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Prevelence Of Cervical Radiculopathy In Housewives

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Abstract –

Introduction cervical radiculopathy occurs when a nerve root in the spine is compressed or impeded, leading to pain that can spread beyond the neck and into the arm, chest, shoulders, and upper back. Common signs of impingement include muscle weakness and impaired deep tendon reflexes..

Methods in this study selected 100 housewives who full filled the inclusion and exclusion criteria. Subjects were evaluated at the beginning for cervical radiculopathy by using compression test and NRPS scale. Housewives female were given survey forms the cervical radiculopathy impact scale (CRIS) questionnaire scale fill according to their present condition.

results the study shows that the prevalence rate of cervical radiculopathy in housewife by cervical radiculopathy impact scale (CRIS). UK and Dutch score, categorized by NPRS category of low and severe pain and accompanied by P values that indicate statistical significance. The mean UK score of samples with low pain was 0.890 and severe pain was 0.633 with a significant p value .000 indicating a significant difference in UK score in samples with low and severe pain.

Conclusion In this present survey show the 39% of housewife have no symptoms of cervical radiculopathy and 69% housewife have symptoms of cervical radiculopathy.

Keywords': **cervical radiculopathy, degenerative changes, cervical disc herniation, bone hyperplasia.**

INTRODUCTION-

Cervical radiculopathy, which is a normal result of degenerative changes such as cervical disc herniation and bone hyperplasia, is characterized by neck pain and radiating pain from the neck to the shoulder.(1) Cervical radiculopathy is disease process marked by nerve compression from herniated disc material or arthritic bone spurs. This impingement typically produces neck and radiating arm pain or numbness, sensory deficits, or motor dysfunction in the neck and upper extremities. (2) The clinical diagnosis of CR relies mainly on the out come of history taking and a physical examination in which diminished muscle tendon reflexes sensory disturbances , or motor weakness with dermatomal / myotomal distribution can be found. (3)

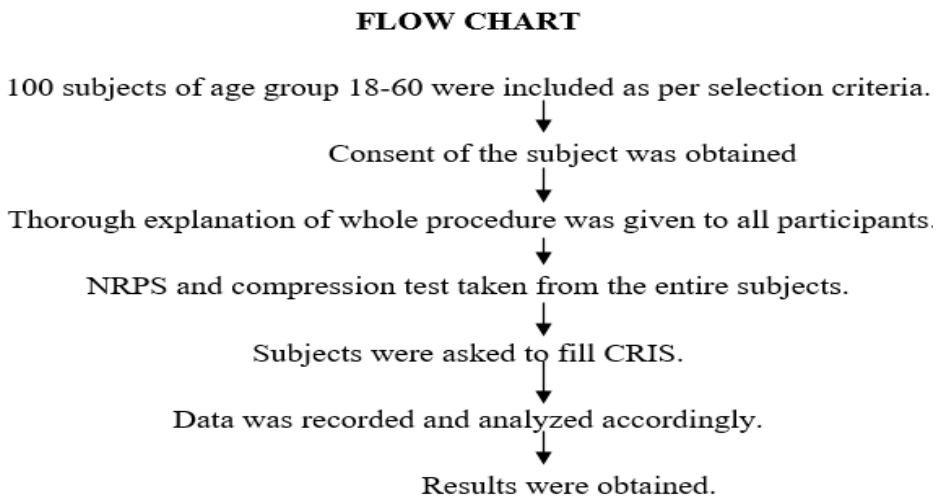
Neck pain is widespread and causes significant pain and disability.workers with a history or neck pain account for up to 40% of work absenteeism. In the setting of cervical radiculopathy, because the nerve root of a spinal nerve is compressed or otherwise impaired,the pain and symptomatology can spread far from the neck and radiates to arm,neck chest upper back and/or shoulders. Often muscle weakness and impaired deep tendon reflexes are noted along the course of the spinal nerve.(5)

The numeric rating scale is a pain screening tool, commonly used to assess pain severity at that moment in time using a 0 - 10 scale, with zero meaning "no pain'' and 10 meaning "the worst pain''(4). Generally, this impingement causes sensory impairments, motor deficits, and discomfort or numbness in the neck and upper extremities. The abnormality that affects the nerve root resulting in symptoms known as cervical radiculopathy. Parkinson originally characterized the condition in 1817 although he concluded that it was a rheumatic disease of the deltoid muscle. Cervical radiculopathy has an annual incidence of 83.2/100,000, with men experiencing a greater incidence of 107.3/100,000 than women 63.5/100,000. The most prevalent age to be affected is between 50 and 60 years old, and the incidence is 3.5/1000. For the younger population, disc herniation is most frequently responsible for cervical radiculopathy, which makes up 20-25% of all cases. The osteophyte formation in the uncovertebral- and/or facet joints is associated with decreased disc height in older patients and pleated ligaments in older patients. The C6 and C7 nerve roots are the two that are most frequently damaged. Peripheral nerve entrapment such as carpal tunnel syndrome, neuropathy, neuritis, impingement of the shoulder and ischemic heart disease. According to the logistic regression analysis, the female gender was positively related to LBP (odds ratio [OR]: 1.692, p 0.02) and negatively associated with LBP (p 0.003). They concluded that 64.98% of primary school teachers in rural Western Kenya had LBP, with the majority of them claiming just mild impairment. (7)
The pathoanatomy of cervical radiculopathy involves compression of the cervical nerve root [10]. Nerve root impingement can be secondary to an acute disc herniation, or also from chronic spondylosis and/or instability with impingement from uncovertebral osteophytes, hypertrophied facet joints, and decreased disc height. (6) Hypertrophy of the uncinate joint, in particular, leads to foraminal stenosis and cervical radiculopathy. It is suspected that some individuals have a genetic predisposition to disc degeneration although only modest correlations have been found in genome wide association studies [11].

METHODOLOGY-

it is a one time survey and random sampling .The total number of subjects in the survey is n=100 with the inclusion criteria of aged between 25-40 years, at least two month existing complaints of radicular sensations in the arm, Compression test, Housewives while the exclusion criteria are Paresis of MRC<4 Mainly sign of myelopathy any form of cervical spine surgery in the past instability of the cervical spinal column requiring stabilization, pregnancy, Patient unable to cooperate. The data were selected according to inclusion and exclusion criteria. The study duration of the survey is 6 months. Data were collected from outpatient department of Santosh College of physiotherapy, bansal physiotherapy clinic at (gaur city).
Procedure- A signed consent was taken from patients and permission was also obtained from the head of the hospital where the study was conducted. Study included 100 patients with cervical radiculopathy who full filled the inclusion and exclusion criteria. Subjects were evaluated at the beginning for cervical radiculopathy by using compression test and NRPS scale. A numerical rating scale requires the patient to rate their pain on a defined scale. For example, 0 to 10 where 0 is no pain and 10 is the worst pain. Housewives female were given survey forms the cervical radiculopathy impact scale (CRIS) questionnaire scale fill according to their present condition. The cervical radiculopathy impact scale consists of 21 items divided over three subscales: (1) symptoms, (2) energy and postures, and (3) actions and activities.

FLOW CHART



RESULTS:

In this study 100 housewives female were selected according to inclusion and exclusion criteria. To fill the Cervical radiculopathy impact scale (CRIS) according to their symptoms. In Table1 There were total 100 female samples of mean age 32.21±4.191 years. It was found that the mean of NPRS was 3.42±2.161, and the UK score was 0.733±0.181 and Dutch score was 0.852±0.106.

TABLE-1 Descriptive statistics of age, NPRS, UK and Dutch score

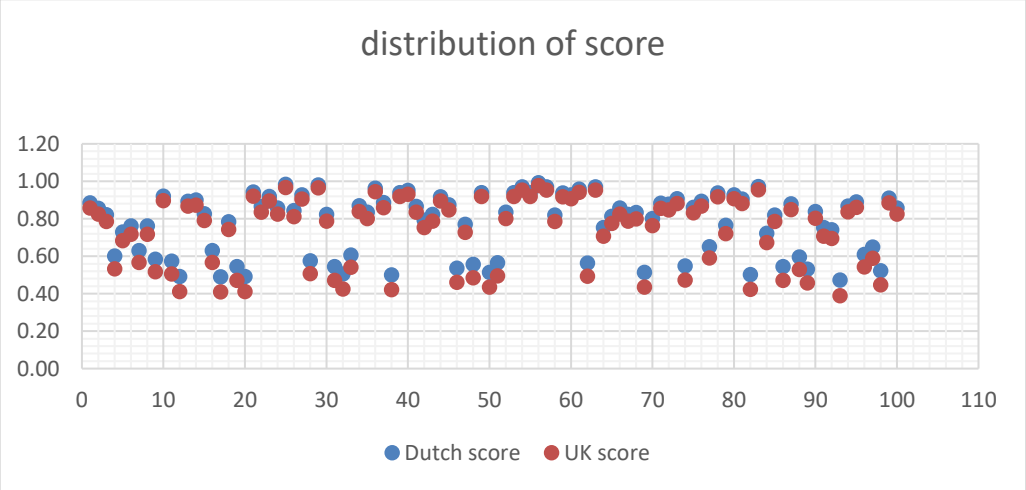
	age	NPRS(10)	UK score	Dutch score
Mean	32.21	3.42	.733	.852
Std. Error of Mean	.419	.216	.018	.010
Std. Deviation	4.191	2.161	.181	.106

TABLE-2

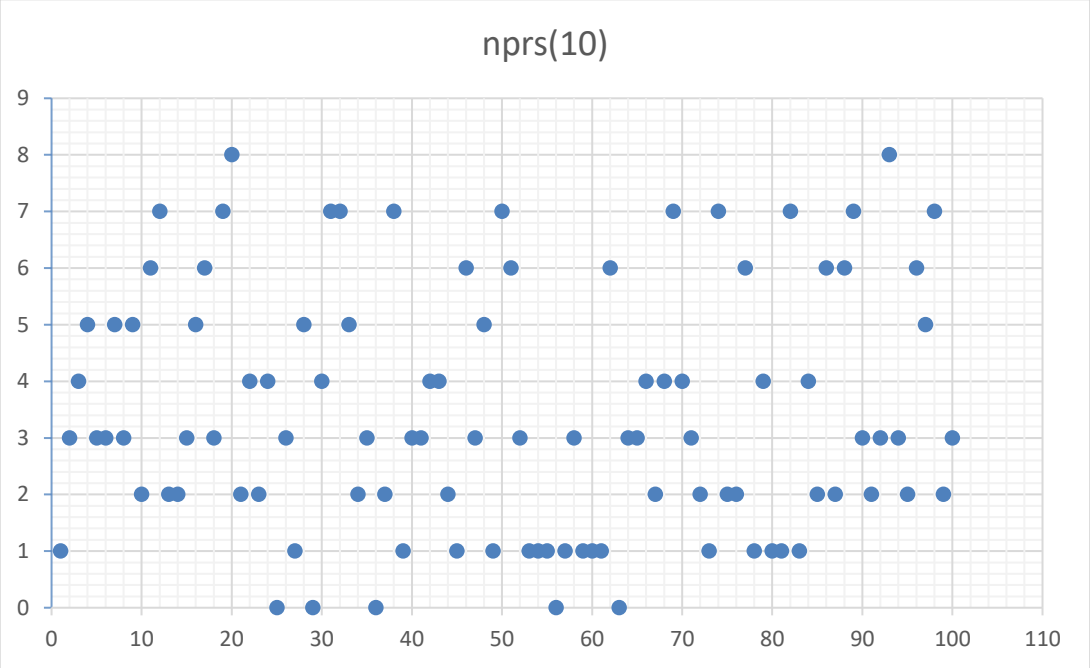
	NPRS CATEGORY	N	Mean	Std. Deviation	Std. Error Mean	p-value
UK score	Low (nprs<3)	39	.890	.055	.008	.000
	Severe (nprs≥3)	61	.633	.160	.020	
Dutch score	Low(nprs<3)	39	.943	.036	.005	.000
	Severe(nprs≥3)	61	.794	.094	.012	
age	Low(nprs<3)	39	31.33	3.862	.618	.087
	Severe(nprs≥3)	61	32.77	4.326	.554	

The Table 2 summarizes data on age, UK and Dutch score, categorized by NPRS category of low and severe pain and accompanied by P values that indicate statistical significance. The mean UK score of samples with low pain was 0.890 and severe pain was 0.633 with a significant p value .000 indicating a significant difference in UK score in samples with low and severe pain. The mean Dutch score of samples with low pain was 0.943 and severe pain was 0.794 with a significant p value .000 indicating a significant difference in Dutch score in samples with low and severe pain. The mean age of low NPRS was 31.33 and sever pain was 32.77 and the low NPRS standard deviations were 3.862 and sever NPRS standard deviation was 4.326.

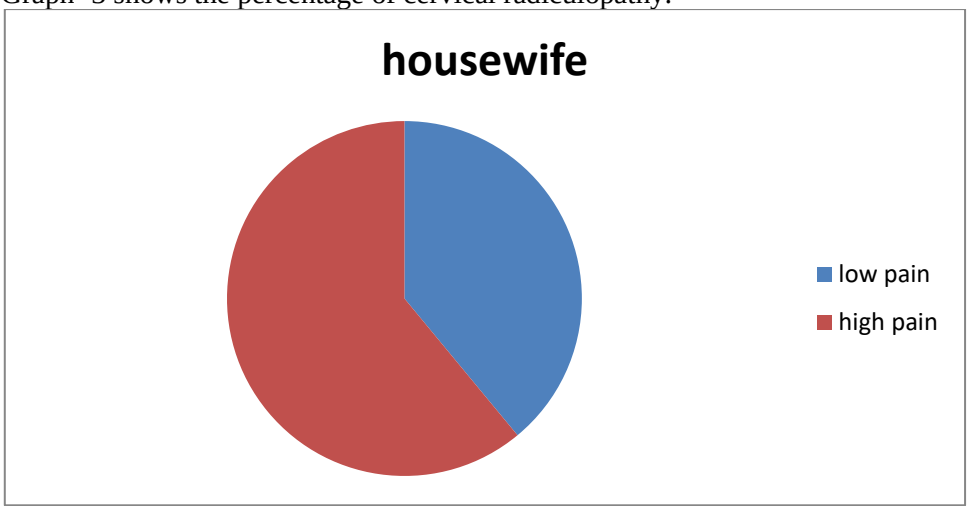
Graph-1 Show the distribution of Dutch and UK score



GRAPH-2 Show the value of NPRS scale



Graph -3 shows the percentage of cervical radiculopathy.



DISCUSSION-

In this present study show the 61% housewife have the symptoms of cervical radiculopathy and 39% housewife have no symptoms of cervical radiculopathy. Measure by the cervical radiculopathy impact scale (CRIS). In this cervical radiculopathy impact scale consisting of 3 subscales with in total 21 items. Subscale divided according to the symptoms. In subscale 1st symptoms including nine items covering pain in the neck, shoulder, and arm/ hand /fingers, as well as items on, tingling, loss of strength, and stiffness in the neck. Subscale 2nd energy and postures (6 items) and subscale 3rd actions and activities (6 items) cover items on functional limitations due to pain and symptoms. Cervical radiculopathy impact scale (CRIS) calculating by the UK Score and Dutch score. The total UK score mean is .733 and the total Dutch score is .852 and the UK Score standard deviation is .181 and Dutch score standard deviation is .106. (Table 1st). And the pain intensity is measure by the numerical pain rating scale. The total mean of numerical pain rating scale is 3.42 and standard deviation is 2.161. According to the pain 39 sample UK SCORE mean of low pain (NPRS less the 3) was 0.89 and standard deviation is .008. A P Value of UK score is less the 0.05. And 61 sample the UK score sever pain (NPRS more the 3) mean was .633 and standard deviation was .160. The Dutch score low pain (NPRS<3) mean was .943 and standard deviation was .005 and sever pain (NPRS>3) mean was 0.794 and standard deviation was .012.and A p value of Dutch score is less the 0.05. According to the analysis the 39% have low pain symptoms and 61% have sever pain symptoms.

Cervical radiculopathy involves compression of the cervical nerve. Compression of the cervical nerve root may occur due to herniation of disk material or bony osteophytes that impinge on the cervical nerve root. Impingement of the nerve root by disc material likely leads to nerve damage both by mechanical and chemical pathways. Mechanically compression of the nerve likely leads to localized ischemia and nerve damage. Chemical cascade triggered by the nucleus pulposus on the nerve. Disc degeneration and the local ischemia triggers a pro-inflammatory cascade mediated by tumor necrosis factor-alpha (TNF-α), interleukin factor-6 (IL-6), and matrix metalloproteinases (MMPs). This cascade leads to further sensitization and increased pain in the area. Cervical spondylosis refers to the degenerative changes that occur in the cervical spine with age. In these cases, the breakdown of the disc with age leads to decreased disc height and foraminal narrowing. The decreased disc height then results in increased loads placed through the intervertebral joints of Luschka (uncinate joints) as well as the vertebral body. This, in turn, leads to bony hypertrophy. Hypertrophy of the uncinate joint, in particular, leads to foraminal stenosis and cervical radiculopathy. (8). Disc herniation is more commonly associated with lumbar radiculopathy than with cervical radiculopathy. Disc herniation is responsible for only 21.9% of cervical radiculopathy cases. Disc degeneration with age leads to decreased disc height and foraminal narrowing. Decreased disc height causes the increased loads to the vertebral body and the intervertebral joints of Luschka (uncovertebral joints). This leads to osteophyte formation and bony hypertrophy. Hypertrophy of the uncovertebral and facet joints can cause foraminal stenosis and cervical radiculopathy. Cervical radiculopathy is less commonly caused by tumors, trauma, synovial cysts, meningeal cysts, dural arteriovenous fistulae, or tortuous vertebral arteries. It mainly presents with neck and arm pain, sensory loss, motor dysfunction, and reflex changes according to the dermatomal distribution.(9).

Conclusion:

The present survey show that 39% of housewife have no symptoms of cervical radiculopathy and 61% housewife have symptoms of cervical radiculopathy.

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