A Prospective Analysis of Pain Self - Management Practices in Older Adults at Primary Health Centers in Komarapalayam, Namakkal District

Jerin Mathew M

Department of Pharmacy Practice, SSM College of Pharmacy, Jambai, Erode, Tamil Nadu, India. Pin code: 638311
Affiliated to The Tamil Nadu Dr. M. G. R. Medical University, Tamil Nadu
Email: *mjerinmathew0404[at]gmail.com*

Abstract: *Background: Chronic pain is a common and frequently disabling problem in older adults. Clinical guidelines emphasize the need to use multimodal therapies to manage persistent pain in this population. Pain self - management training is a multimodal therapy that has been found to be effective in older adults. Materials and Methods: The cross sectional survey was carried out in people who were visited primary health centre during the study period and 250 responses were collected and documented. The data collected were analysed by descriptive statistics. The pain intensity was measured by usin wong – baker faces pain rating scale. Results: The study found that, most of the participants were preferred Passive strategies for relieving of pain when compared to active strategies. The major passive strategies reported were rest (84.4%), stress relieving activities (15.2%), massages (9.2%), Heat and cold compression (6.4%) respectively. while the most commonly reported active strategy was exercising like walking (4.8%) and breathing exercises (4%). Using passive strategies increased the risk of having high levels of pain - related disability and more pain - related health care visits. Conclusion: The study concluded that, since more than half of the subjects were preferred passive strategies to reduce the pain, it is essential to advocate more attention to the community or population for improving the awareness on the importance of active self management of pain.*

Keywords: Chronic Pain, Multimodal therapies, Passive strategy, Active strategy

1. Introduction

The majority of people struggle to survive in society and face numerous challenges. They also deal with a variety of illnesses and symptoms. One of the most common reasons patients seek medical attention is pain.5People experience pain as an uncomfortable feeling, and some patients become irritated by this problem. Pain is a common symptom of a wide range of illnesses and typically indicates the presence of tissue damage. Tissues can either become irritated or experience extensive damage due to the condition.

Although pain is unpleasant, it can be a helpful tool for healing, as it compels the sufferer to rest the injured area and seek medical attention. In some cases, the body may not have functional pain receptors to feel the agony. The central and peripheral nervous systems can also produce pain without the involvement of receptors. This type of pain is always pathological, occurring when the nervous system is damaged. Pathological pain differs from physiological pain in both its nature and clinical manifestation. It is important to differentiate between receptor pain (nociceptive), physiological pain, and non - receptor pain, which is pathological and can arise from central or peripheral nervous system damage.

Pain is generally divided into two types: nociceptive and neuropathic. Pain duration is frequently used to classify it as acute or chronic. Acute pain typically lasts for hours, days, or weeks, and is caused by tissue damage, inflammation, surgery, or a temporary disease process. Chronic pain, on the other hand, persists for months, years, or even a lifetime, and tends to worsen over time. Acute pain is a sign that something is wrong, while chronic pain often outlasts the usual healing time for an injury.

The International Association for the Study of Pain (IASP) defines chronic pain as pain that persists for more than three months. Pain not caused by acute injuries can be uncomfortable for the patient, alter their lifestyle, lower their quality of life, and affect their family. Persistent pain significantly impairs psychological and functional functioning.

Pain is especially prevalent in older adults, with up to one - third of community - dwelling individuals over 60 experiencing daily pain, and 50% of those over 80 frequently taking analgesics. The intensity of chronic pain, as reported by the patient, should guide treatment decisions. For acute pain management, the therapeutic target is typically "no more than mild discomfort. "

Studies have shown that "any, " "substantial, " and "severe" chronic pain are negatively correlated with job status, interference with daily activities, and overall health. Various treatment strategies aim to improve patients' ability to manage their pain effectively. These strategies include cognitive - behavioral therapy (CBT), psycho - educational (or "educational") methods, and self - management (or "self - help") approaches, all of which are interconnected.

Patients with pain often manage their conditions independently. The Neuropathic Pain Special Interest Group (NeuPSIG) recently classified neuropathic pain as "pain that results directly from a lesion or disease affecting the somatosensory system. " The revised definition replaces "dysfunction" with "disease" to distinguish neuropathic pain from pain caused by neuroplastic changes in response to

Volume 13 Issue 12, December 2024
Fully Refereed | Open Access | Double Blind Peer Reviewed Journal
www.ijsr.net

Paper ID: MR241129200924   DOI: https://dx.doi.org/10.21275/MR241129200924   159

intense nociceptive stimulation. To further distinguish neuropathic pain from other types of pain caused by lesions in different parts of the nervous system, such as muscle stiffness from central motor pathway lesions, the term "somatosensory system" is used instead of "nervous system."

The immediate result of disrupting normal pathways is loss or reduction of function, which may include discomfort. However, the lesion can sometimes cause pain to manifest, a condition known as neuropathic pain. Neuropathic pain can be either visceral or somatic. Despite the variation in mechanisms between different organs and organ systems, two universal principles apply to all visceral pain. First, research on somatic pain cannot always be generalized to visceral pain because the underlying neurological mechanisms are distinct. Second, visceral pain differs from somatic pain in terms of perception and psychological processing.

In addition to its scientific importance, the distinction between somatic and visceral pain is crucial for therapeutic treatment. Visceral pain has five key clinical characteristics: (1) it is not always associated with visceral injury (e. g., cutting the intestine causes no pain, but stretching the bladder can be painful); (2) it is not always evoked from all viscera; (3) it is diffuse and poorly localized; (4) it is not always accompanied by injury; and (5) it does not always involve injury.

Many people are affected by pain and manage their treatable conditions on their own. The patient's desire to improve their quality of life is central to this study, which examines the patient's behavior toward self - management of their pain condition.

2. Materials and Methods

2.1. Participants

The research focused on individuals experiencing pain and their methods of pain management. Using questions derived from the WHO Guidelines on pain management and healthcare, questionnaires were created based on accepted practices. Only participants who volunteered for the study were included. Data was collected from all participants, and their pain levels were recorded for further analysis. A behavioral and habitual evaluation of the patient's health was conducted, along with recommendations for managing pain when it occurs.

2.2. Data

A total of 250 individuals were selected for the study, and a data collection form was created using standard questions from the fields of pain management and patient care, as outlined by the WHO recommendations.

2.3. Design

Subjects for the study, which was a prospective survey, were selected based on their level of interest. All adults, whether they were experiencing pain or not, were included. Individuals who experienced mild, moderate, or severe pain did not perceive pain in the same way.

2.4. Procedure:

The 3 - month prospective survey included visits to hospitals, health centers, and primary health centers to collect data. The research was conducted in the Namakkal district of Tamil Nadu, near Komarapalayam. Data was collected using a specifically designed data collection form. Reports were gathered, and interviewing the subjects was a key part of the study. An active methodology was used, with interviews conducted at hospitals, primary health centers, and during student visits. All individuals who sought medical attention for themselves provided the information. Each subject received information about health matters and completed a form that was used to assess their condition

3. Results and Discussion

The following conclusions were drawn based on the subjects' responses and comments:

3.1 Age Wise Distribution of Patients

The group consisted of approximately 250 individuals, and pain was not universally experienced. The likelihood of developing chronic pain increases with age (16). Most patients were elderly, between the ages of 50 and 80. Projections suggest that by 2050, 25% of the population will be 65 years or older, a significant rise from current levels. Additionally, it is estimated that the number of individuals aged 85 and older will reach 8 million by 2030 (17).

Among the younger participants, fever and discomfort were the primary conditions reported. In older individuals, age - related tissue damage or physical frailty has been associated with chronic pain. Physiological and psychological changes linked to aging may lead elderly patients to describe pain differently from younger individuals. For instance, conditions like arteriosclerosis or the effects of a stroke may alter pain perception (18).

As a result, individuals experiencing pain were categorized into two groups: those who were sick and those who were otherwise healthy.
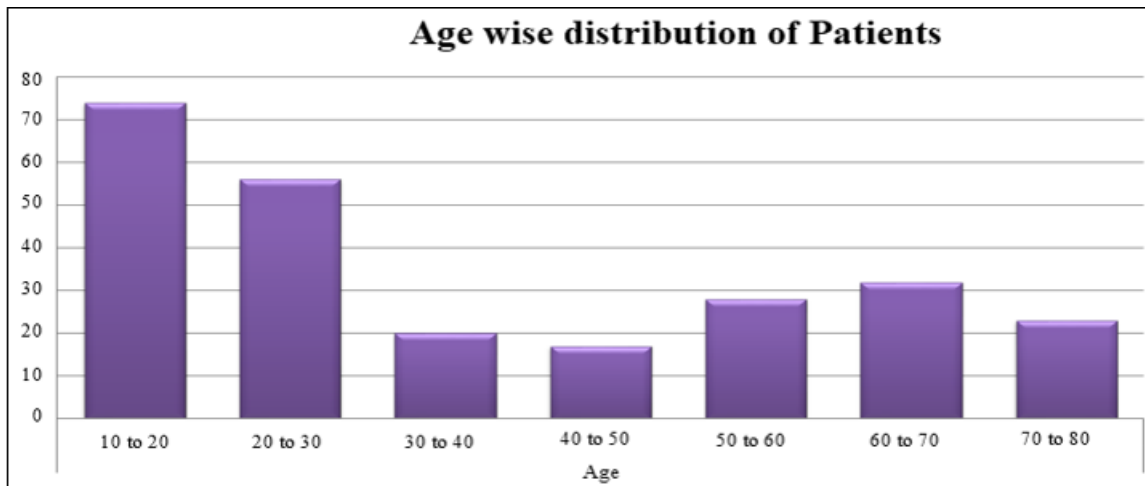
Figure 1: Age wise distribution of patient

3.2 Gender Wise Distribution of Patients with Pain:

This highlights the disparity among male patients, who tend to experience more illnesses related to their physical conditions. Males are more likely than females to suffer from significant pain conditions due to factors such as work pressure, industrial labor, and other physically demanding tasks. As a result, males are more affected by these circumstances.
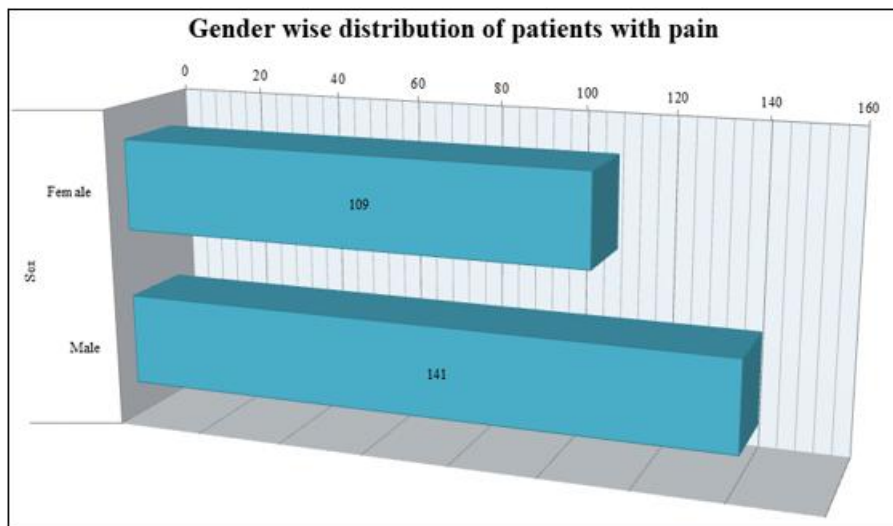

Figure 2: Gender wise distribution of patient with pain

3.3. Occupation Details of Patient

Many studies have shown that neuropathic pain impacts patients' mood, quality of life, daily activities, and work performance (19). Participants were categorized based on their occupations, including students, workers, and others. In the survey, students reported experiencing pain primarily due to prolonged writing, constant use of mobile phones (which causes eye strain), heavy workloads, stress, and extended periods of standing during work. Both college students and other individuals participated in the survey. The majority of people, particularly those in the workforce, are affected by pain.
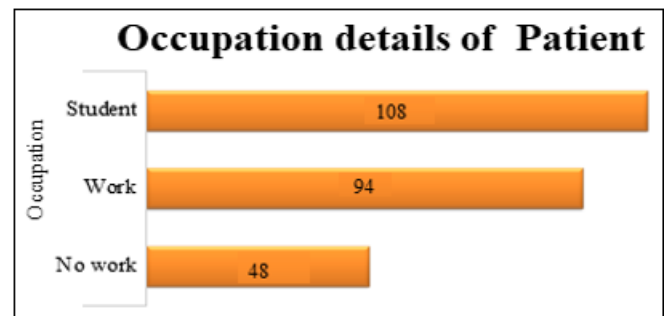

Figure 3: Occupation details of patient

4. Distribution of Behavioral Risk Factor of Peoples

Individuals suffering from pain - related addictions were also often dependent on alcohol and smoking. Some patients with this condition not only struggle with addiction but also have other health issues such as diabetes, hypertension,

Volume 13 Issue 12, December 2024
Fully Refereed | Open Access | Double Blind Peer Reviewed Journal
www.ijsr.net

Paper ID: MR241129200924   DOI: https://dx.doi.org/10.21275/MR241129200924   161

asthma, COPD, and heart disease. Long - term alcohol use has been shown to cause small - fiber painful neuropathy, also known as dying - back neuropathy, which is characterized by distal axonal degeneration. Smoking has also been linked to the development of neck pain (20). This issue particularly affects male patients (21), as shown in Figure 4.
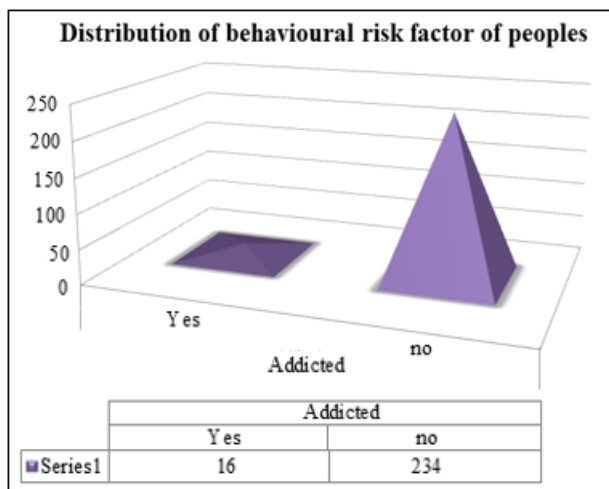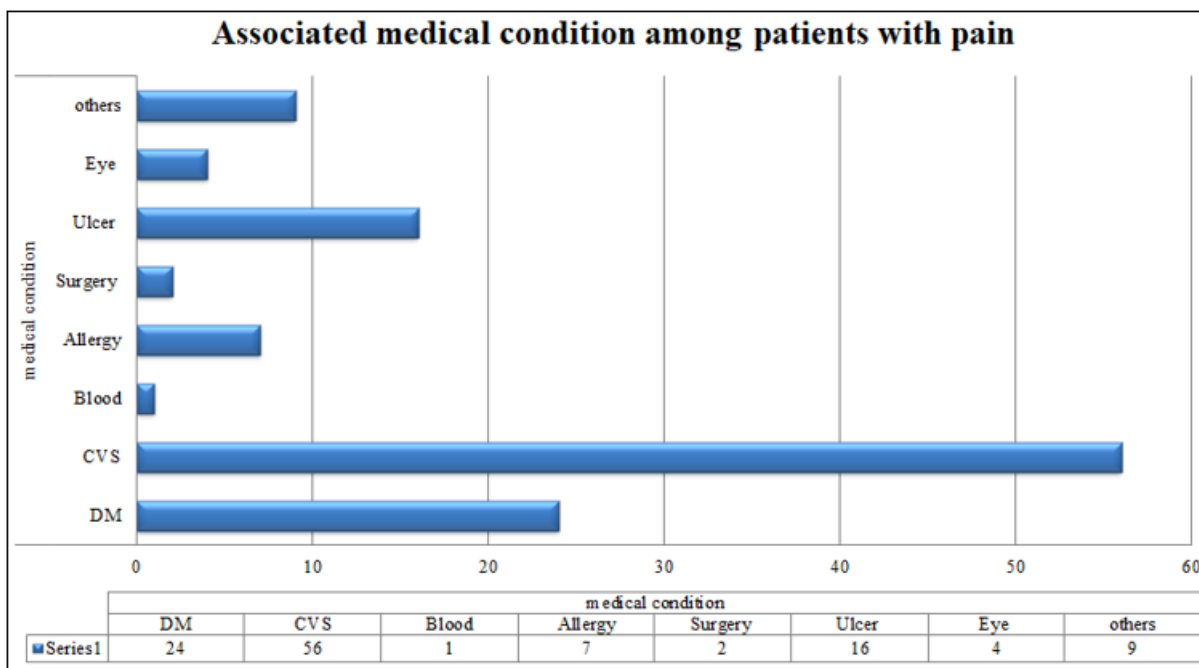

Figure 4: Distribution of behavioral risk factor of people

Associated medical condition among patient with pain

5. Associated Medical Condition among Patients with Pain

Patients experiencing discomfort symptoms faced a variety of health challenges. They suffered from conditions such as diabetes, heart issues (including angina, heart attacks, and blockages), blood disorders like anemia, allergic conditions, past surgeries related to previous medical issues, ulcers, eye pain, urinary tract infections, bone fractures, thyroid surgery, menstrual pain, asthma, and stroke. Pain is particularly prevalent among patients with cardiovascular disease (22). For many, pain was a common issue they had already been dealing with.

3.6 Classification of Pain based on Affected Area

The patient experienced discomfort in several areas of the body. Various factors, including stress, bathing, traveling, and other conditions, contributed to the patient's headache. These factors were also identified as causes for migraine headaches in some patients, particularly in those of older age. Clinical significance is defined as a change of at least 12% for acute pain and at least 20% for chronic back pain (23). Some patients experienced shoulder pain, which was linked to work - related stress, excessive weight, and bone fractures.

Neck pain was prevalent among patients who used computers, worked in offices, wrote frequently, slept on one side, or had other similar conditions. Neck discomfort is a significant problem in today's society. According to prevalence data, the one - year prevalence of neck pain in the general population was 29% for men and 40% for women. Conditions such as depression, angina, asthma, congestive heart failure (CCF), and heart disease caused fewer individuals to experience chest pain (25). Chest pain is the most common initial symptom of coronary artery disease (CAD) (26).

Many patients reported abdominal discomfort due to food poisoning, stomach distress, vomiting, eating irregularly,

Volume 13 Issue 12, December 2024
Fully Refereed | Open Access | Double Blind Peer Reviewed Journal
www.ijsr.net

Paper ID: MR241129200924   DOI: https://dx.doi.org/10.21275/MR241129200924   162

diarrhea, or dysentery. Some patients experienced joint pain as a result of continuous walking, work overload, bending, and stretching. Toe pain was common while standing, moving around, playing, jogging, and for other reasons. Hand and wrist pain was associated with activities such as writing, labor overload, and weightlifting.

A smaller number of patients experienced head injuries caused by trauma or accidents. Those who were ill or had a fever complained of body aches. This survey was conducted during the monsoon season, so many conditions were influenced by climate change. Patients who had trouble sleeping or who used their mobile phones excessively often reported eye pain.

Teeth issues, such as gingivitis related to vitamin C deficiency, were noted in one case. Some patients experienced muscle cramping. In a pain drawing, patients are asked to mark the locations of their pain on an outline of the human figure. In other methods, individuals are simply instructed to shade the areas where they feel discomfort (24). Figure 3.6.1 below describes the affected regions
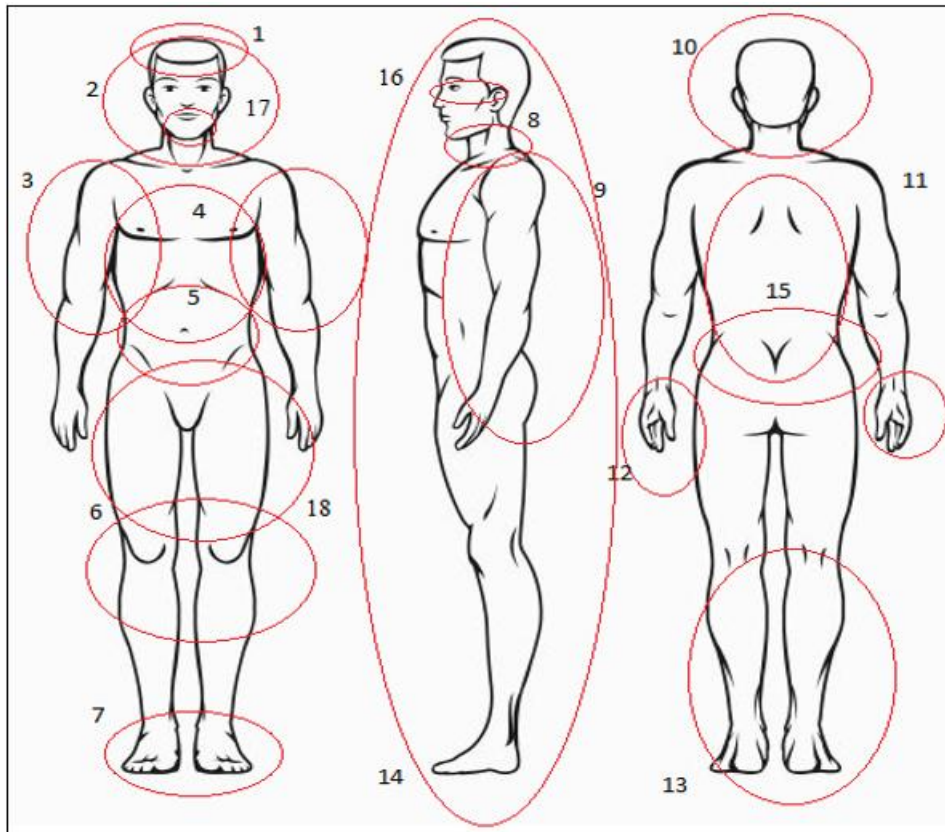

Figure 3.6.1: Pain associated in the affected area

The percentage of healthy individuals and patients affected by the condition is shown in Table 3.6.2.

Table 3.6.3: Percentage value of affected people

Number	Affected area	No of people	Percent %
1.	Headache	41	16 %
2.	Migraine headache	18	7%
3.	Shoulder	10	4 %
4.	Chest	19	7 %
5.	Abdomen	26	10 %
6.	Joint	13	5 %
7.	Toe	16	6 %
8.	Neck	10	4 %
9.	Hand	33	13 %
10.	Head injury	4	1 %
11.	Back bone	12	4 %
12.	Wrist	10	4 %
13.	Leg	20	8 %
14.	Whole body	47	18 %
15.	Hip	16	6 %
16.	Eye	11	4 %
17.	Teeth	4	1 %
18.	Muscle cracking	11	4 %

Volume 13 Issue 12, December 2024
Fully Refereed | Open Access | Double Blind Peer Reviewed Journal
www.ijsr.net

Paper ID: MR241129200924   DOI: https://dx.doi.org/10.21275/MR241129200924   163
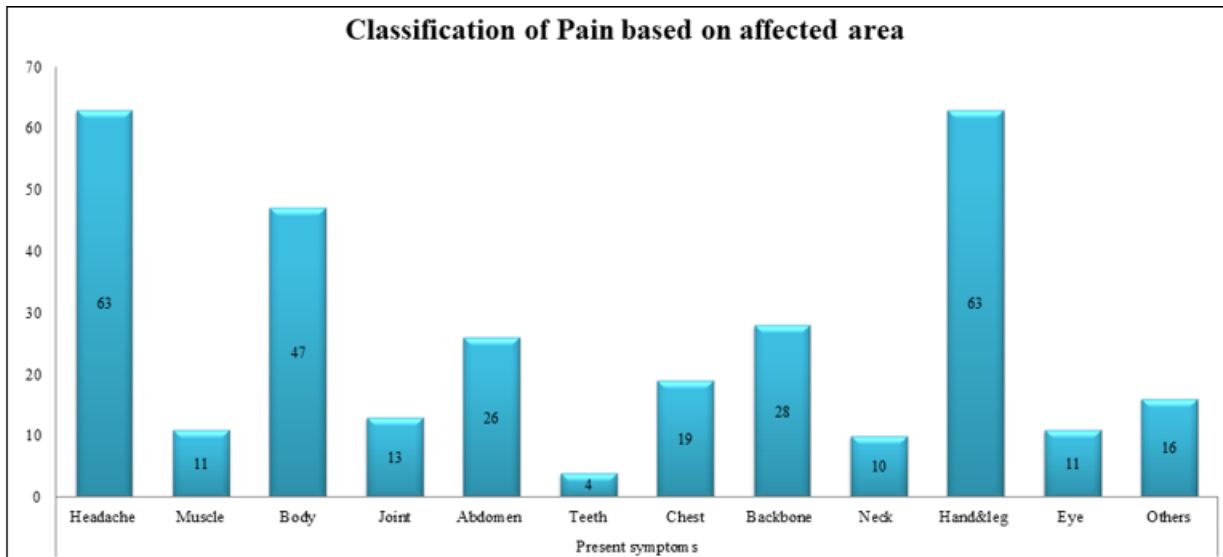
**Figure 3.6.4:** Classification of pain based on affected area

3.7 Pain Related Problem

The patient experienced both nociceptive and neuropathic pain, which in medical terms refers to pain that spreads. Most sufferers of neuropathic pain do not feel it in other parts of their body. However, some patients reported pain spreading to other areas. For example, chest pain associated with angina pectoris often radiates to the left arm. Some patients experienced head pain that was accompanied by neck pain, eye pain, and body fatigue. In several cases, back pain was a symptom related to abdominal pain, while others reported pain during urinary excretion. Thus, many patients experienced complex pain patterns affecting multiple areas of their body.

3.8 Distribution of Patients Experiencing Pain

This survey was conducted among the attendees. While some patients experienced pain, others did not feel any pain but still had medical conditions such as high blood pressure or diabetes. Additionally, some individuals reported no issues and were in good health. This is illustrated in Figure 3.8.
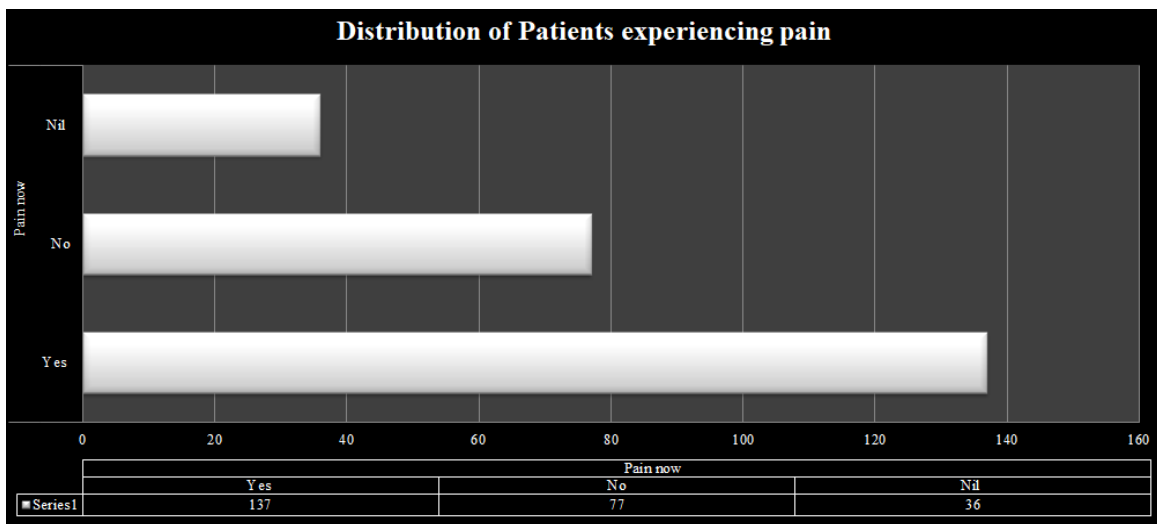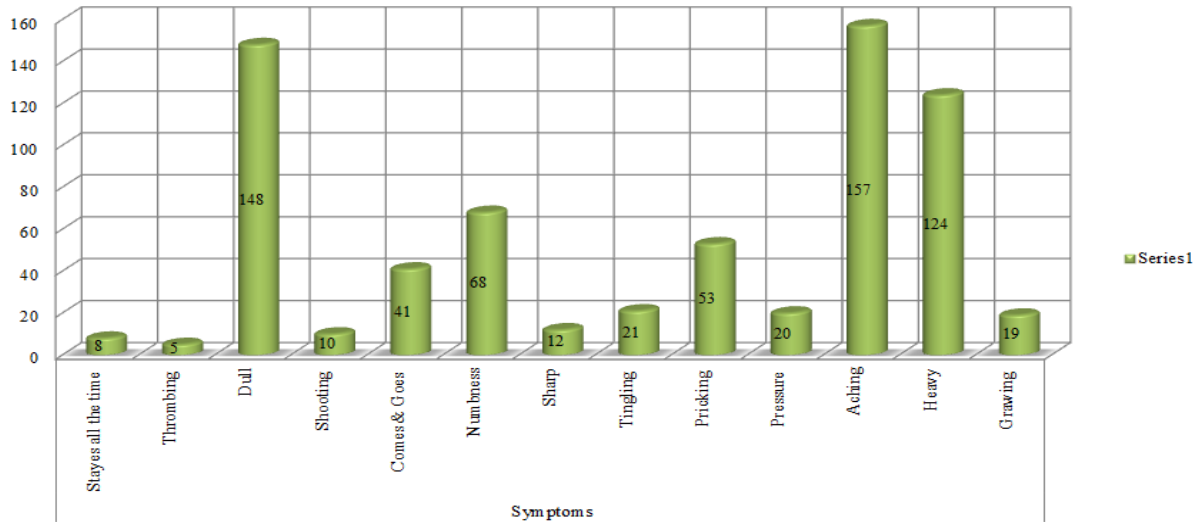

Distribution of patients experiencing pain

3.9. Distribution of Sign & Symptoms of Pain

People experiencing pain reported a variety of sensations. To identify symptoms in older patients, it is important to use a range of descriptive terms, such as burning, aching, soreness, tightness, discomfort, sharp, dull, and throbbing (27). One of the conditions that affect these symptoms is the sensation of burning, pricking, or itching (28). Pain was often described as constant, throbbing, dull, shooting, intermittent (coming and going), numb, sharp, tingling, pricking, pressure - like, aching, heavy, or gnawing. Many individuals described their pain as aching, heavy, and dull. These are the primary sensations that often emerge when the pain first begins. In addition to this, people in the workforce also reported experiencing similar types of pain. Intermittent pain accompanied by numbness

Volume 13 Issue 12, December 2024
Fully Refereed | Open Access | Double Blind Peer Reviewed Journal
www.ijsr.net

Paper ID: MR241129200924   DOI: https://dx.doi.org/10.21275/MR241129200924   164

Distribution of sign & symptoms of pain

Distribution of sing & symptoms of pain

3.10. Pain Intensity a Per Wong- Baker Faces Pain Rating Scale:

There are various categories and methods used to assess pain. One of the primary advantages of this approach, compared to others, is its ability to evaluate the difference in pain intensity at two separate time points using the Visual Analog Scale (VAS), which reflects the actual change in pain magnitude (29). This system is closely related to the original VAS, as shown in several studies (30). Pain measurements are determined using different rating systems, such as the intensity of pain on scales ranging from mild to moderate to severe, as well as the Wong - Baker Faces Pain Rating Scale and a numeric pain scale. The Behavioral Rating Scale is a variant of the Verbal Rating Scale (VRS), which uses sentences with behavioral descriptors to represent different levels of pain. (31)
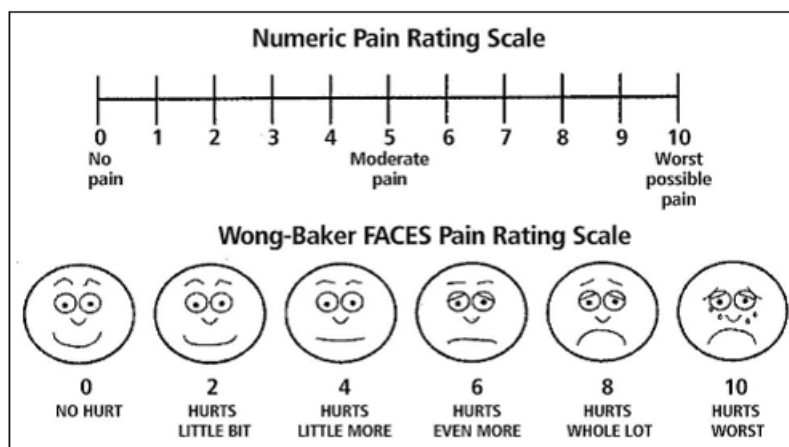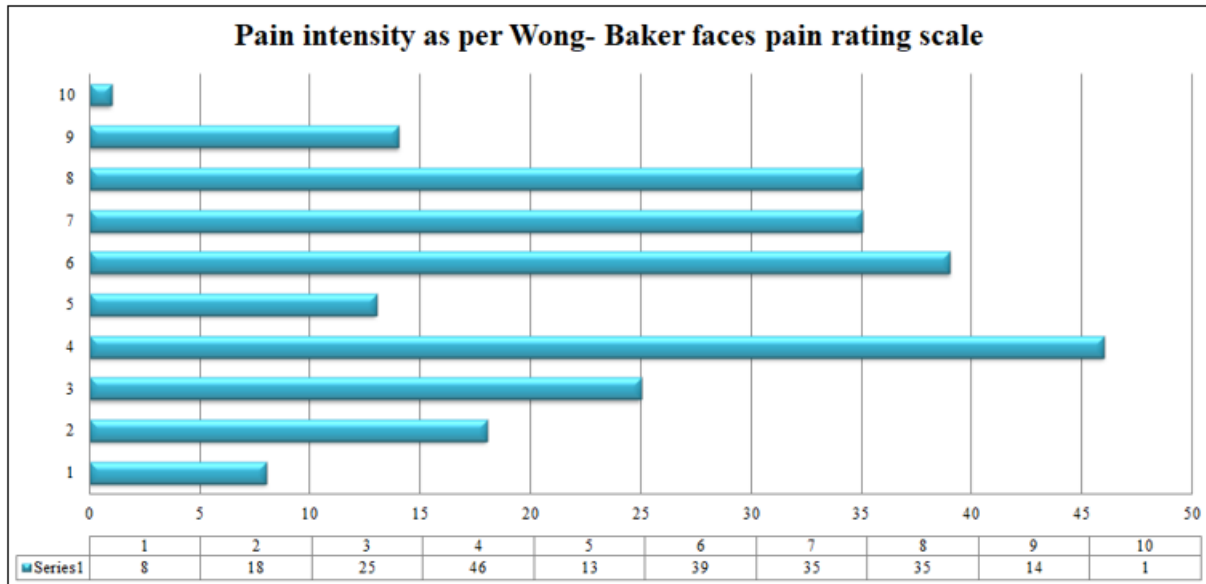

Figure 3.10.1: Pain scales

Patients reported varying levels of facial pain, with some experiencing pain ranging from 0 to 3, others from 4 to 7, and some from 8 to 10. When describing their pain, the worry on their faces was evident. The intensity of the pain perceived by the patients can be quantified using a pain scale, where 0 represents no pain and 10 represents the worst pain imaginable (32). Due to the severity of their pain, some patients were unable to function and were visibly distressed, with sobbing indicating their suffering. Exhibit 3.10.2 illustrates the pain ratings of the patients.

Volume 13 Issue 12, December 2024
Fully Refereed | Open Access | Double Blind Peer Reviewed Journal
www.ijsr.net

Paper ID: MR241129200924   DOI: https://dx.doi.org/10.21275/MR241129200924   165

Patient intensity as per Wong – Baker faces pain rating scales

3.11 List of Medications Taken by Patients for Relieving Pain:

Despite being the most common neuropathic pain syndrome, the underlying causes of pain remain poorly understood, and no single pharmacological therapy has been proven to be fully effective (33). Most patients with bodily discomfort were taking medications, typically NSAIDs, which are used for mild to moderate pain. Opioids, on the other hand, are reserved for severe pain. The analgesic effects of NSAIDs vary among different medications in this class, as they act on the peripheral nervous system. Commonly used NSAIDs include aspirin, ibuprofen, naproxen, and indomethacin (34).

Many patients use acetaminophen (500 mg or 650 mg) as a pain reliever. Other pain medications commonly used include aceclofenac and diclofenac, which play a key role in pain management. For neuropathic pain, regardless of its cause, medications such as tricyclic antidepressants and/or anticonvulsants are commonly prescribed. However, even when used effectively, only a small portion of patients (e. g., 30%) experience long - lasting pain relief before it returns (35).

For nociceptive pain, medications such as amitriptyline, clozapine, and olanzapine were prescribed by doctors. For neuropathic pain, traditional medications include lidocaine, lamotrigine, acetaminophen, dextromethorphan, carbamazepine, gabapentin, valproic acid, opioid analgesics, and tramadol hydrochloride. However, only 40–60% of patients experience full recovery (36).

Several patients with type 2 diabetes mellitus were using medications like metformin and glimepiride. However, steroid medications, such as prednisolone and methylprednisolone, can elevate blood sugar levels. Medications like pantoprazole and ranitidine were used to treat stomach discomfort, ulcers, and acid reflux, which may be aggravated by NSAIDs.

Some patients who used topical balms reported side effects such as back pain, muscle cramps, headaches, and pain in their hands and legs. For patients with hypertension, medications like amlodipine, nifedipine, enalapril, atenolol, and losartan were commonly prescribed. Vitamin supplements, including vitamin B complex, methylcobalamin, and folic acid, were used to maintain a healthy body condition.

For hyperlipidemia or high cholesterol, patients were prescribed atorvastatin. Antibiotics were given to those with cold, cough, fever, or bacterial infections. Patients who experienced bleeding or clotting issues were prescribed aspirin and clopidogrel. Nitroglycerin and isosorbide dinitrate were used for angina, while acyclovir was prescribed for viral infections. For inflammation in asthma patients, dexamethasone was given.

Other medications included alprazolam for neck pain, calcitriol and thyroxine for hyperthyroidism, salbutamol for asthma, and furosemide for urinary calculi. Clotrimazole cream was used for fungal infections, while dextromethorphan and chlorpheniramine were prescribed for coughs. Zinc and ORS supplements were provided to address fatigue.

These are the medications used by patients to manage their pain and underlying conditions. NSAIDs, antidepressants, and painkillers were most commonly used for pain relief. Figure 3.11 illustrates the drugs used by patients.

S. N	Medication	No of people	Percentage
1.	Acetaminophen	72	28 %
2.	Acelofenac, Diclofenac	18 + 6 = 24	9 %
3.	Metformin	22	8 %
4.	Glimipride	10	4 %
5.	Pantoprazole	26	10 %
6.	Balm	22	8 %
7.	Ranitidine	16	6 %
8.	Amlodipine & Nifidiopine (1)	41 + 1 = 42	16 %
9.	BC (vitamin)	48	19 %
10.	Enalapril	23	9 %
11.	Atrovastatin	15	6 %
12.	Antibiotics	28	11 %
13.	Aspirin & Clopidogrel (2)	8 + 2 = 10	4 %

| 14.	Gel	13	5 %
15.	Atenolol	23	9 %
16.	Nitroglycerin & Isosorbid trinitrate	2	1 %
17.	Acyclovir	1	0.5 %
18.	Dexamethasone	4	1 %
19.	Alprazolam	2	1 %
20.	Serato peptidase	2	1 %
21.	Methylcobalamine	6	2 %
22.	Amitriptyline	3	1 %
23.	Prednisolone	1	0.5 %
24.	Heparin	3	1 %
25.	Domperidone	2	1 %
26	Thyroxin	3	1 %
27.	Salbutamol	2	1 %
28.	Calciterol	2	1 %
29.	Furosemide	1	0.5 %
30.	Mucopurin	1	0.5 %
31.	Betadine	3	1 %
32.	Clotrimazole cream	1	0.5 %
33.	Dechloromethorphane & Chlorphenaramine	1	0.5 %
35.	Zinc	1	0.5 %
36.	Losartan	3	1 %
37.	ORS	1	0.5 %

Figure 3.11: Patients used various drugs to manage both their diseases and pain.

3.12. After Effects of Pain among Patients

However, it has been observed that these functional anomalies might lead to a reduced quality of life for months, years, or even a lifetime (37). The effects of pain varied from patient to patient and were often accompanied by symptoms such as dizziness, vomiting, and nausea. Many patients experienced disruptions in their sleep patterns, both during the night and the day, failing to achieve restful sleep. Some patients showed a decreased appetite and altered behavioral, cognitive, and emotional reactions to pain in an attempt to reduce its severity (38).

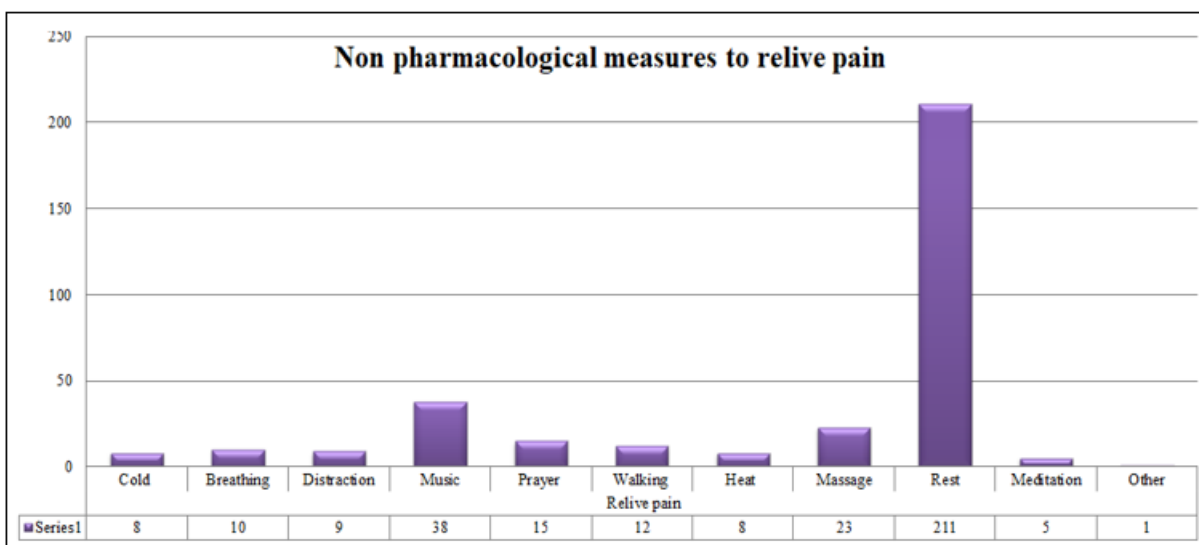Even though they were not engaged in physical work, these patients experienced decreased physical activity due to the pain. At the same time, some were affected in their relationships and felt emotional distress. These challenges also contributed to a decline in focus and concentration
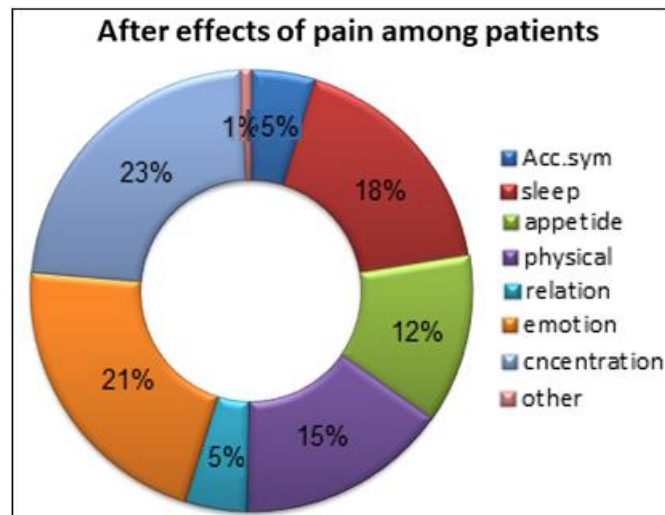
3.13. Non- Pharmacological Measures to Relive Pain:

Patients experiencing pain employed various relieving measures. For instance, individuals with hand pain or fever often used cold pack methods. Those with asthmatic conditions or wheezing practiced breathing techniques for relief. Some patients distracted themselves from pain through activities like watching TV, sleeping, talking, or listening to music, which helped reduce their perception of pain. Others used heat therapy, which effectively alleviated their pain, while many incorporated massage therapy and meditation into their routines.

Patients were educated early on that maintaining a baseline level of daily activity is crucial for rehabilitation, and resting alone is not an effective way to manage chronic pain (39). However, most people opted for rest as a behavioral approach to reduce pain and meet their body's need for recovery. Various therapeutic massage techniques, such as Swedish, neuromuscular, and deep - tissue massage, were also utilized. One review noted more than 80 different types of massage therapies available for pain management (40).

Non pharmacological measures to relive pain

Volume 13 Issue 12, December 2024
Fully Refereed | Open Access | Double Blind Peer Reviewed Journal
www.ijsr.net

Paper ID: MR241129200924   DOI: https://dx.doi.org/10.21275/MR241129200924   167

6. Conclusion

In conclusion, this study identified the presence of both nociceptive and neuropathic pain among the participants. The majority experienced neuropathic pain, while nociceptive pain was also prevalent. Some individuals reported no pain at all. However, there remain challenges in accurately assessing pain across various scenarios, such as during rest, daily activities, or specific movements. Additionally, questions persist about whether different types of pain—nociceptive, neuropathic, and visceral—can be effectively addressed with current methodologies (22). This highlights the need for further research to validate and refine pain assessment tools and treatment strategies.
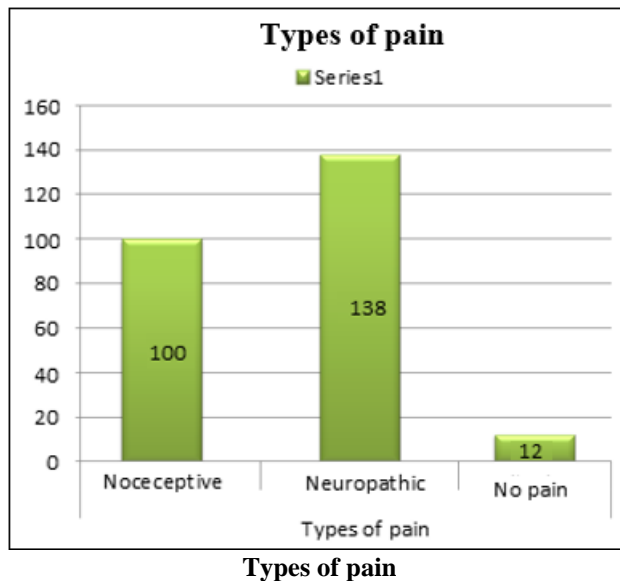
Types of pain

Acknowledgement

References

[1] Mantuselka P, Kumpusalo E, Ahonen R, Pain as a reson to visit the doctor; a study in finish primary health care, Pain 2001; 89; 175 - 80

[2] Paulina swieboda, Rafal Filip, Andrzej prystupa, Assessment of pain; type, mechanism and treatment, Ann agric Environ med; 2013; special Issue 1; 2 - 7

[3] Turk D, melzack R (2011), The measurement of pain and the assessment of people experiencing pain; In; Turk D, melzack (eds) Handb. Pain assesses, 3rd ed, Guilford press, NY, P 542

[4] International Association for the study of pain, Classification of chronic pain; Introduction, pain 24; 1986; S3 – S8

[5] Sandra MG Zwakhalen, Jan PH Hamers, Huda Huijer Abu - Saad, Pain in elderly people with severe dementia; A systematic review of behavioural pain assessment tool; BMC Geriatrics 2006; 6: 3

[6] M. Carrington Reid, MD, PhD, Maria papaleontiou, MD; Self – management strategies to reduce pain and improve function among older; Adults in community setting; A Review of the evidence of the evidence, Pain medicine Volume 9. Number 4.2008

[7] Shega JW, Ersek M, Herr K, Paice JA, The multidimensional experience of noncancer pain; does congnitive status matter? Pain med 2010, 11 (11); 1680 – 1687

[8] Moore RA, Straube S, Aldington D. Pain measure and cut – offs – "no worse than mild pain "as a simple, universal outcome, Anaesthesia 2013; 68; 400 – 12

[9] Smith BH, Elliott AM, Chamber WA, The impact of chronic pain in the community

[10] Mary Ersek, Judith A Turner, Kelvin C Cain, chronic pain self - management for older adults a randomized controlled trail [ISRCTN 11899548], study protocol, BMC Geriatrics, 2004, 4; 7, 2

[11] Treede RD, Jensen TS, Campbell JN, Redefinition of neuropathic pain and a grading system for clinical use; consensus statement on clinical and research diagnostic criteria, Neurology 2008; 70; 1630 – 5

[12] Geber C, Bagumgartner U, Schwab R. Revised definition of neuropatic pain and its grading system; an open case series illustrating its use in clinical practice, AM J med 2009; 122; S3 – S12

[13] Nama Brix finnerup, Rohini Kuner, Troels staehelin Jensen, Neuropathic pain; from mechanism to treatment, physiological Rev 101; 2021; 259 – 301

[14] Fernando cervero, Jennifer MA Larid, Visceral pain, The LANCET, Vol 353, June 19, 1999, 2145

[15] Dubner R, Gebner R, Gebbart GF, Bond MR, eds. Proceedings of the Vth World, congress on pain. Amsterdam; Elsevier, 1988; 216 - 26

[16] Crook J, Ride out, E, Browne G, The prevalence of pain complaints in a general population, pain.1984; 18 (3); 299 – 314

[17] Steckenrider JS: Aging as a female phenomenon: the plight of older women. New Dimensions in Old Age Policies Edited by: Steckenrider JS and Parrott TM. Albany, NY, SUNY Press; 1998: 235 - 260.

[18] Fordyce W. E. (1978). Evaluating and managing chronic pain, Geriatrics 33, 59 – 62

[19] Schmader KE. Epidemiology and impact on quality of life of postherpetic neuralgia and painful diabetic neuropathy. Clin J Pain 2002; 18: 350 - 4.

[20] Amteshwar Singh Jaggi, Vivek Jain, Nirmal Singh, Animal models of neuropathic pain, Clinical Pharmacology 25 (2011) 1–28

[21] Haldeman S, Carroll L, Cassidy JD. Findings from the bone and joint decade 200 to 2010 task force on neck pain and its associated disorders. Journal of Occupational & Environmental Medicine 2010 Apr; 52 (4): 424–7.

[22] Wilco P Achterberg, Marjoleine JC Pieper, Annelore H van Dalen - Kok, Pain management in patients with dementia, Clinical Interventions in Aging 2013: 8; 1479

Volume 13 Issue 12, December 2024
Fully Refereed | Open Access | Double Blind Peer Reviewed Journal
www.ijsr.net

Paper ID: MR241129200924   DOI: https://dx.doi.org/10.21275/MR241129200924   168

[23] Bird SB, Dickson EW, clinically significant changes in pain along the visual analog scale. Ann Emerg Med (2001) 38: 639–643

[24] Mathias Haefeli, Achim Elfering, Pain assessment, Eur Spine J (2006) 15: S17–S24

[25] Bovim G, Schrader H, Sand T. Neck pain in the general population. Spine 1994; 19: 1307 - 9.

[26] Liliana E. Pezzin, PhD, JD, Penelope M. Keyl, PhD, Gary B. Green, MD, MPH, MBA, Disparities in the Emergency Department Evaluation of Chest Pain Patients, ACAD EMERG MED February 2007, Vol.14, No.2; 153

[27] Alan D. Kaye, MD, PhD, Amir Baluch, MD, Jared T. Scott, MD, Pain Management in the Elderly Population: A Review, The Ochsner Journal 2010; 10: 179–187

[28] Szallasi A, Blumberg PM (1999) Vanilloid (Capsaicin) receptors and mechanisms. Pharmacol Rev 51: 159–212

[29] . Price DD, Harkins SW, Baker C Sensory–affective relationships among different types of clinical and experimental pain. Pain 1987; 28: 297–30

[30] Choiniere M, Amsel R (1996) A visual analogue thermometer for measuring pain intensity. J Pain Symptom Manage 11: 299–311

[31] Budzynski TH, Stoyva JM, Adler CS, Mullaney DJ (1973) EMG biofeedback and tension headache: a controlled outcome study. Psychosom Med 35: 484–496

[32] REGINA FINK, RN, PHD, AOCN, Pain assessment: the cornerstone to optimal pain management, BUMC PROCEEDINGS 2000; 13: 236–239

[33] Finnerup NB. Nonnarcotic methods of pain management. N Engl J Med 380: 2440 - 2448, 2019

[34] S. Jose closs, Pain in elderly patients: a neglected phenomenon? Journal of advanced Nursing, 1994, 19, 1072 – 1081

[35] Dario Siniscalco, Catia Giordano, Francesco Rossi, Sabatino Maione and Vito de Novellis, Role of Neurotrophins in Neuropathic Pain, Current Neuropharmacology, 2011, 9, 523 - 52

[36] Dworkin, R. H.; O'Connor, A. B.; Backonja, M, Pharmacologic management of neuropathic pain: evidence - based recommendations. Pain, 2007, 132 (3), 237 - 251.

[37] Dougherty P. M., Cata J. P., Cordella J. V., Burton A., Weng H. R. Taxol induced sensory disturbance is characterized by preferential impairment of myelinated fiber function in cancer patients. Pain (2004) 109 132–142.

[38] Mary Ersek, Judith A Turner, Kevin C Cain, Chronic pain self - management for older adults: a randomized controlled trial, BMC Geriatrics 2004, 4: 7

[39] Nicholas Hylands - White, Rui V. Duarte, Jon H. Raphael, An overview of treatment approaches for chronic pain management, 2015, 10

[40] Sherman KJ, Dixon MW, Thompson D, Cherkin DC. Development of a taxonomy to describe massage treatments for musculoskeletal pain. BMC Complement Altern Med 2006; 6: 24.