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Research Article

**FREQUENCY OF CHRONIC PAIN WITH ASSOCIATION OF
DEPRESSION IN ELDERLY POPULATION.**¹Dr Muhammad Usman Nawaz,²Dr Bakhtawar Huma Khan,³Dr Misbah Nawaz,
⁴Dr Ubaid Latif¹MBBS, Services Institute of Medical Sciences, Lahore.²MBBS, Fatima Jinnah Medical College, Lahore.³MBBS, Fatima Jinnah Medical University, Lahore.⁴MO, Friends Welfare Trust Hospital.**Article Received:** December 2019 **Accepted:** January 2020 **Published:** February 2020**Abstract:**

The most challenging condition to treat is neuropathic pain which is chronic in nature. Chronic neuropathy is commonly linked with pathophysiological mechanism but the pain has also seen in individuals who are having no neurological lesion or disease. Patients who are suffering from co-morbidities are likely more prone to have chronic neuropathic pain which consequences have negative impact on their quality of life. With the comparison of general population, patients who are suffering from neuropathic pain have decreased quality of life. Majority of the participants were showing the symptoms of chronic neuropathic pain which was more prevalent among females than males. There was remarkable correlation of anxiety and stress. In order to enhance the quality of life there must be strategies to reduce the occurrence of chronic neuropathic pain in elder population. More detailed research work is required to evaluate the contributing factors.

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INTRODUCTION:

International study of pain has described the definition of Neuropathic Pain as "pain caused by a lesion or disease of the somatosensory system". One of the major complains of patients to seek consultations from the doctors is known as Pain [1]. The most challenging condition to treat is neuropathic pain which is chronic in nature. Chronic neuropathy is commonly linked with pathophysiological mechanism but the pain has also seen in individuals who are having no neurological lesion or disease. Patients who are suffering from co-morbidities are likely more prone to have chronic neuropathic pain which consequences have negative impact on their quality of life. With the comparison of general population, patients who are suffering from neuropathic pain have decreased quality of life [2]. After musculoskeletal pain, neuropathic pain has been considered as the second most prevalent cause of chronic pain. The different factors such as environmental, physical and pathogenically factors can aggravate and continue the chronic pain for long term which can further results in disability adaptation and abnormal behavior [3]. Patients who are left with untreated or unmanaged pain also suffer with neurocognitive disorders which include anxiety, depression, fear and anger and other multiple issues. Chronic pain suffering patients uses 15 times health care services more than those who are not having chronic pain [4]. In the United State more than 50 million medically related absenteeism in an organization just because of pain [5].

The World Health Organization defines depression as "A common mental disorder, characterized by persistent sadness and loss of interest in activities that you normally enjoy, accompanied by an inability to carry out daily activities, for at least two weeks. In addition, people with depression normally have several of the following: loss of energy; a change in appetite; sleeping more or less; anxiety; reduced concentration; indecisiveness; restlessness; feelings of worthlessness, guilt or hopelessness and thoughts of self-harm or suicide".⁶ Depression is very alarming situation which affects the individual's health which include family life social life and general habits. With regard to patients well-being the the impact of depression is compared with other medical conditions such as diabetes.

In very severe cases, the depressed person can also have symptoms of psychosis that includes delusions or hallucinations to the problem [7].

With the increasing age, sufferings of the elderly generation with regard of comorbid conditions such as chronic pain and depression increases. In many

clinical settings the most common unrecognized or misdiagnosed pain is neuropathic pain which is also unable to differentiate in daily practice. Current time is to focus on the pain in the elder population. Globally chronic neuropathic pain has extreme negative effects on the patients additionally it also has severe burden on economic health state. A study conducted on Asian population has reported that there is 3.2% prevalence of chronic neuropathic pain among them. A comprehensive review on the prevalence of chronic neuropathic pain can guide about its awareness and existence. It can encourage about the proper identification and management of the pain.

The aim of the study was to analyze the frequency of chronic pain and its association with depression among elder population.

The results may help in evaluating the strategies to manage the patients suffering from chronic conditions among elder population.

Methodology

It was a descriptive cross sectional study which consisted of 309 participants.

The study was conducted over a period of six months.

Participants who met the inclusion criteria were included in the study. Inclusion criteria was population over age 60 years and having pain for more than 6 months, whereas those who were having intermittent pain, malignancy and other psychological issues were excluded from the study. Total 400 participants were included in the study who was meeting the inclusion criteria but 32 did not fulfill the inclusion criteria while 24 patients refused to participate. Questionnaires were distributed to the remaining 344 patients, of which 35 patients did not fill their forms properly so they were excluded from the study as well. A written informed consent was given to participants after explaining the purpose of the study. The questionnaires were explained to them in their first language in order to avoid misleading answers and any other confusion. There was 95% confidence of interval and 5% margin of error.

Data was collected directly from the subjects using two standardised questionnaires, which were, DN4 Questionnaire "Douleur Neuropathique 4"⁹ and Urdu Version of DASS Questionnaire "Depression, Anxiety and Stress Scale".¹⁰ DN4 which is also known as Douleur Nueropathic is a clinically administered questionnaire made up of ten items containing the details about the patient's neuropathic pain. 7 items in the questionnaire are about the quality of pain such as painfully cold, burning or electric shocks and the description of

the pain which includes sensation of tingling pins, numbness, itching and needles. Remaining three items were used to evaluate the physical examination of the patient. This scale has been used globally since 2005 as it gives the best and easiest way to diagnose the neuropathic pain.

DASS stands for Depression, Anxiety and Stress Scale which was obtained to evaluate the three negative emotional statuses. In order to acquire the best possible data an Urdu version of DASS was used. Data was analyzed by using SPSS version 20. In the descriptive statistics categorical variables such as gender and occupation were presented as frequency or percentage. Chi Square test was used in order to find out the association of chronic pain with neuropathic characteristics with state of depression in the elderly.

Results

Out of a total of 309 participants, 216 (79.9 %) were male and 93 (20.3%) were female. The mean age of participants was (66 ± 5.8) years. According to the results elder population who were having chronic pain were more depressed as compared to those who were not having chronic pains.

Total number of 163 elderly with chronic neuropathic pain among whom 39 (19.86%) were normal, 25 (13.6%) had mild depression, 60 (39.7%) had moderate depression and 39 (26.7%) suffered from severe depression. Whereas there were 146 elderly with chronic non-neuropathic pain, among them 52 are normal, 22 had mild depression, 46 had moderate and 26 suffered severe depression. Out of 309 participants 91 (24.4%) were normal, 47 (14%) had mild anxiety, 106 (39.1%) had moderate anxiety and 64 (22.1%) were having severe form of anxiety. Only one participant was suffering from extreme anxiety. A study conducted by Kate et al has shown the remarkable relation between anxiety and chronic pain (P=0.048). The current study has revealed that patients who having chronic pains were having higher level of anxiety.

On the other hand, the same chronic pain patients had a high correlation with depression as well.¹¹ Regarding stress, out of total 309 participants 91 (15.9%) were not having any stress, 47 (11.4%) participants had mild stress, 108 (46.1%) had moderate stress and 62 (26.2%) subjects were suffering from severe form of stress. The frequency of depression among the elderly with chronic neuropathic pain was 80.1%, which indicated that 163 subjects out of a total 309 elderly with chronic neuropathic pain were having depression. The frequency of depression among those elderly with chronic non neuropathic pain was 66.4%, which means that 94 subjects out of total 146 elderly were with nonneuropathic pain. The statistics showed

strong association of chronic neuropathic pain with stress as (P=.001). There were 164 elderlies with chronic NP, among them 11 were normal, 18 had mild stress, 75 were with moderate stress, 42 were suffering from severe form of stress. On the other hand, among 125 elderlies with chronic non-neuropathic pain, 32 were normal, 13 were having mild stress, 50 were having moderate stress and 29 were suffering from severe stress. Management of pain

Managing pain is a challenging task to begin with and it is especially difficult in the elderly population, secondary challenges in their pain assessment. With the lack of age- specific scientific evidence, it is often common to extrapolate the data from young adult studies for clinical decision-making in elders¹². There is an increased risk of medicine-associated adverse events from poly-pharmacy, lack of age-appropriate treatment guidelines and protocols, lack of age-appropriate drug safety data, multiple comorbidities, and age-related physiological changes. On the other end, aging is also a very individualized process, and age-related changes are extremely varied among individuals¹³. Pain is an extremely common symptom of aging and its management is a challenging task for any physician, secondary to unique individual physiological states, multiple barriers, and associated comorbidities¹⁴.

Despite the presence of significant limitations, effective and safe pain management is the patient's right. Education among health professionals, age-targeted clinical trials, frequent and detailed pain assessment, utilization of multiple modalities concomitantly, and the development of common guidelines can facilitate the effective delivery of pain control^{15 16}.

CONCLUSION:

Majority of the participants were showing the symptoms of chronic neuropathic pain which was more prevalent among females than males. There was remarkable correlation of anxiety and stress. In order to enhance the quality of life there must be strategies to reduce the occurrence of chronic neuropathic pain in elder population. More detailed research work is required to evaluate the contributing factors.

REFERENCES:

1. Debono DJ, Hoeksema LJ, Hobbs RD. Caring for patients with chronic pain: pearls and pitfalls. *J Am Osteopath Assoc.* 2013; 113:620-7.
2. Doth AH, Hansson PT, Jensen MP, Taylor RS. The burden of neuropathic pain: a systematic review and meta-analysis of health utilities. *Pain.* 2010; 149:338-44.

3. Turk D, Okifuji A. Pain terms and taxonomies of pain. Loeser JD, Turk D, Okifuji A, eds. Bonicas management of pain. Philadelphia: Lippincott Williams & Wilkins, 2001.
4. Becker N, Thomsen AB, Olsen AK, Sjøgren P, Bech P, Eriksen J. Pain epidemiology and health related quality of life in chronic nonmalignant pain patients referred to a Danish multidisciplinary pain center. *Pain*. 1997; 73:393-400.
5. Society AP. Pain assessment and treatment in the managed care environment. *The Case Manager*. 2000;11:50-3.
6. World Health Organization. Depression and other common mental disorders: Global health estimates. [online] 2017 [cited 2018 Jun 12]. Available from:URL: [https://www.who.int/mental health/manageme nt/depression/p revalence_global_health_estimates/en/](https://www.who.int/mental_health/manageme nt/depression/p revalence_global_health_estimates/en/)
7. American Psychiatric Association. Diagnostic and statistical manual of mental disorders (DSM-5). Washington,DC: American Psychiatric Association, 2013.
8. Inoue S, Taguchi T, Yamashita T, Nakamura M, Ushida T. The prevalence and impact of chronic neuropathic pain on daily and social life: A nationwide study in a Japanese population. *Eur J Pain*. 2017;21:727-37.
9. Perez C, Galvez R, Huelbes S, Insausti J, Bouhassira D, Diaz S, et al. Validity and reliability of the Spanish version of the DN4 (Douleur Neuropathique 4 questions) questionnaire for differential diagnosis of pain syndromes associated to a neuropathic or somatic component. *Health and quality of life outcomes*. 2007; 5:66-8.
10. Antony MM, Bieling PJ, Cox BJ, Enns MW, Swinson RP. Psychometric properties of the 42-item and 21-item versions of the Depression Anxiety Stress Scales in clinical groups and a community sample. *Psychological assessment*. 1998;10:176-81.
11. Santos KAdS, Cendoroglo MS, Santos FC. Anxiety disorder in elderly persons with chronic pain: frequency and associations. *Rev Bras Geriatr Gerontol*. 2017; 20:91-8.
12. Wright A, Sluka KA. Nonpharmacological treatments for musculoskeletal pain. *Clin J Pain*. 2001;17(1):33-46. [PubMed] [Google Scholar]
13. Kerns RD, Otis JD, Marcus KS. Cognitive-behavioral therapy for chronic pain in the elderly. *Clin Geriatr Med*. 2001;17(3):503-523. [PubMed] [Google Scholar]
14. American Geriatrics Society Panel on the Pharmacological Management of Persistent Pain in Older Persons. Pharmacological management of persistent pain in older persons. *J Am Geriatr Soc*. 2009;57(8):1331-1346. [PubMed] [Google Scholar]
15. Derby S, Chin J, Portenoy RK. Systemic opioid therapy for chronic cancer pain: practical guidelines for converting drugs and routes of administration. *CNS Drugs*. 1998;9(2)(11):99-109. [Google Scholar]
16. Grond S, Zech D, Schug SA, Lynch J, Lehmann KA. Validation of World Health Organization guidelines for cancer pain relief during the last days and hours of life. *J Pain Symptom Manage*. 1991;6(7):411-422. [PubMed] [Google Scholar]
17. Mason L, Moore RA, Edwards JE, Derry S, McQuay HJ. Topical NSAIDs for chronic musculoskeletal pain: systematic review and meta-analysis. *BMC Musculoskelet Disord*. 2004;5:28. [PMC free article] [PubMed] [Google Scholar]
18. Fine PG, Mahajan G, McPherson ML. Long-acting opioids and short-acting