



ASSESSMENT OF PREFERENCE OF PAIN SCALE AMONG CANCER PATIENTS ON PAIN MEDICATION: A PATIENT CENTRIC APPROACH

Dr Aroop Roy Burman, MBBS, MD, DNB, MPHIL, PhD
Oncologist
Radiation Oncology
ABVRCC, Agartala, India

Abstract: Pain being the most important symptoms especially while rendering palliative care, proper measurement of pain of individual patient is important both for treatment planning and future interventions. In this study, cancer patients with pain of a single Tertiary Care Centre were given choice to select the most convenient pain measuring scale out of Visual Analogue Scale, Percentage Pain measuring Scale, Numerical Pain measuring Scale and Descriptive Pain measuring Scale. Results showed 91.2% patients chose Descriptive pain scale with mild-moderate-severe rating. Statistical analysis did not show any relationship with choice and education of the sample. Hence, it is concluded that Descriptive pain measuring pain scale is the most preferred pain scale among the sample population. This unique study revealed the mind of the cancer patients attending the lone cancer hospital of the State and as the study was done in OPD setting, the result revealed the most practical scenario. Anyway, apart from single centre study, sample size in this study was not very high and hence, further studies are required to establish the results of this study.

INTRODUCTION

Pain is one of the most common and also most unpleasant symptoms that many people experience it in their life time. Pain occurs in response to trauma like injuries including surgical interventions and also can occur in various other conditions. Pain is a frequent accompaniment of chronic diseases like cancer and many patients who are suffering from cancer experience pain sometime during their disease course. Pain has been described as "An unpleasant sensory and emotional experience associated with, or resembling that associated with, actual or potential tissue damage" by The International Association for Study of Pain (IASP). Pain is an individual feelings and its character can be influenced by different factors viz. physical, psychosocial etc. Patients often describe pain from their previous exposures. Pain is many a time, shows no adaptation and shows various detrimental effects on factors related to quality of life. Chronic pain is important for its patho-mechanisms and such pain is classified as ICD11. Chronic primary pain cannot be clarified clearly through organic causes. But secondary pain can be explained clearly through involvement of organic factors. Grossly three types of pain mechanisms are described. They are Nociceptive, Neuropathic and Nociplastic pain. **Invalid source specified.**

Certified Nurse Practitioner from Blanchard Valley Pain Management says that "Nociceptive pain" is the pain which is related to the tissue damage and injury like trauma ankle or burn from hot stove. Similarly, "Neuropathic pain" is associated with the damage of the nerve which interferes in such a way that pain signals are transmitted to the brain. Thus a person may complain of burning sensation in feet even when no heat or flame is acting there. "Nociplastic pain" is the pain that arises due to changed perception, even in absence of clear input from disease or true sign of tissue injury. Such pain is usually extensive in nature and

often augmented. There is increased and altered sensitivity to normal stimuli. Nociceptive pain management often requires multidisciplinary approach. Anyway, treatment of chronic pain is dependent as per the description of the patient about the intensity, mobility or even choice of treatment modality. (H)

The terms “acute” and “chronic” pain is related to the duration and also give some suggestions regarding the causes of pain. Acute pain generally starts rapidly and usually lasts for a specific time period. These are most often due to injury to the various organs or soft tissues. On the other hand chronic pain usually experienced insidiously and is of longer time duration. Chronic pains are frequently associated with nerve damages but also can occur due to damage of the soft tissues or organs. Both acute and chronic pains may show strong emotional links and influences psychological aspect of the sufferer. Such association is more frequent in case of chronic pain and as such anxiety, depression etc are very often found to be associated with chronic pain. Persons with chronic pain also experience break through pain which may start any time even without any predisposing factors even though pain medications are taken regularly. (J, 2023)

In the “Declaration of Montreal” it is stated that “access to pain management is a fundamental human right”. Pain medications are required for both acute and chronic pain and dependent on the understanding of the pain status of the patient. Very often there is insufficient access to pain management. Knowledge and perception of Health Care Professionals about pain creation and also about pain management are deficient. Policies for good pain management are of utmost importance and research in this area is extremely essential. Such endeavor requires good understanding about the problem of pain especially as described by the patient. For patients with pain, scope for getting help regarding pain management without prejudice, to express about their pain and to get assessed about pain to control it, all these are very much essential right of the people suffering with pain. (IASP)

No doubt, proper evaluation or measuring the pain is the most essential step for providing optimum pain medication and advices for pain control. Pain is a subjective experience and hence most of the pain measuring scales are made depending up on the patients understanding about the scale and expression regarding the scale reading. Some very commonly used uni-dimensional pain measuring tools are like visual analog scale, percentage scale, numerical and descriptive scales etc. *FLACC Scale measures pain by analyzing various components like “Face, Legs, Arms, Crying, Consolability”*. It is dependent on behavioral pattern. Large information about various pain measuring scales are available across the web. (Olisarova V, 2021) Scale (E, 2018)

Visual analog scale, percentage and numerical scales ask the patient for a little calculation before providing the data or score of pain intensity. Descriptive scales measure pain from simple answers about perception of pain by the patient. Most of the descriptive scales provide some choices related to intensity of pain and patients can choose the most appropriate one as they feel. (E C. , 2018) (Medicine-Jacksonville) (E J. , 2023)

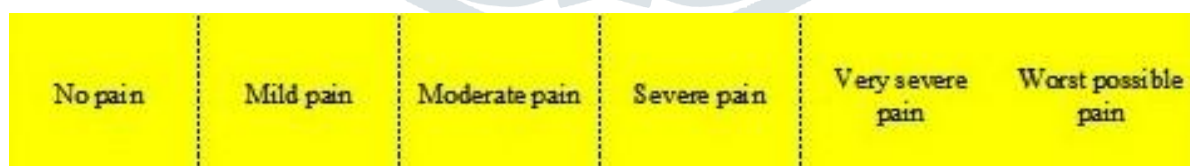


Figure 1 Verbal rating scale

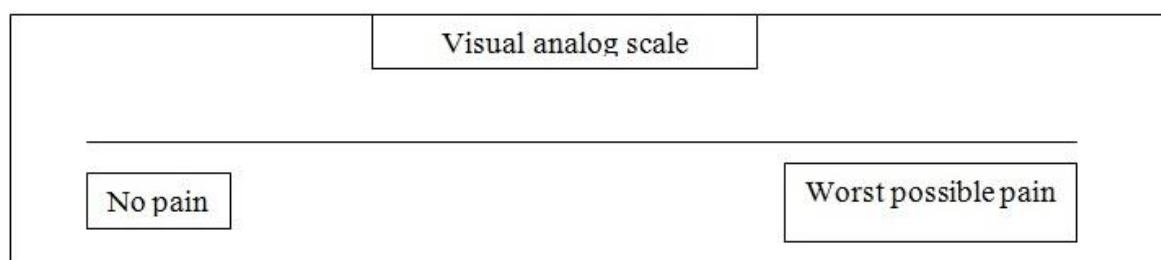


Figure 2 Visual analog scale

World Health Organization pain measuring scale:

As pain is one of the most consulted health problem in cancer and many other illnesses, in 1986, World Health Organization (WHO) presented the pain management framework which can be used by physicians for preparation of a pain management plan for the cancer patients. This guideline helped larger number of people suffering from pain in a simple and yet useful way. Analgesic ladder of WHO says that pain therapy should start with non-opioid medicine (step one) and in next two steps weaker and stronger opioids are combined to control pain optimally. In all steps adjuvant treatments are added whenever required. Though many modifications are proposed for this ladder, by and large most of these proposals are retaining the original structure pattern of the ladder. This WHO step ladder analgesic pattern is a time tested technique for providing good pain relieving care. When analyzed the pattern of the ladder it is seen that three steps are mentioned in the system. This can nicely co-related with the pain intensity of mild-moderate-severe and can be treated as such accordingly. In other words, as per WHO, pain intensity is expressed in three steps and treatment schedules are also described in three corresponding steps. (G, 2010)

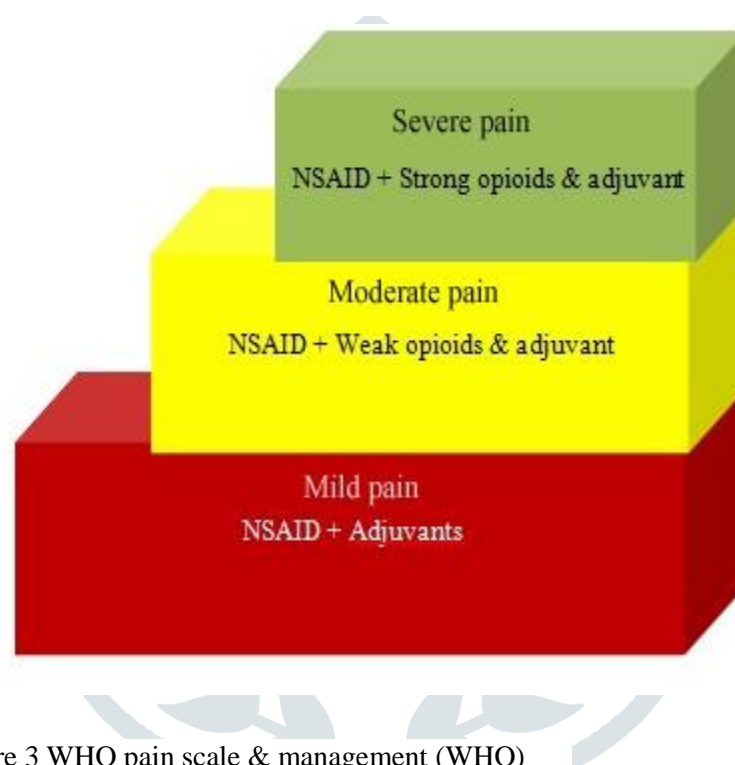


Figure 3 WHO pain scale & management (WHO)

Cancer Pain

As incidence of cancer is increasing, pain sufferers are also rising steadily. Cancer pain may occur among the active sufferers and also in the disease free survivors. In all cases, good pain controlled is not only desirable also it is mandatory as it helps in improvement of quality of life which is jeopardized by depression, fatigue, lower functional capacity and may be survival also. One of the most important issues related to pain is “patient reported outcome” as in present days this is directly contributing the treatment plan. Hence, recording of the intensity of pain as per the patients’ statement is very much essential for good pain management. (Mestdagh F, 2023) (Nijs J, 2021) (Bennett M.I, 2019) (Boland J.W, 2020)

In the present study, commonly used pain measuring scales like Visual Analogue Scale, Percentage Pain Scale, Numerical Pain Scale and Descriptive Pain Scale are explained to the cancer patients in a clinic (OPD) based setting and preferences about the scales are asked.

AIMS AND OBJECTIVES:

To assess the preferences of types of pain scales by the cancer patients among Visual Analogue Scale, Percentage Pain Scale, Numerical Pain Scale and Descriptive Pain Scale.

METHODOLOGY:

This cross sectional survey type of study was conducted in the OPD of a Tertiary Cancer Center (ABVRCC, Tripura) and data was collected for 2 months from 15th May, 2024 to 14th July, 2024 from all the cancer patients who complained of pain associated with the disease cancer and attended the particular OPD within the study period. All the patients were having the biopsy or cytology report showing cancer. The study method was similar to the clinical evaluation before framing management plan for pain and hence, all but those with extreme physical problems participated in the study. Necessary ethical committee permission was taken prior to the study.

“Pain measuring scales” were explained to the cancer patients first and then preference for a particular scale was asked. Uni-dimensional pain measuring scales those were used in the study were Visual Analogue Scale, Percentage Pain measuring Scale, Numerical Pain measuring Scale and Descriptive Pain measuring Scale. The last scale i.e. the descriptive pain measuring scale was used with three options. Those were mild, moderate and severe pain. Scales used in the study are shown in figure (figure 2, 4, 5 & 6)

A predesigned table was used for collecting opinion regarding pain measuring scale and opinion noted in paper after taking consent from the sample patients. The opinion options were divided as per Likert’s scale in five options viz. Very Good-Good-Average-Bad-Very Bad.

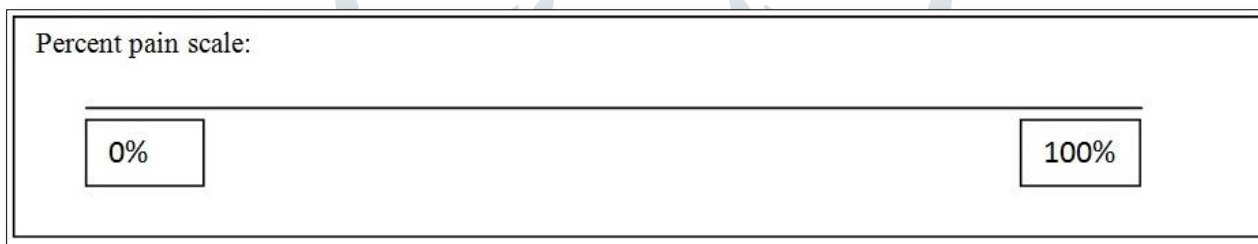


Figure 4 Percent pain scale

0	1	2	3	4	5	6	7	8	9	10
No pain										Full pain

Figure 5 Numerical pain scale

Verbal rating scale / Descriptive scale used in the study		
Mild pain	Moderate pain	Severe pain

Figure 6 Descriptive pain scale / Verbal rating scale used in study

Table 1 Data collection table

Pain scales:	Very good	Good	Average	Bad	Very bad
Visual Analogue Scale					
Percentage pain scale					
Numerical pain scale					
Descriptive pain scale					

During the study full ethical consideration was maintained for any patient who was having extreme pain or any other very distressing symptoms needing immediate intervention and was managed promptly. Anyway, no such issue arose during the study period.

RESULTS:

During data collection, it was found that 246 patients were otherwise fit to participate in the study. But, out of 246 patients, only 126 patients complained of pain. Hence, these 126 patients were recruited as study sample (126/246). This constituted about 51% of the population. In other words, more than 50% of the patients who attended OPD complained of pain.

Table 2 Study population

Total number of patients fit to join study	Total number of patients with pain fit to join study	Percentage of total Vs sample population
246	126	51.2%

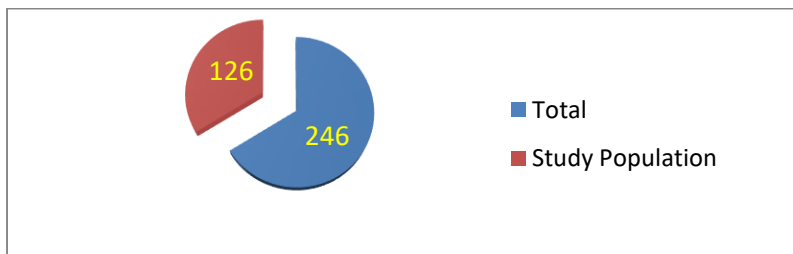


Figure 7 Total number of OPD patients Vs sample population

Age range of the sample was from 24 to 95 years and average age of the sample was 54.6 years. Male participants were 58 and female were 68.

Table 3 Male and Female number in sample

Male	Female
58	68
46.0%	53.9%

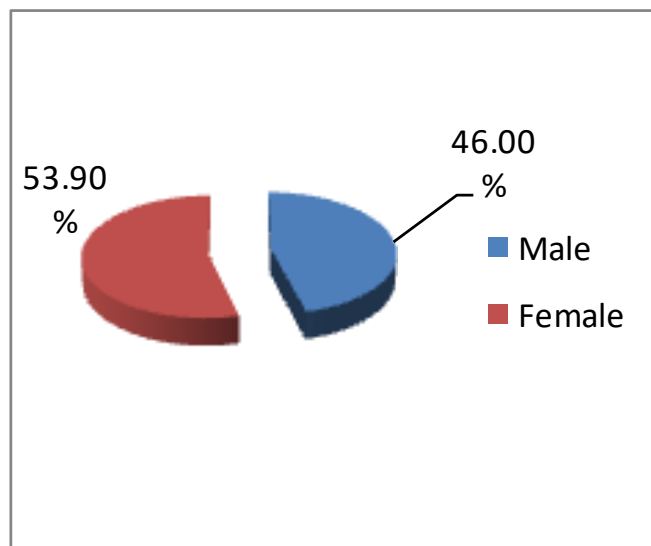


Figure 8 Male: Female number in the sample

Most of the patients (41) were in 51 to 60 years age group, 17 patients were below 40 years. Thirty (30) patients were in 41-50 years age group, 29 patients were 61 to 70 years group and 9 patients were above 70 years of age.

Table 4 Age group division of sample

Below 40 years	51 to 60 years	41-50 years	61 to 70 years	Above 70 years
17	41	30	29	9
13.5%	32.5%	23.8%	23.0%	7.1%

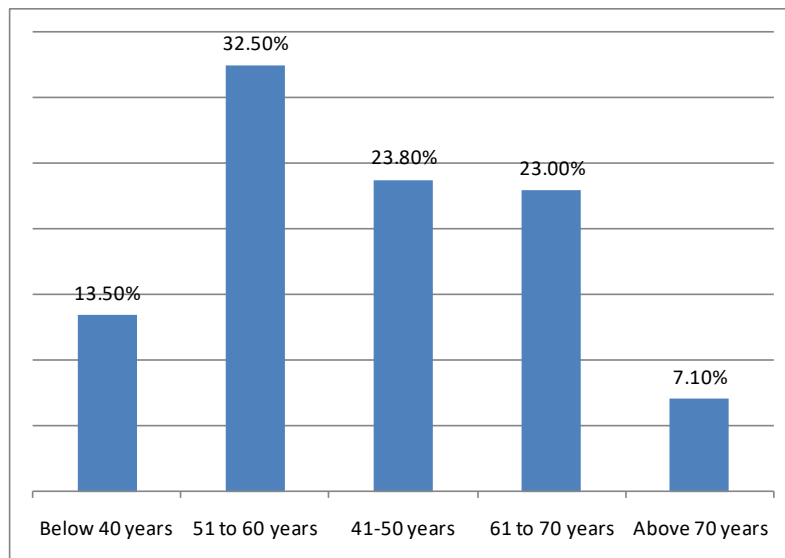


Figure 9 Age group division of the sample

Sample population was suffering from cancer in various sites of the body. Out of these, head and neck area cancers were 44 and female breast cancer was 24. Lung cancer sufferers were 15, cervical cancers were 10 in number. Among others gall bladder cancers were 5, stomach and oesophagus were 6, colo-rectal 3 in number. Rests were ovary, vagina, lymphoma, brain, peri-ampulatory, bladder, penis etc. in small number.

Table 5 Diagnosis of the patients in sample

HN Cancer	Breast Female Cancer	Lung Cancer	Uterine Cervical Cancer	Gall Bladder	Stomach & Oesophagus	Colo-rectal	Others
44	24	15	10	5	6	3	19
34.9%	19.0%	11.9%	7.9%	3.9%	4.8%	2.4%	15.0%

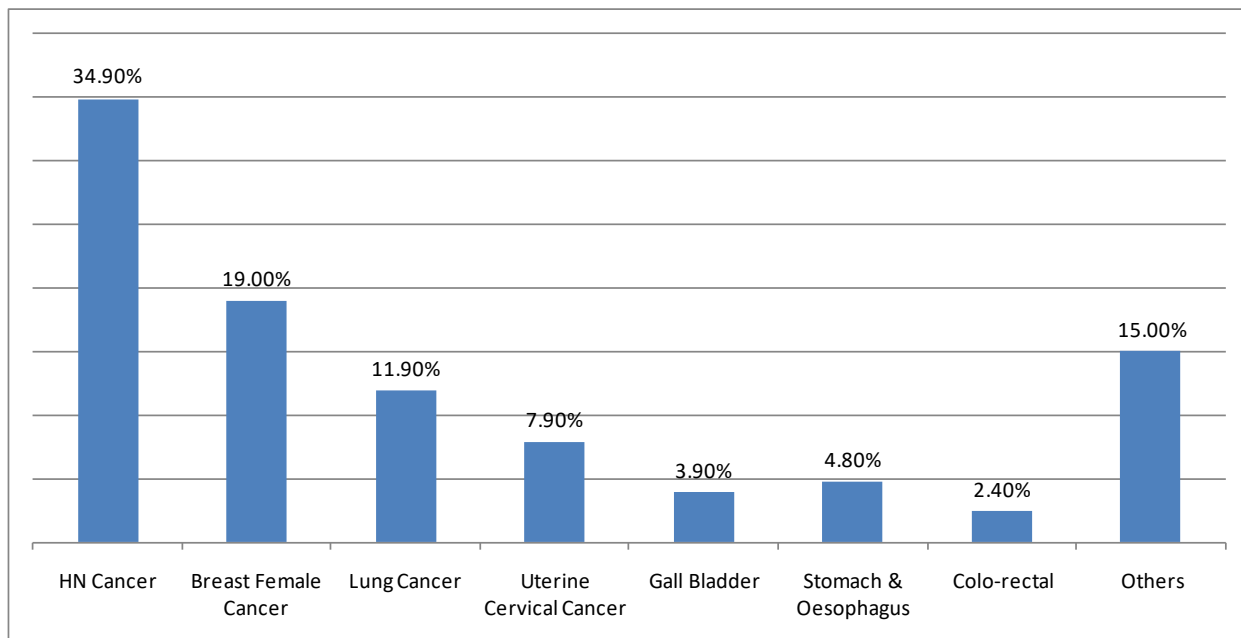


Figure 10 Diagnosis of the sample

Anyway, when they were explained about various pain scales viz. Visual Analogue Scale, Percentage Pain Scale, Numerical Pain Scale and Descriptive Pain Scale, they mostly showed preference for Descriptive pain scale with three options of pain intensity “mild-moderate-severe” and marked either good or very good in favour of this scale. For simplification of analysis and considering result sheet, the option “very good” and “good” were counted together and described in result analysis. As per the preferences Visual Analog Scale was chosen by three (3), Percent scale four (4), Numerical rating scale by four (4) and Descriptive Pain Scale by one hundred and fifteen (115) patients. The result is given here.

Table 6 Choice of pain scale

Name of the scale	Visual Analog Scale	Percent Scale	Numerical Rating Scale	Descriptive Pain Scale
No. of patients chosen the scale	3	4	4	115 (91.2%)

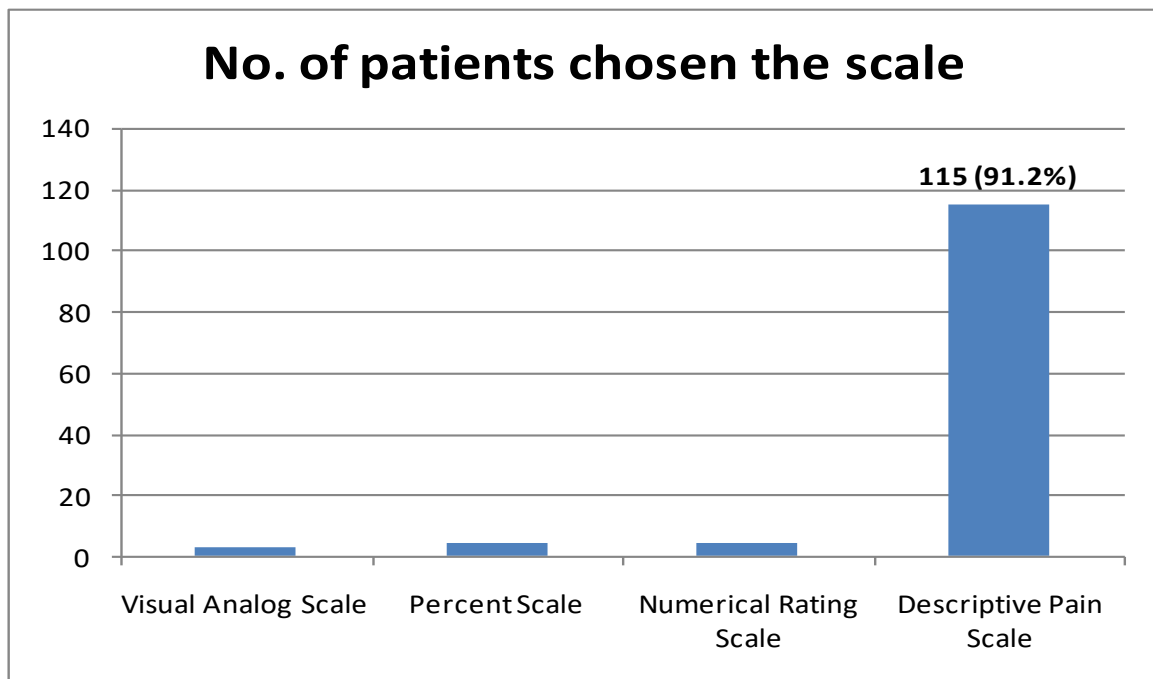


Figure 11 Choice of the sample for scale

One of the most important findings in the sample was that the educational qualification of the participants. Out of 126 people, graduate was only 2 persons. Regarding Academic qualification, it is seen that Patients with “No formal Schooling” was twenty-five (25), Primary education forty-six (46), Class X standard forty-six (46), above Class X but below Graduation seven (7) and Graduate two (2).

Table 7 Qualification of the sample

Qualification	No formal Schooling	Primary education	Class X standard	Above Class X but below Graduation	Graduate
Total patients 126	25	46	46	7	2
Percentage	19.8%	36.5%	36.5%	5.5%	1.6%

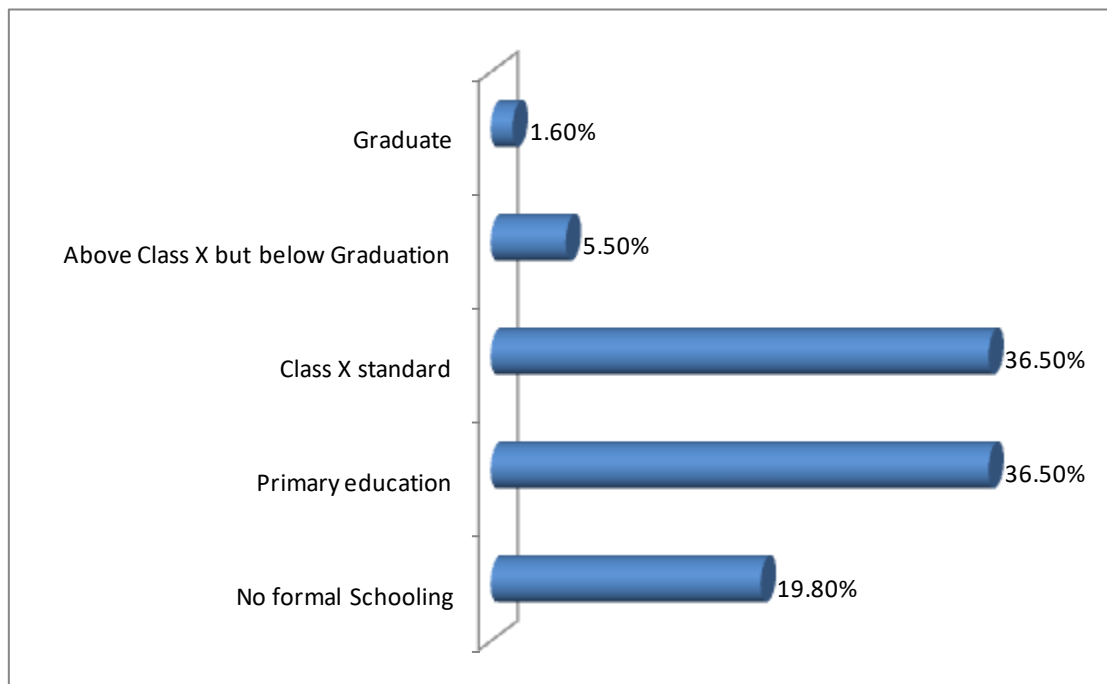


Figure 12 Qualification of the patients in sample

Data was tabulated as number of patients with various qualifications opting for a particular scale. It was seen that Descriptive Pain Scale was chosen by twenty-four (24) patients with no formal schooling and forty-two (42) patients with Primary Education, forty-one (41) people with Class X standard of education, six (6) patients with above Class X but below Graduation qualification and two (2) Graduate patients. The total number of one hundred and fifteen (115) thus had chosen Descriptive Pain Scale with Mild-Moderate-Severe options. Visual Analog scale was chosen by one (1) with primary education and two (2) with Class X standard. Similarly, Percent scale was chosen by one (1) patient each with no formal schooling and above class X but below graduation, two (2) with primary education qualification. For Numerical rating scale, one (1) patient with primary education and three (3) patients with class X standard education qualification choose.

Table 8 A composite table of Choice of pain scale and Qualification:

Qualification	Visual Analog scale	Percent Scale	Numerical Rating Scale	Descriptive Pain Scale	Total
No formal Schooling	0	1	0	24	25
Primary education	1	2	1	42	46
Class X standard	2	0	3	41	46
Above Class X but below Graduation	0	1	0	6	7
Graduate	0	0	0	2	2
Total no. patients	3	4	4	115 (91.2%)	126 (Total)

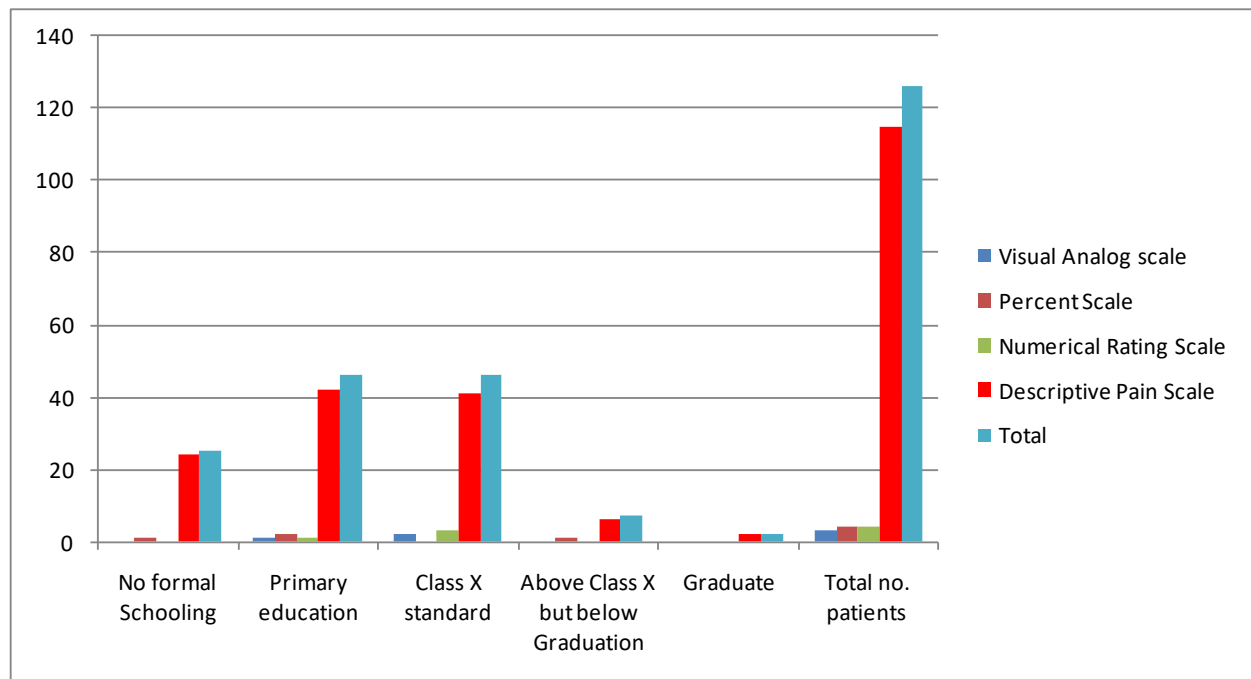


Figure 13 Choice of scale and qualification

Statistical method:

To verify the role of academic qualification in choosing pain measuring scale, Chi-Square test was performed.

H_0 : For the population of cancer patients there is no relationship between level of education and choice of pain scale Vs H_1 : For the population of cancer patients level of education and choice of pain scales are related.

Chi-Square tabulated at $\alpha = 0.5$ is 21.03

Chi-Square calculated is 9.057

Here Chi-Square calculated is less than critical value (Chi-Square tabulated) at 12 degrees of freedom. Therefore, we accept the null hypothesis for the population of cancer patients there is no relationship between choice of pain scale and level of education.

DISCUSSION:

Physician assessment of the hurdles for cancer pain relief:

In the present study, participant cancer patients suffering from pain, en mass preferred Descriptive Pain Scale of Mild-Moderate-Severe description to express their pain intensity. A survey was conducted in Israel from December, 1995 to April, 1996 on physicians who provide care the cancer patients. Participants included Oncologists, Surgeons, Hematologists, General practitioners and also internists from various set ups. Results were astonishing. For effective cancer pain management the commonest barriers strongly or very strongly mentioned were inadequate assessment of pain and treatment results (65%), insufficient knowledge of staffs (58%). Regarding evaluation of pain, only 33.1% of participants expressed that reliability for pain reporting by the patients may be up to 75–100% and another 30% believed that only not more than 50% of patients could report authentically. Underestimation about pain (58%), not giving history of pain (31%) were general problems committed by the patients, as reported by the participants. Even 1% of the physician opined that patients exaggerate pain severity and this was a barrier for proper assessment. (Sapir R, 1999) Hence, the issue of pain reporting is very important and sensitive. It is expected that a good reporting of pain from patients' side is one of the precondition for good treatment outcome. Intensity expression of the patient should be clear cut, flawless and accurate so that physician also can fully rely on the expression and make a good treatment plan.

“Patient reported outcomes” are straight forward information from patients’ end to the health care givers regarding their health status. The communication is unmodified and not interpreted by any other persons. On the other hand, “patient reported outcome measures” are the instruments that measure the “patient related outcomes”. Usually, such instruments are at heart validated questionnaires served to the patients to return with answers of self assessment about their health conditions. Such instruments are now regarded as one of the main component for taking appropriate decision about treatment where preferences of the patients are taken into consideration. This has become pertinent and important in present era as quality of life has gained tremendous attention. This is in contrary of our older treatment fashion where issues like co-morbidities and toxicities of medicines were taking upper hand. (Nguyen H, 2021) (Mestdagh F, 2023) (van den Beuken-van Everdingen M.H.J., 2020) (Drageset J., 2021)

“Patient related outcome measurements” are also at times may be challenging to the patients. Some “patient level barriers” were described in the articles. (Nguyen H, 2021) Firstly, it was observed that most of the patients had lost already considerable amount of time before reaching to the physician due to appointment schedule, tests or procedures. Hence, responding accurately and minutely and deducing the correct answer as per the questionnaire provided to them becomes difficult and it affects negatively to the assessment protocol. In view of this information, we may analyze the result of present study where almost all the participants preferred such a pain scale where only use of adjectives can document the pain intensity status.

Literacy etc and relationship with pain measuring scales:

Pain scales are widely used tools and applied to understand and express about the intensity of pain. Uni-dimensional scales take account of physical pain. Pain scales may be commonly classified as numerical scales, visual analog scales, expression based scales and verbal rating scales. Each scale has some advantage and disadvantages. But to sum up, it may be commented that there are few common factors regarding choice of pain scale. These factors may be patients related or physician or assessor related. Literacy of the patient, cognitive ability or age of the patient etc are factors those are dependent on patient. On the contrary, the assessor also may choose a scale as per their suitability and resources. Whereas in case of numerical rating scale it is easy for a patient with good level of cognitive function, there are reports that the choice of pain scales may vary with the culture also. This is true for even visual analog scales, though precision is claimed to be more in this scale and the assessor also may find it difficult to interpret the results. But verbal rating scales provide an excellent platform for a patient to describe the pain status in words and with simple classification of “mild/ moderate/ severe etc as provided by the examiner. Some limitations of verbal scale is that it is a fixed expression scale and totally dependent on options given by the examiner. Also such scale may be difficult to administer if language barrier exists. But verbal rating scales may require less use of cognitive skills. There is also information that choice of pain measuring scale may vary with culture of that particular sample. (V, 2020)

In a study done in Nepal adults with musculoskeletal pain patients participated in four pain measuring scales. The number of participants was two hundred and two and they rated their pain in all four pain scales. The study ultimately concluded that Faces Pain Scales-Revised and Verbal Rating Scales were mostly useful in their population. The study mentioned various factors including literacy & social customs of measurements etc those might have influenced the sample population to take the decision. (Pathak A, 2018)

In various studies it is mentioned that there are multiple factors which play their role in preferring or choosing the pain scale. It is mentioned in studies that cultural and ethnic diversities may influence pain measurement capacity. Other factors those can alter pain perception and expression are age, emotional status, literacy etc. (Davidhizar R, 2004) (KE, 2000) (Li L, 2007) (Peters ML, 2007)

In this study, most of the people were having lower academic qualification. Whether this academic qualification is the cause of choosing the verbal rating scale like mild-moderate-severe or not is also a pertinent question. But relationship between level of education and choice of pain scales was not found in Chi-Square test.

CONCLUSIONS:

This study result concluded that Descriptive Pain Measuring Scale is more acceptable to the participants of the study. This study was done in a Tertiary Cancer Centre of North East India. The cancer centre is the lone such centre and catering the whole State. Hence, represents the whole State. The study is unique because it directly collected data from OPD cancer patients who had pain symptom. This is a very practical aspect of

the study. It was also observed in this study that, on the contrary to the popular belief, literacy has no relation with the scale choice, as per statistical analysis done in this study. Further, this study may be treated as a conclusive one for this centre because the result was clear cut. This study is expected to produce consistently similar findings in other same type of situations. As pain is one of the most prominent symptoms which can be treated in most of the times, this study result is very much helpful in both for treatment plan and during follow up to compare with previous findings. Descriptive pain measuring scale, as used in this study, is straightforward and used only three adjectives to determine the pain intensity viz. mild, moderate & severe. In this scale administered in the study, can be express pain intensity directly by use of only one adjective. This is very easy to express. Hence, this scale was chosen by maximum persons of the population. Measuring pain intensity in large scale can also help in arrangement of pain medications in a tailored way and this scale can do the same very easily. This study is expected to contribute in the present knowledge about pain management and also in future researches in the same matter.

Anyway still there are certain limitations in this study. Firstly, this was a single centre study. Secondly, sample size was not very large and was done among the adult cancer patients only. As the study was done in a single centre, result may not reflect opinion of other centers. The drawbacks of cross sectional study also to be considered. Hence, further proposals remain for bigger multi-centric study with larger samples and different designs in other populations.

TABLES:

Table 1 Data collection table	77
Table 2 Study population.....	77
Table 3 Male and Female number in sample	78
Table 4 Age group division of sample.....	79
Table 5 Diagnosis of the patients in sample.....	79
Table 6 Choice of pain scale.....	80
Table 7 Qualification of the sample.....	81
Table 8 A composite table of Choice of pain scale and Qualification:.....	82

Figures:

Figure 1 Verbal rating scale	74
Figure 2 Visual analog scale.....	74
Figure 3 WHO pain scale & management (WHO).....	75
Figure 4 Percent pain scale.....	76
Figure 5 Numerical pain scale.....	76
Figure 6 Descriptive pain scale / Verbal rating scale used in study.....	77
Figure 7 Total number of OPD patients Vs sample population	78
Figure 8 Male: Female number in the sample.....	78
Figure 9 Age group division of the sample	79
Figure 10 Diagnosis of the sample.....	80
Figure 11 Choice of the sample for scale.....	81
Figure 12 Qualification of the patients in sample	82
Figure 13 Choice of scale and qualification	83

BIBLIOGRAPHY

Bennett M.I, K. S. (2019). The IASP Taskforce for the Classification of Chronic Pain The IASP classification of chronic pain for ICD-11: Chronic cancer-related pain. *Pain*, 160, 38–44.

Boland J.W, A. V. (2020). The relationship between pain, analgesics and survival in patients with advanced cancer; a secondary data analysis of the international European palliative care Cancer symptom study. *Eur. J. Clin. Pharmacol*, 76, 393–402.

Davidhizar R, G. J. (2004). A review of the literature on care of clients in pain who are culturally diverse. *Int Nurs Rev*, 51, 47-55.

Drageset J., S. R. (2021). Quality of life among cancer inpatients 80 years and older: A systematic review. *Health Qual. Life Outcomes*, 19, 98.

- E, C. (2018, September 18). *Pain Scale* . Retrieved August 3, 2024, from www.healthline.com/health/pain-scale#types
- E, J. (2023, August 30). *Pain Scales: Types of Scales and Using Them to Explain Pain* . Retrieved August 4, 2024, from verywellhealth: <https://www.verywellhealth.com/pain-scales-assessment-tools-4020329>
- G, V.-S. (2010). Is the WHO analgesic ladder still valid? *Can Fam Physician* , 56 (6), 514–517.
- H, A. (n.d.). *Expert Health Articles*. Retrieved May 12, 2024, from Blanchard Valley: <https://www.bvhealthsystem.org/expert-health-articles/the-three-types-of-musculoskeletal-pain>
- IASP. (n.d.). *Declaration of Montreal*. Retrieved May 12, 2024, from IASP: <https://www.iasp-pain.org/advocacy/iasp-statements/access-to-pain-management-declaration-of-montreal/>
- J, S. (2023, Jan 12). *Pain Classifications and Causes: Nerve Pain, Muscle Pain, and More*. Retrieved May 13, 2024, from WebMD: <https://www.webmd.com/pain-management/pain-types-and-classifications>
- KE, L. (2000). Culture, pain, and culturally sensitive pain care. *Pain Manag Nurs* , 1 (3 suppl 1), 16–22.
- Li L, L. X. (2007). Postoperative pain intensity assessment: a comparison of four scales in Chinese adults. *Pain Med* , 8, 223–34.
- Medicine-Jacksonville, C. o. (n.d.). *Pain Assessment and Management Initiative*. Retrieved August 4, 2024, from UFHealth: <https://pami.emergency.med.jax.ufl.edu/resources/provider-resources/pain-assessment-scales/>
- Mestdagh F, S. L. (2023). Cancer Pain Management: A Narrative Review of Current Concepts, Strategies, and Techniques. *Curr Oncol* , 30 (7), 6838–6858.
- Nguyen H, B. P. (2021). A review of the barriers to using Patient-Reported Outcomes (PROs) and Patient-Reported Outcome Measures (PROMs) in routine cancer care. *Journal of Medical Radiation Sciences* , 68 (2), 186-195.
- Nijs J, R. E. (2021). Pain and Opioid Use in Cancer Survivors: A Practical Guide to Account for Perceived Injustice. *Pain Physician* , 24, 309–317.
- Olisarova V, T. V. (2021). Pain Assessment: Benefits of Using Pain Scales for Surgical Patients in South Bohemian Hospitals. *Healthcare* , 9 (2), 171.
- Pathak A, S. S. (2018). The utility and validity of pain intensity rating scales for use in developing countries. *www.painreportsonline.com* , 3 , e672.
- Peters ML, P. J. (2007). Pain assessment in younger and older pain patients: psychometric properties and patient preference of five commonly used measures of pain intensity. *Pain Med* , 8, 601-10.
- Sapir R, C. R. (1999). Cancer Pain Knowledge and Attitudes of Physicians in Israel. *JPSM* , 17 (4), 266-276.
- V, Z. (2020, October 22). *Pain scale types: Benefits and limitations*. Retrieved September 30, 2024, from MedicalNewsToday: <https://www.medicalnewstoday.com/articles/pain-scale#what-is-the-pain-scale>
- van den Beuken-van Everdingen M.H.J., v. K. (2020). Treatment of Pain in Cancer: Towards Personalised Medicine. *Cancers* , 10, 502.
- WHO. (n.d.). Retrieved November 22, 2024, from ResearchGate: https://www.researchgate.net/figure/Pharmacological-management-of-pain-Adapted-from-the-World-Health-Organization-Pain_fig2_312576362