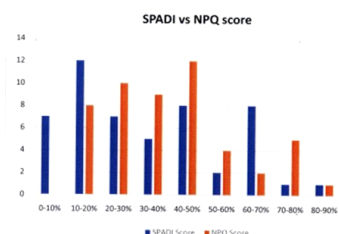


Graph 04 : Graphical representation shows that distribution of Total SPADI Score.

SPADI Score	Total Number of Women
0-10%	7
10-20%	12
20-30%	7
30-40%	5
40-50%	8
50-60%	2
60-70%	8
70-80%	1
80-90%	1

The above table shows the number of women with different percent of SPADI score.

- 7 out of 51 women suffer with SPADI score between 0-10%.
- 12 out of 51 women suffer with SPADI score between 10-20%.
- 7 out of 51 women suffer with SPADI score between 20-30%.
- 5 out of 51 women suffer with SPADI score between 30-40%.
- 8 out of 51 women suffer with SPADI score between 40-50%.
- 2 out of 51 women suffer with SPADI score between 50-60%.
- 8 out of 51 women suffer with SPADI score between 60-70%.
- 1 out of 51 women suffer with SPADI score between 70-80%.
- 1 out of 51 women suffer with SPADI score between 80-90%.
- None of the women suffer with SPADI score more than 90%.



Graph 05 : Graphical representation shows that comparison between SPADI score and NPQ Score

Pain %	SPADI Score	NPQ Score
0-10%	7	0
10-20%	12	8
20-30%	7	10
30-40%	5	9
40-50%	8	12
50-60%	2	4
60-70%	8	2
70-80%	1	5
80-90%	1	1

The above graph shows a comparison between SPADI score and NPQ Score among a group the same 51 women.

The maximum number of women suffering with SPADI have a score of 10-20%. Similarly, the maximum number of women suffering with Neck pain have a score of 40-50%.

CHAPTER - 5

DISCUSSION

In conclusion, the survey shows that out of 51 women, around 50% housewives suffer from neck and shoulder pain with either a moderate score of 10-20% or a median score of 40-50%.

This data also shows that neck and shoulder pain are independent variables and it cannot be said that a housewife with neck pain is also suffering from a shoulder pain of same intensity or vice versa.

LIMITATIONS

"NATURE AND PATTERN OF NECK AND SHOULDER PAIN IN HOME ECONOMIST AT JHANSI (U.P.)" in this survey study to explain each and every point present in questionnaire are difficult to elaborate and also difficult to correlate with her daily routine neck and shoulder problems. Each and every woman suffering with problem like neck shoulder as well as knee low back.... So it is very difficult to council house wives only for neck and shoulder pain.

FUTURESCOPE

"NATURE AND PATTERN OF NECK AND SHOULDER PAIN IN HOME ECONOMIST AT JHANSI(U.P.)" in this study there is more scope to identify other health related issues which are disturbing house wives lifestyle like... Mental or psychological health, physical health, pain related problems, other problem like physical harassment at home etc.

CLINICAL SIGNIFICANCE

According to survey (50% housewives suffer from neck and shoulder pain with either a moderate score of 10-20% or a median score of 40-50%.) women are suffering with shoulder and neck pain after council for correction of posture and regular involvement of exercise . Life style of house wives are easier with their house hold activities

APPENDIX

INFORMED CONSENT FORM

"NATURE AND PATTERN OF NECK AND SHOULDER PAIN AT HOME

ECONOMIST AT JHANSI (U.P.):You are invited to participate in the study which is being conducted to the fulfillment of the requirements of the MASTER OF PHYSIOTHERAPY . **PURPOSE OF THE RESEARCH:** Survey analysis on neck pain and shoulder pain among housewives at Jhansi (U.P.)

CONFIDENTIALITY: I understand that medical information by this study will be part of my university records and will be subject to the confidentiality and privacy regulations.

REQUEST FOR MORE INFORMATION: I understand that at any point of the study I can contact my physiotherapist and he will be answerable to all my queries. **REQUEST FOR WITHDRAWL OF PARTICIPATION:** I understand that the participation of my ward is voluntary and that I may refuse to participate and withdraw consent at any time. I confirm that she has explained to me in the language I can understand about the purpose of the study and the procedures my ward will be undergoing, the risk and discomforts. I have read and I understand this consent to let my ward participate as a subject in her research project.

NAME OF THE PARTICIPANT

I have explained to _____, the purpose of the research, the procedure needed and possible risks and benefits of the best of my ability in the language and best of his understanding.

CONFIDENTIALITY: All the information about you will be kept confidential and limited to me and my research guide Dr. Vivek Chouhan and will not be shared with anyone who is not part of this study. We also request you to use the data for presentation and publication purpose.

Questionnaire

Northwick park neck pain questionnaire

Name..... Date.....

This questionnaire has been designed to give information as to how your neck pain has affected your ability to manage in everyday life .Please answer every section and mark in each section only.

One box which applies to you .We realize you may consider that two of the statement in any one section relate to you, but please just the mark the box which most closely describe your problem.

1] NECK PAIN INTENSITY

- I have no pain at the moment.
- The pain is mild at the moment.
- The pain is moderate at the moment.
- The pain is severe at the moment .
- The pain is worst imaginable at the moment.

2] NECK PAIN AND SLEEPING

- My sleep is never disturbed by pain.
- My sleep is occasionally disturbed by pain.
- My sleep is regularly disturbed by pain.
- Because of pain I have less than 5 hours sleep in total.
- Because of pain I have less than 2 hours sleep in total.

3] PIN & NEEDLES OR NUMBNESS IN THE ARMS AT NIGHT

- I have no pin and needles or numbness at night.
- I have occasional pin and needles or numbness at night.
- My sleep is regularly disturbed by pin and needles or numbness .
- Because of pin and needles or numbness I have less than 5 hours sleep in total.
- Because of pin and needles or numbness I have less than 2 hours sleep in total

4] DURATION OF SYMPTOMS

- My neck and arms feel normal all day
- I have symptoms in my neck and arm on walking, which last less than 1 hour
- Symptoms are present on and off for a total period of 1-4 hours
- Symptoms are present on and off for a total period of more than 4 hours
- Symptomts are present continuously all over day.

5] CARRYING

- I can carry heavy objects without extra pain.
- I can carry heavy objects, but they give me extra pain.
- Pain prevents me from carrying heavy objects, but I can manage medium Objects.
- I can only lift light weight objects.
- I cannot lift anything at all

6] READING & WATCHING TV

- I can do this as long as I wish with no problems.
- I can do this as long as I wish, if I'm in suitable.
- I can do this as long as I wish, but it causes extra pain.
- Pain causes me to stop this sooner than I would like.
- pain prevents me from doing this all activities.

7] WORKING/HOUSEWORK etc.

- I can do my usual work without extra pain .
- I can do my usual work, but it gives me extra pain.
- Pain prevents me from doing my usual work for more than half the usual time.
- Pain prevents me from doing my usual work for more than quarter the usual time.
- Pain prevents me working at all.

8] SOCIAL ACTIVITIES

- My social life is normal and causes me no extra pain.
- My social life is normal but increases the degree of pain.
- Pain has restricted my social life, but I am still able to go out.
- Pain has restricted my social life to the home.
- I have no social life because of pain.

9.] DRIVING (IF APPLICABLE)

- I can drive whenever necessary without discomfort.
- I can drive whenever necessary, but with discomfort.
- Neck pain or stiffness limits my driving occasionally.
- Neck pain or stiffness limits my driving frequently.
- I cannot drive at all due to neck pain or symptoms.

10] COMPARED WITH THE LAST TIME YOU ANSWERED THIS QUESTIONNAIRE, IS YOUR NECK PAIN

- Much better Slightly better
- The same
- Slightly worse Much worse

Comments.....

If all nine sections are completed the NPQ percentage score is calculated as: Total score ____/36 x 100%.

If one section (e.g. driving) is not applicable, the score is calculated as: Total scored ____/32 x 100%.

Note: Each question is scored between 0-4 and summated.

Shoulder Pain and Disability Index (SPADI)

Source: Roach KE, Budiman-Mak E, Songsiridej N, Lertratanakul Y. Development of a shoulder pain and disability index. Arthritis Care Res. 1991 Dec;4(4):143-9.

The Shoulder Pain and Disability Index (SPADI) is a self-administered questionnaire that consists of two dimensions, one for pain and the other for functional activities. The pain dimension consists of five questions regarding the severity of an individual's pain. Functional activities are assessed with eight questions designed to measure the degree of difficulty an individual has with various activities of daily living that require upper-extremity use. The SPADI takes 5 to 10 minutes for a patient to complete and is the only reliable and valid region-specific measure for the shoulder.

Scoring instructions - To answer the questions, patients place a mark on a 10cm visual analogue scale for each question. Verbal anchors for the pain dimensions are 'no pain at all' and

'worst pain imaginable', and those for the functional activities are 'no difficulty' and 'so difficult it required help'. The scores from both dimensions are averaged to derive a total score.

Interpretation of scores - Total pain score: / 50 x 100 = %
(Note: If a person does not answer all questions divide by the total possible score, eg. if 1 question missed divide by 40)

Total disability score: / 80 x 100 = %
(Note: If a person does not answer all questions divide by the total possible score, eg. if 1 question missed divide by 70)

Total Spadi score: / 130 x 100 = %
(Note: If a person does not answer all questions divide by the total possible score, eg. if 1 question missed divide by 120)

The means of the two subscales are averaged to produce a total score ranging from 0 (best) to 100 (worst). Minimum Detectable Change (90% confidence) = 13 points (Change less than this may be attributable to measurement error) Shoulder Pain and Disability Index (SPADI)

Please place a mark on the line that best represents your experience during the last week attributable to your shoulder problem. Pain scale How severe is your pain? Circle the number that best describes your pain where: 0 = no pain and 10 = the worst pain imaginable.

At its worst?	0	1	2	3	4	5	6	7	8	9	10
When lying on the involved side?	0	1	2	3	4	5	6	7	8	9	10
Reaching for something on a high shelf?	0	1	2	3	4	5	6	7	8	9	10
Touching the back of your neck?	0	1	2	3	4	5	6	7	8	9	10
Pushing with the involved arm?	0	1	2	3	4	5	6	7	8	9	10

Disability scale How much difficulty do you have? Circle the number that best describes your experience where: 0 = no difficulty and 10 = so difficult it requires help.

Washing your hair?	0	1	2	3	4	5	6	7	8	9	10
Washing your back?	0	1	2	3	4	5	6	7	8	9	10
Putting on an undershirt or jumper?	0	1	2	3	4	5	6	7	8	9	10
Putting on a shirt that buttons down the front?	0	1	2	3	4	5	6	7	8	9	10
Putting on your pants?	0	1	2	3	4	5	6	7	8	9	10
Placing an object on a high shelf?	0	1	2	3	4	5	6	7	8	9	10
Carrying a heavy object of 10 pounds (4.5 kilograms)	0	1	2	3	4	5	6	7	8	9	10
Removing something from your back pocket?	0	1	2	3	4	5	6	7	8	9	10

ORTHOPAEDICS ASSESSMENT

Date: Name:

Age:

Gender:

Occupation:

Address:

Chief Complaint:

History:

Present History

- Allowed to narrate history
- Date of onset of symptoms
- Mechanism of injury
- Mode of onset
- Condition – Improved, Stationary, Deteriorated
- Muscular weakness

Pain History

- Duration of symptoms

- Type of pain
- Aggravating and Relieving factors

Past History

- Any history of Tuberculosis
- Bronchial Asthma
- Blood Pressure
- Diabetes
- Cardiac Problems
- Enquiry made for any accidental injury

Family History

- Hereditary
- Consanguinity

Personal History

- Cigarettes – Number/day how long?
- Alcoholic – Amount/day duration

Socio-economic History

Medical History

- Present medication patient is on

On Observation:

- General Condition of patient – Poor, Good, Fair built
- Wasting
- Oedema
- Any bandages, Scars – Area Extent
- Attitude of the Limbs – Supine, Sitting, Standing

Type of gait

- Bony contours
- Deformities

On Palpation:

- Tenderness
- Grading

- 1: Patient complains of pain
- 2: Patient complains of pain & winces
- 3: Patient winces & withdraws
- 4: Patient will not allow palpation of the joint

- D/F tissue tension and texture
- Temperature variation of skin
- Spasm
- Type of skin – Dry or Excessive moisture
- Scar – Adherent / Non Adherent
- Swelling
- Comes on soon after injury – **Blood**
- Comes on after 8 to 24 hours – **Synovial**
- Boggy, spongy feeling – **Synovial**
- Harder, tense feeling with warmth – **Blood**
- Tough, dry – **Callus**
- Leathery thickening – **Chronic**
- Soft fluctuating – **Acute**
- Hard – **Bone**
- Thick, slow-moving – **Pitting oedema**

Creptus, Abnormal sounds

On Examination:

Vital Signs Motor, Assessment

Range of Motion (ROM)

Active - When and where pain starts

- Whether movement increases pain
- Pattern of movement
- Trick movements Passive
- When and where pain starts
- Whether movement increases pain

- Pattern of movement
- D/F between range of motion available

End Feel

Normal - Bone to Bone
Soft Tissue Approximation
Tissue Stretch

Abnormal - Early Muscle Spasm

- Late Muscle Spasm
- Hard Capsular
- Soft Capsular
- Bone to Bone
- Empty
- Springy Block

Capsular Patterns
Manual Muscle Testing

MRC Grading

Resisted Isometrics

- On contraction causes pain and, if it does, pain's intensity & quality
- Strength of contraction
- Type of contraction causing problem (concentric, isometric, eccentric)

Joint movements

- Loose packed position
- Close packed position

Sensory Assessment

Superficial Sensations

- Pain, Temperature, Light touch, Pressure
- Deep Sensations
- Movement sense, Position sense
- Combined Sensations
- Stereognosis, Tactile Localization, Two Point Discrimination, Grapesthesia

MRC Grading

- S0 : No sensation
- S1 : Deep Proprioception
- S2 : Skin touch, pain thermal sensation
- S3 : S2 with accurate localization but deficient stereognosis, cold sensitivity, hypersensitivity often present
- S3+ : Object and texture recognition but not normal sensation, good but not normal two point discrimination
- S4 : Normal sensations

Reflexes

Reflexes Superficial

- Corneal, Abdominal, Plantar, Cremasteric Deep Reflexes
- Biceps, Triceps, Babinski Reflex, Knee Jerk, Ankle Jerk Clonus

Gradin

- Absent
- 1 : Diminished
- 2 : Normal
- 3 : Brisk
- 4 : Exaggerated

- Dermatomes & Myotomes
- Limb Length Discrepancies

- Apparent Length
- True Length
- Special Test
- Functiona Assessment
- Ambulation- Giant or Wheel Chair
- Independent or Dependent
- Transfers
- Gait Assessment

- Type of gait
- Stride length
- Step length
- VAS / NRS Scale
- ADL

Investigations:

Clinical Impression:

Differential Diagnosis:

Findings to make Final Impression:

Final Diagnosis:

Goals:

- Short Term
- Long Term

Treatment Plan

- Electric Modalities
- Manipulation
- Exercise
- Splints & Assistive Devices

Home Programme:

SPECIAL ORTHOPAEDIC TESTS

- Shoulder:
 - Speed - Bicipital Tendinitis (Biceps or Straight Arm Test)
 - Yergason's Test - Bicipital Tendinitis
 - Lippman's Test - Bicipital Tendinitis
 - Supraspinatus Test - Supraspinatus Tear (Empty Can Test)
 - Drop Arm Test (Codman's Test) - Rotator Complex
 - Neer Impingement Test - Supraspinatus & Biceps Tendon
 - Roos Test - Thoracic Outlet Syndrome
 - Adson Test - Thoracic Outlet Syndrome
 - Allen's Test - Thoracic Outlet Syndrome
 - Upper Limb Tension Test (ULTT)
 - ULTT 1 - Median nerve & anterior interosseous nerve
 - ULTT 2 - C5, 6, 7, Median nerve, Musculocutaneous nerve & axillary nerve
 - ULTT 3 - Radial nerve
 - ULTT 4 - C8, T1, Ulnar nerve
 - Apprehension Test - Anterior Shoulder Dislocation
 - Rockwood Test - Anterior Shoulder Instability
 - Dugas Test - Anterior Shoulder Dislocation
 - Posterior Apprehension Test - Posterior Shoulder Dislocation
 - Push Pull Test - Posterior Shoulder Dislocation
 - Sulcus Test - Inferior Shoulder Instability
 - Clunk Test - Labral Tear

Elbow:

- Ligamentous Instability Tests - Lateral & Medial Collateral Ligaments
- Cozen's Test - Lateral Epicondylitis
- Mill's Test - Lateral Epicondylitis
- Golfer's Elbow Test - Medial Epicondylitis
- Wartenberg's Sign - Ulnar Neuropathy
- Elbow Flexion Test - Cubital Syndrome
- Pronator Teres Test - Pronator Teres Syndrome

Forearm, Wrist & Hand:

- Finketsein's Test - Abductor Pollicis Longus & Extensor Pollicis Longus Tenosynovitis
- Sweater Finger Test - Ruptured Flexor Digitorum Profundus
- Bunnel-Litter Test - Tight Intrinsic
- Phalen's Test - Carpal Tunnel Syndrome
- Reverse Phalen's Test - Carpal Tunnel Syndrome
- Froment's Sign - Paralysis of Adductor Pollicis Longus

Pelvis:

- Approximation Test - Possible SI Lesion or Sprain Posterior SI Ligaments

- Gapping Test - Sprain Anterior SI Ligaments
- Sacroiliac Rocking Test (SI Strain)- Sacrotuberous Ligaments
- SLR (Lascgucs Test) - SI Problems
- Gaenslen's Test - I/P SI Lesion or Hip Pathology or Lumbar Pathology
- Prone Knee Bend Test - For D/F Diagnosis
- Yeoman's Test

Hip:

- Patrick's Test (FABER or Figure Four Test) - Hip Joint?
- Stinchfield Test - Hip Joint Pathology
- Thomas Test - Hip Flexion Contracture
- Rectus Femoris Contracture Test - For Rectus Femoris
- Ober's Test - TFL Contracture
- Piriformis Test - Piriformis Syndrome

Knee:

- Valgus Stress Test - Medial Collateral Ligament
- Varus Stress Test - Lateral Collateral Ligament
- Lachman Test - Anterior Cruciate Ligament
- Anterior Drawer Sign - Anterior Cruciate Ligament
- Posterior Drawer Sign - Posterior Cruciate Ligament
- McMurray Test - Meniscal Tear
- Apley's Test - Meniscal or Ligamentous?
- Bounce Home Test - Meniscal Injury
- Mediopatellar Plica Test - Mediopatellar Plica
- Fluctuation Test - Swelling
- Patellar Tap Test - Swelling
- Clarke's Sign - Patellofemoral Dysfunction
- McConnell Test - Chondromalacia Patella
- Q-Angle or Patellofemoral Angle - Patellofemoral Dysfunction
- Fairbank's Apprehension Test - Dislocation of Patella

Ankle:

- Anterior Drawer Test - Anterior Talofibular Ligament Injury
- Talar Tilt - Calcaneofibular Ligament
- Thompson's Test - Achilles Tendon Rupture

Cervical Spine:

- Foraminal Compression (Sparling's Test) - Anterior Talofibular Ligament Injury
- Talar Tilt - Calcaneofibular Ligament
- Thompson's Test - Achilles Tendon Rupture

Cervical Spine:

- Foraminal Compression (Sparling's Test) - Cervical Radiculitis
- ULTT's - D/F Diagnosis
- Shoulder Depression Test & Abduction Test - Compression of nerve roots or Brachial Plexus Lesion
- Jackson's Compression Test - Pressure on nerve root
- Valsalva Tests - Herniated disc / Tumour / Osteophyte
- Vertebral Artery Test (Cervical Quadrant Test) - Compression of Vertebral Artery

Thoracic Spine:

- Slump Test - Impingement of Dura & Spinal Cord / Nerve Roots

Lumbar Spine:

- Slump Test - For Neuromeningeal Tract
- SLR (Basic), 2, 3, 4, Crossed SLR - Sciatic, Tibial, Sural, Common Peroneal, Disc Prolapse
- Valsalva Maneuver - Increased Intrathecal Pressure
- Schober's Test - Measure Flexion of Lumbar Spine
- Stoop Test - Neurogenic Intermittent Claudication

Tests for Malingering:

- Hoover Test - Malingering for Back Pain
- Burns Test - Malingering for Back Pain

Sr.	Neck Pain Intensity	Neck Pain And Sleeping	Pin & Needles Or Numbness In The Arms At Night	Duration Of Symptoms	Carrying	Reading & Watching TV	Working /house Work Etc.	Social Activities	Driving (if Aplicable)	Compared With The Last Time You Answered This Questionnaire, Is Your Neck Pain	Result %
1	4	3	2	3	3	3	2	1	0	3	66.6
2	2	2	1	3	1	1	1	2	0	2	41.6
3	3	3	0	2	2	1	2	1	0	1	41.6
4	0	1	0	3	0	0	0	1	1	1	19.9
5	1	0	0	1	1	1	2	1	1	1	25
6	2	1	1	3	0	1	1	1	1	2	39.3
7	1	0	1	3	0	1	1	1	0	1	28.12
8	1	0	1	2	0	1	1	2	0	1	25
9	3	2	1	3	2	1	2	1	0	2	47.2
10	2	1	1	4	1	1	1	1	1	2	41.6
11	2	0	1	3	1	2	1	1	0	2	36.1
12	3	2	1	2	2	2	2	2	1	2	52.77
13	1	0	1	3	0	2	1	2	0	1	30.5
14	4	3	2	4	3	2	3	2	0	3	81.25
15	0	0	1	1	0	2	0	1	2	1	22.22
16	2	0	1	2	1	2	1	1	0	2	33.3
17	3	1	1	4	2	1	2	1	0	2	47.2
18	1	0	1	1	0	1	0	1	0	1	16.6
19	4	4	3	4	3	2	3	1	1	3	77.7
20	0	1	0	1	0	1	0	1	0	1	15.62
21	0	1	0	1	0	1	0	1	0	1	13.8
22	3	2	3	4	1	3	2	1	0	2	65.62
23	4	3	3	4	2	1	3	2	1	3	79.2
24	2	1	1	4	1	2	1	1	0	2	41.6
25	3	1	1	3	2	1	2	1	1	2	47.2
26	2	0	1	2	0	1	1	1	0	2	27.1
27	2	0	1	3	0	2	1	1	1	2	36.5
28	3	2	1	2	2	1	2	1	1	2	47.2
29	2	1	0	4	2	0	1	1	1	2	38.8
30	2	0	0	4	2	0	1	1	1	2	36.1
31	1	0	0	4	0	1	0	1	1	1	25
32	1	0	0	0	1	0	0	1	0	1	11.11
33	3	2	1	0	4	2	2	1	0	2	47.3
34	1	0	0	4	1	1	0	1	1	1	27.7
35	3	1	1	2	3	1	3	2	0	2	52.77
36	4	3	2	4	4	2	3	1	0	3	72.2
37	2	0	0	2	1	1	1	1	0	2	27.7
38	2	1	1	3	2	3	1	1	1	2	47.2
39	1	0	0	0	0	1	0	1	1	1	19.8
40	3	2	0	4	2	2	2	1	1	2	52.77
41	4	3	4	4	3	2	3	2	0	3	77.2
42	2	1	0	1	1	2	1	0	0	1	27.7
43	1	0	2	0	0	1	0	0	0	1	13.8
44	2	1	0	3	2	1	1	0	0	2	33.3
45	0	1	1	0	1	1	0	0	1	1	16.6
46	2	1	2	3	0	2	1	1	2	2	44.44
47	1	1	0	1	0	0	1	1	1	2	22.2
48	1	0	3	2	3	2	0	0	1	1	36.1
49	2	0	0	4	4	2	2	1	1	2	50
50	4	3	4	4	3	3	3	1	1	3	77
51	2	0	4	4	2	3	1	1	2	2	58.3

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CHAPTER - 6

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