

How Effective Adult Patients of Delhi NCR with Musculoskeletal Disorders Found Their Physiotherapy Treatment and Their Awareness and Perception about Physiotherapy - A Cross-Sectional Study

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ABSTRACT

Background: Physical therapy is very well known for its vital role in health promotion, treating, and preventing a wide spectrum of health disorders. It is considered an indispensable part of the recovery of patients with musculoskeletal disorders and is regarded as an important field of medicine in the health sector.

Objective: The purpose of this study was to find how effective patients of musculoskeletal disorders found physical therapy in their journey of recovery and their Awareness and Perception about Physiotherapy

Method: Online cross-sectional survey developed by the authors was conducted using Google Forms. A total of 26 questions excluding questions regarding general demographics of patients, were designed in this web-based survey. Non-probability purposive sampling method was used. The survey was distributed via emails/WhatsApp to 260 adult patients residing in Delhi NCR, who approached physiotherapy for musculoskeletal conditions. Based on the responses, percentage analysis was done.

Result and Conclusion: Out of 260 only 231 patients responded (male = 126 female = 105) between age group 20 to 92 residing in Delhi and NCR. Majority of the patients found physiotherapy an effective treatment option and were satisfied with their overall physiotherapy experience. Yet a large number of patients couldn't identify the role of physiotherapy in health sector. People of Delhi-NCR still lack awareness about the various specializations in Physiotherapy and many patients were unable to identify the role of a physiotherapist and confused them with other healthcare professionals like Massage Therapists, Chiropractors and Acupuncturist.

Keywords – Awareness, Effective, Musculoskeletal, Perception, Physical therapy, Treatment

INTRODUCTION

Physical therapy is one among the allied healthcare system that aims to help individuals in maintaining and restoring maximal physical functioning and health throughout life⁽¹⁾. Historically, physicians like Hippocrates and Galen, considered as the first practitioners of physical therapy, supported techniques that are widely used

now, with excellent results⁽²⁾. According to World Physiotherapy “Physiotherapists provide services that develop, maintain and restore people’s maximum movement and functional ability. They can help people at any stage of life when movement and function are threatened by aging, injury, diseases, disorders, conditions or environmental factors. Physiotherapists help

people maximize their quality of life, looking at physical, psychological, emotional, and social wellbeing. They work in the health spheres of promotion, prevention, treatment/ intervention, and rehabilitation⁽³⁾.”

The foundation of Physiotherapy was laid in India in 1952 following a major epidemic of poliomyelitis in Mumbai & soon in 1953 the first school & center for Physiotherapy was established in Mumbai as a joint collaborative project of the Government of India, State Government, & the then Bombay Municipal Corporation (BMC) with technical support by World Health Organization (WHO)⁽⁴⁾⁽⁵⁾.

In many settings including India, physical therapy services are given in conjunction with medical treatment and other therapies. Musculoskeletal conditions encompass a wide range of disorders that affect the bones, joints and connective tissue, which can be age related or trauma or post/ pre surgery. Physiotherapists assess and treat patients with Musculoskeletal conditions to reduce and eliminate pain and address muscle weakness, loss of stability and limited functional abilities⁽⁶⁾. Physiotherapy interventions include education about treatment and self-management strategies which improves patient satisfaction⁽⁷⁾. Physiotherapy for Musculoskeletal conditions is particularly effective for injury prevention and detection before the condition becoming incapacitating for the patient. Outpatient physiotherapy programs for patients with MSK conditions are cost-effective and result in earlier return-to-work and return to pre-injury activities⁽⁶⁾.

Although physiotherapy has a vital role in society, it seems to lack a clear identity with the public who demonstrate limited awareness and understanding about the role of physiotherapy, its importance in health sector and have difficulty in differentiating it from other health professions⁽⁸⁾. Having such a crucial role the extent of understanding and outlook on physiotherapy as a treatment option among

people is still doubtful. The purpose of this study is to find how effective, patients with musculoskeletal disorders found physiotherapy in their journey of recovery and their awareness and perception about physiotherapy.

METHODOLOGY

Non-probability purposive sampling method was used. An online survey was carried out using Google Forms, which was distributed through WhatsApp and emails among 260 patients. Statistical method employed – Percentage analysis.

Inclusion criteria –

- Adult Age group i.e. 18 and above years
- Both male and female
- Patients who have undergone physiotherapy treatment in recent years/months/weeks/days
- Patients who are currently undergoing physiotherapy treatment
- Only patients with musculoskeletal conditions
- Patients of private clinic as well as hospital setting

Exclusion criteria –

- Physiotherapists
- Medical and allied health professionals
- Subjects not willing to participate

Procedure

The online survey was distributed among 260 patients who met the inclusion criteria. The survey consisted of 26 MCQ plus 6 questions to establish general demographics of patients. Out of the 26 MCQ, 18 questions listed below, evaluated how effective the patient found physiotherapy in terms of pain reduction, enhancement of strength, confidence, ROM and functionality, patient-therapist relationship and patient education.

1. Did physiotherapy help reduce your pain?
2. If pain is reduced, then by what percentage?
3. Did Physiotherapy help you become functionally more independent in

- carrying out activities that were previously limited by your condition?
4. What was the impact of Physiotherapy on your Joint Range of Motion?
 5. Did physiotherapy help you gain strength and combat motion fatigue of the affected joint/extremity?
 6. Did physiotherapy help you achieve your goals set by you and your therapist?
 7. Did the treatment provide you with a positive outlook towards your condition?
 8. Did you feel the therapist provided adequate emotional support and encouragement throughout the treatment?
 9. How would you describe your communication with the therapist?
 10. Did physiotherapy treatment help you educate about the effects of your condition on the body?
 11. Were your worries and doubts addressed during the treatment?
 12. Did the treatment increase your confidence level to carry out movements using the joint/s which was affected?
 13. Were the aim and procedure of prescribed exercises, positions and postures thoroughly explained to you?
 14. Was a home program included, for you to carry out exercises at home?
 15. If a home exercise program was included then were the repetition, sets, type of exercises, purpose, posture during exercise etc. thoroughly explained and demonstrated to you?
 16. Do you feel the treatment is/was worth the cost and time?
 17. Do you feel the treatment provided is/was?
 18. How would you rate your overall physiotherapy experience?

3 questions were based on the status of treatment and means of referral to physiotherapy

1. Status of Treatment?
2. Duration of elapsed treatment time?

3. How were you referred to the physical therapy department?

5 questions to evaluate and understand patient's awareness and perception about physiotherapy and its role in the health sector post their physiotherapy.

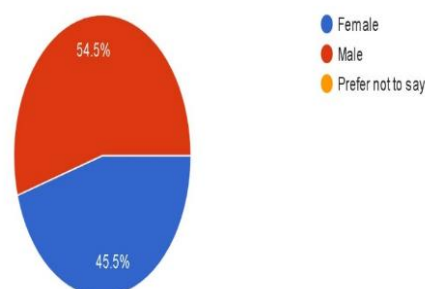
1. Would you recommend and spread awareness about physiotherapy to your friends, relatives etc. in your circle?
2. Did you find Physiotherapy to be an indispensable and irreplaceable part of your recovery?
3. What describes physiotherapy best according to you?
4. What are the various disorders/ conditions a physiotherapist deals with?
5. Did the Treatment help you identify the role of a physiotherapist in the health sector?

Patients were asked to give only a single response to each question asked in the survey. No scales or measurements were used in this study, to establish how effective was physiotherapy. This study is purely based on patient's self-report of their condition and physiotherapy experience.

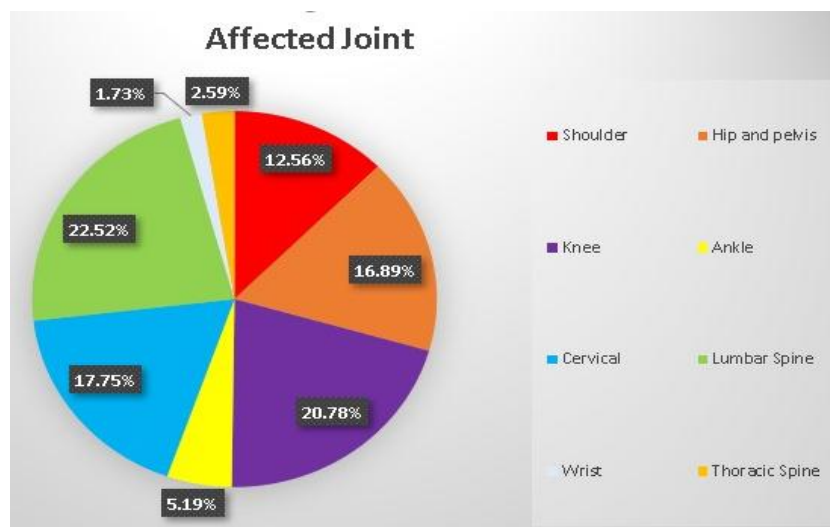
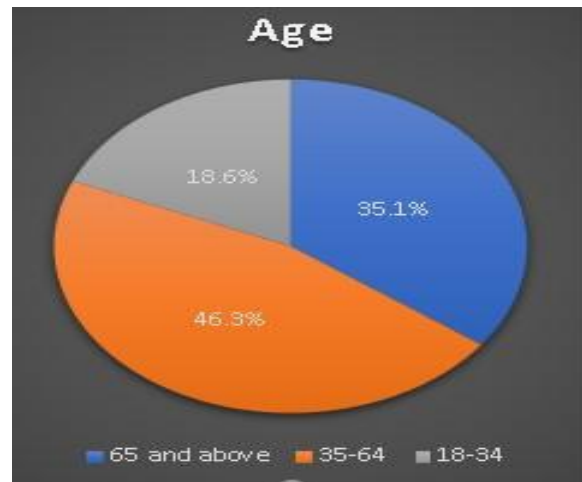
RESULT

Percentage analysis was done for each question. Out of 260 patients only 231 responded to the survey out of which 126 males and 105 females between the age group 18 to 92 participated in this study.

Gender :
231 responses



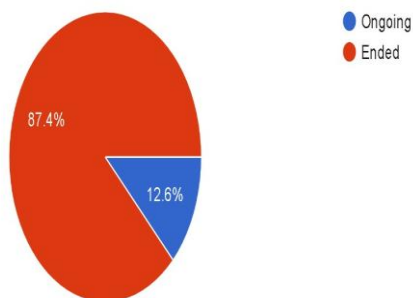
Out of the total 231 patients, 46.3% of patients were between 35-64 years, 35.1% were 65 years or above and 18.6% were between 18-34 years. Patients in this study suffered from various Musculoskeletal conditions affecting chiefly 8 major joints of the body, out of which knee and Lumbar spine were the joints affected in majority of people followed by Cervical spine, Hip and pelvis and Shoulder.



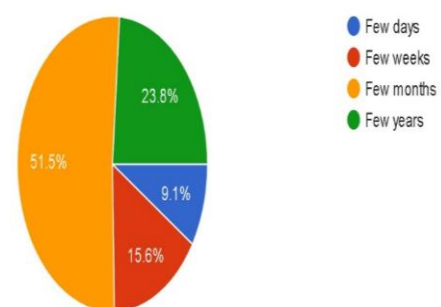
Among the patients, 12.6% were currently undergoing physiotherapy treatment while 87.4% had already completed their course of physiotherapy. Based on the duration of elapsed treatment time, patients had either completed or were undergoing physiotherapy since a few

months (51.5%), since a few years (23.8%), since few weeks (15.6%) or since few days (9.1%). Among the participants, 68.4% of patients were referred to physiotherapy through a doctor, 17.3% through friends and relatives and 14.3% patients were self-referrals.

Status of Treatment :
231 responses

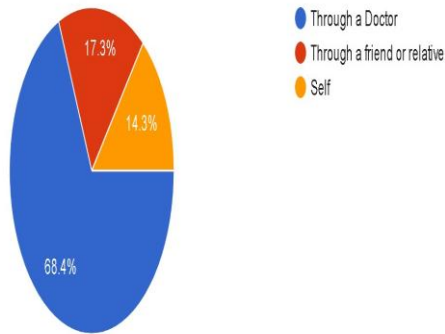


Duration of elapsed treatment time ?
231 responses



How were you referred to the physical therapy department ?

231 responses

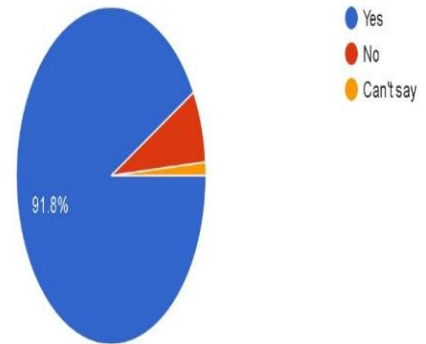


91.8% of patients reported a reduction in pain because of physiotherapy while in 6.9% physiotherapy didn't reduce pain, and 1.3% was unable to appreciate the effect of physiotherapy in pain management. 22.1% of patients reported physiotherapy completely cured their pain, 41.4% reported

physiotherapy reduced their pain by more than 50% and less than 100%. In 15.2% physiotherapy reduced pain by 50% while in 15.6% physiotherapy helped reduce pain by less than 50%.

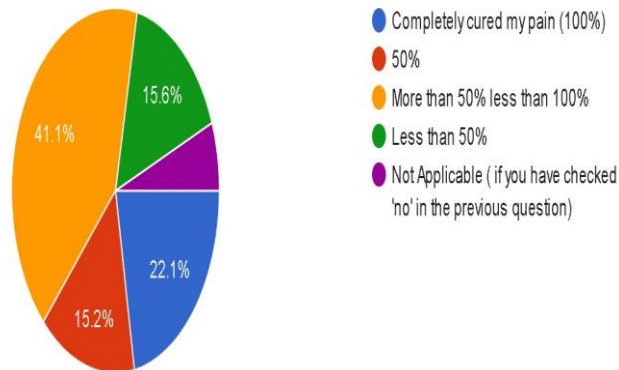
Did physiotherapy help reduce your pain ?

231 responses



If pain is reduced then by what percentage ?

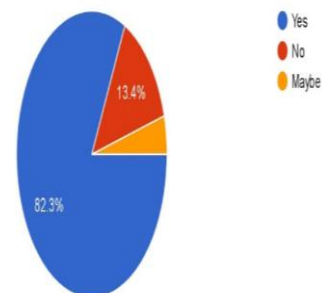
231 responses



Among the patients, 82.3% of them found physiotherapy effective in helping them become functionally more independent in carrying out activities of daily living which were previously limited by their condition, 13.4% found their physiotherapy ineffective in enhancing their functionality, while 4.3% were unable to give a clear verdict on this.

Did Physiotherapy help you become functionally more independent in carrying out activities that were previously limited by your condition ?

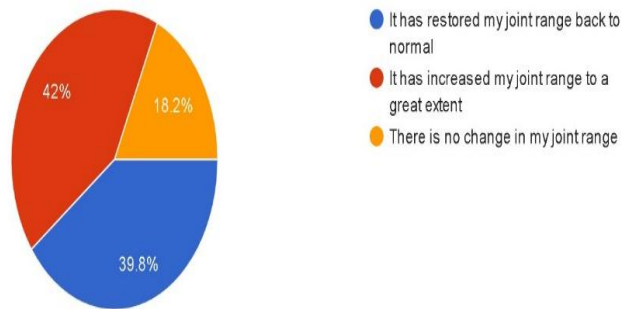
231 responses



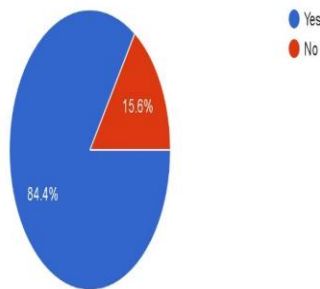
39.8% of patients reported that their physiotherapy helped them gain ROM back to normal, 42% found physiotherapy effective in improving their ROM to a great extent, while 18.2% reported no change in

ROM despite physiotherapy. 84.4% patients reported physiotherapy helped them gain strength and combat motion fatigue of the affected joint/extremity.

What was the impact of Physiotherapy on your Joint Range of Motion ?
231 responses

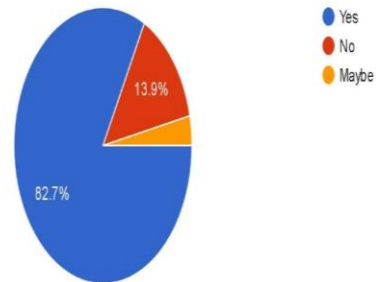


Did physiotherapy help you gain strength and combat motion fatigue of the affected joint/extremity ?
231 responses



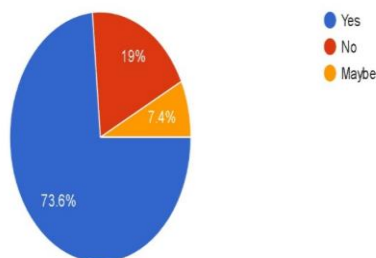
For 82.7% of patients' physiotherapy helped in the development of a positive attitude towards their condition. 13.9% didn't find their treatment to be effective enough to instil a sense of positivity towards their condition.

Did the treatment provide you with a positive outlook towards your condition ?
231 responses



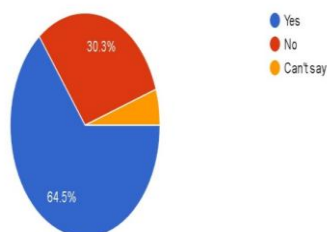
73.6% of patients felt that they were able to achieve the goals set by them and their therapist with the help of physiotherapy, 19% felt they were unable to achieve their goals while 7.4% were unable to give a clear verdict.

Did physiotherapy help you achieve your goals set by you and your therapist ?
231 responses

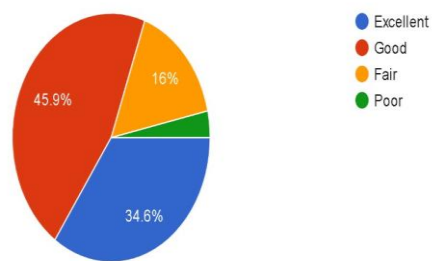


64.5% of them felt that their therapist provided adequate emotional support and encouragement throughout the treatment, 30.3% didn't feel the same. 34.6% of patients rated their communication with their therapist as excellent, 45.9% rated it good, 16% rated it fair and 3.5% rated it as poor.

Did you feel the therapist provided adequate emotional support and encouragement throughout the treatment ?
231 responses

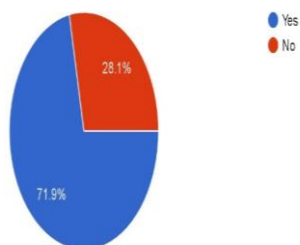


How would you describe your communication with the therapist ?
231 responses

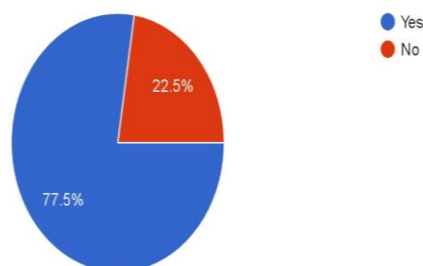


79.1% patients found their treatment effective in educating them and becoming more aware about their condition, while in 28.1% treatment failed to do so. According to 77.5% patients, worries and doubts during the treatment were addressed by their therapists, while the remaining 22.5% patients didn't feel the same.

Did physiotherapy treatment help you educate about the effects of your condition on the body ?
231 responses

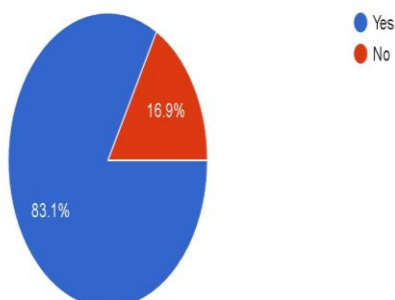


Were your worries and doubts addressed during the treatment ?
231 responses



83.1% patients reported their treatment helped in gaining confidence to carry out movement with their affected extremity, remaining 16.9% felt their treatment wasn't adequate to boost their confidence.

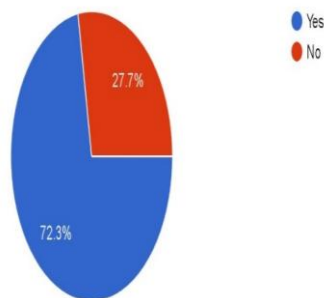
Did the treatment increase your confidence level to carry out movements using the joint/s which was affected ?
231 responses



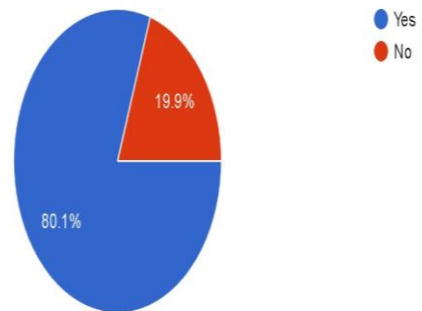
72.3% patients reported that their therapist explained to them aim and procedure of prescribed exercises, positions, and postures. For 90.5% patients a home program was included. Out of this 90.5% patients, 65.4% reported that they were well explained and taught on how to

perform various exercises at home while 28.6% patients reported that they were not taught and explained on how to carry out these exercises . 80.1% of patients felt that the treatment given to them was worth time and money, while 19.9% disagree to this.

Were the aim and procedure of prescribed exercises, positions and postures thoroughly explained to you ?
231 responses

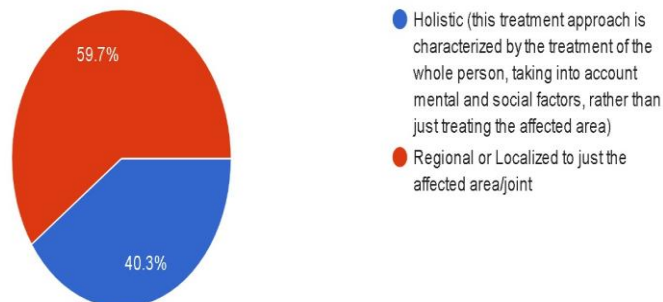


Do you feel the treatment is/was worth the cost and time ?
231 responses

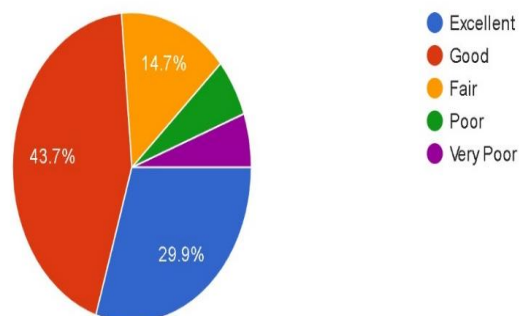


59.7% patients found their treatment to be localized to the affected area, remaining 40.3% found it to be holistic. 29.9% of patients rated their overall physiotherapy experience as excellent, 43.7% rated it as good, 14.7% rated it fair, 6.1% rated it poor and 5.6% rated it very poor.

Do you feel the treatment provided is/was :
231 responses



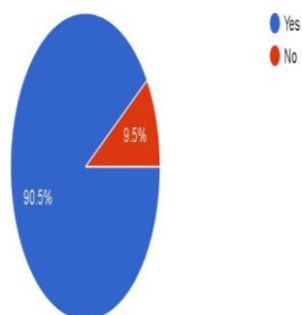
How would you rate your overall physiotherapy experience ?
231 responses



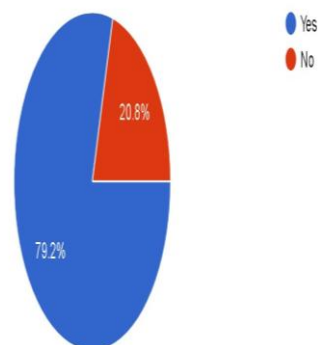
90.5% patients showed interest in recommending and spreading awareness about physiotherapy as a treatment option in their circle, while 9.5% patients refused to do so. 79.2% patients believe physiotherapy

played an indispensable and irreplaceable part in their recovery whereas 20.8% disagreed with this.

Would you recommend and spread awareness about physiotherapy to your friends, relatives etc in your circle ?
231 responses



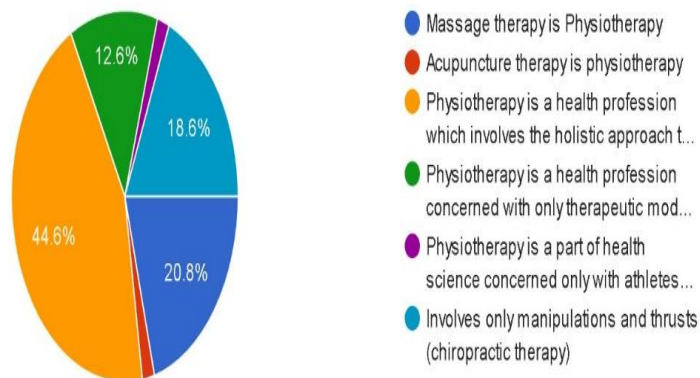
231 responses



When asked what describes physiotherapy the best out of the 6 options given to them in the survey, 44.6% patients responded by choosing the option which described physiotherapy as, a health profession which involves the holistic approach to the prevention, diagnosis and therapeutic management of pain, disorders of movement or optimization of function to enhance the health and welfare of the

community from an individual or population perspective. 20.8% believe massage therapy is physiotherapy, 18.6% believe Chiropractic therapy is physiotherapy, 12.6% believe physiotherapy is only concerned with the application of therapeutic modalities, 1.7% believe acupuncture therapy is Physiotherapy and 1.7% described physiotherapy as a health field concerned only with sportspersons.

What describes physiotherapy best according to you ?
231 responses

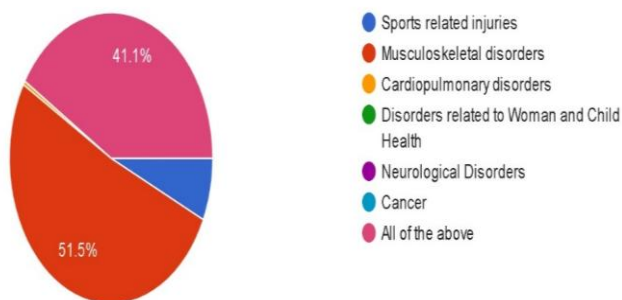


Based on their understanding about the field of physiotherapy, patients when asked about the various conditions that a physiotherapist specializes in, 51.5% patients responded that they only treat musculoskeletal disorders, 6.9% believed that physiotherapist only treats sports

injuries and 41.1% believed that physiotherapist treats disorders not only related to Orthopedic and sports but also neurological, cardiopulmonary, cancer and woman and child related health disorders too.

What are the various disorders/ conditions a physiotherapist deals with ?

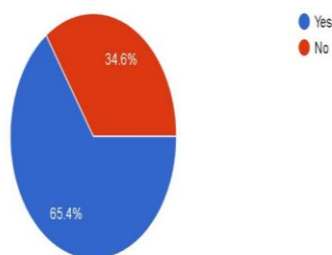
231 responses



Based on their physiotherapy experience, 65.4% patients reported that they were able to identify the role of a physiotherapist in health sector. The remaining 34.6% failed to identify the role of a physiotherapist in health sector.

Did the Treatment help you identify the role of a physiotherapist in the health sector ?

231 responses



DISCUSSION

This study was conducted to evaluate how effective patients with musculoskeletal condition found their physiotherapy and to evaluate and understand their awareness and perception about physiotherapy in health sector. The study is based on patient's self-report of their condition and physiotherapy experience. According to this study, the majority population were those who had already completed their course of physiotherapy. Maximum patients in this study were those above the age of 35years. Patients suffered from various orthopedic conditions affecting 8 major joints of the body, out of which knee and Lumbar spine were the joints affected in the majority of patients.

Physiotherapy is well known as an effective treatment option to reduce pain

and increase functionality of patients. A systemic review done by Valevein Rodrigues, Elisângela Gomes et al. discusses the importance of exercises in reducing pain caused by musculoskeletal disorders⁽⁹⁾. Another study by Saroj M Sanghavi and Dakshesh M Sanghavi on the Role Of Physiotherapy in Pain management, found physiotherapy effective in minimizing pain, stiffness and deformities when started as early as possible⁽¹⁰⁾. The same was found in this study where 91.8% patients reported a reduction in pain because of physiotherapy and 82.3% of them found it effective in helping them become functionally more independent in carrying out activities of daily living which were previously limited by their condition.

Generally, in MSK conditions the ROM is affected⁽¹¹⁾. This not only hinders the functionality of the patient but also demotivates them and harms one's mental state⁽¹²⁾⁽¹³⁾. Further, it may also impact the muscle strength and function and result in easy motion fatigue⁽¹⁴⁾. Through this study it was found that majority of the patients reported physiotherapy helpful in regaining their ROM and muscular strength which decreased motion fatigue. This helped a large number of patients in carrying out movements confidently.

Majority of the patients in this study felt that the therapist did help them educate and become more aware about their condition and provided a treatment that helps the patient develop a positive attitude towards their condition. The physiotherapist needs to establish a healthy patient-therapist

relationship⁽¹⁵⁾. Having good communication skills, being empathetic towards the patient and providing them emotional support is important for a physiotherapist this not only helps the patient develop a sense of trust in the therapist but also makes the recovery process faster. A study done by Harding, Vicki Williams, Amanda Cdec in the year 1995 describes the importance of Applying psychological models and principles to improve physiotherapeutic outcomes⁽¹⁶⁾. It was noted that most of the patients found their communication with the therapist satisfactory and that the therapist was able to provide them adequate emotional support and encouragement throughout the treatment.

According to this study doubts and worries of majority of patients, were addressed and they were properly guided at each step of their rehabilitation. Addressing the worries and doubts that the patient encounters and adopting various strategies to provide quality patient education is an essential part of a good treatment experience it also helps in increasing the effectiveness of the treatment⁽¹⁷⁾. Making the patient more involved in clinical decision making and empowering them in their treatment aids in achieving desired goals⁽¹⁸⁾. Hence the physiotherapist must create a comfortable and friendly environment for the patient to communicate freely and allows him to learn about his treatment. A study done by Hoffmann, Tammy C. Lewis, Jeremy Maher, Chris G. in the year 2020 discusses the importance of Shared Clinical Decision making in Physiotherapy practice⁽¹⁹⁾.

In this study most of the patients felt that the treatment was worth their time and money. Overall physiotherapy experience was found to be satisfactory in many patients. Similar results on patient satisfaction with overall physiotherapy experience in different parts of India, were obtained in 4 other studies done by Garg, Kapil Sharma, Himanshi War, Deptee in the year 2020⁽²⁰⁾; Choksi, Tanishk N. and Anandh, S. in the year 2020⁽²¹⁾; Thaver,

Sabah and Ganu, A. S. in the year 2012⁽²²⁾; Neha, Kakade and Mandar, Malawade in the year 2020.⁽²³⁾

According to Huljev, Dubravko Pandak, Tatjana "Holistic medicine means consideration of the complete person, physically, psychologically, socially, and spiritually, in the management and prevention of disease. These different states can be equally important. All healthcare practitioners should aspire towards a holistic approach to patients and attempt to practice it".⁽²⁴⁾ Modern physiotherapy practice gives large importance to adopt a holistic approach which means treatment of the whole person taking into account mental and social factors, in the quest for optimal health and wellness rather than just treating the affected area. However, through this study majority patients reported their treatment to be localized to the affected area only. Often in MSK conditions, the entire biomechanics of the body gets disrupted for example if someone has a problem with lower back causing pain then its not just the lumbar spine that needs the focus (localized approach), the physiotherapist needs to consider the whole body and identify all the effects of it on various other joints as well as on the patient's mental and social health, and devise a treatment plan for the restoration of patient's physical, social and mental health for an optimum recovery.

In this study most of the patients showed interest in recommending and spreading awareness about physiotherapy as a treatment option in their circle based on their overall treatment experience. Patients were referred to physiotherapy mostly by a doctor. This may be because of lack of awareness about physiotherapy among the patients. Studies previously done by Paul, Anila and Mullerpatan, Rajani⁽²⁵⁾; Swagatika, Smruti⁽²⁶⁾ Doshi, Devanshi Jiandani, Mariya Gadgil, Rucha Shetty, Neha Th, B P⁽²⁷⁾; Rathi, Anushka Sunil and Chandra, Ruchi⁽²⁸⁾ concluded that there is "less awareness regarding the field of physiotherapy in general as well as medical population, and there is an urgent need to

take appropriate measures to spread awareness". In a developing country like India, it is very essential to empower fields of Rehabilitation like Physiotherapy. Going to a physiotherapist first can help many patients who are suffering from MSK conditions get an early diagnosis and an appropriate treatment⁽²⁹⁾. Physiotherapists can effectively refer patients to the correct department of a hospital depending upon their diagnosis⁽³⁰⁾⁽³¹⁾. "Lack of accurate information about competence of Physiotherapists among Physicians, can lead to underutilization of skills and resources of this potential profession⁽³²⁾".

It is extremely important to provide a correct definition of what a physiotherapist does and the role of Physiotherapy⁽⁵⁾⁽³³⁾ in health promotion and wellness⁽³⁴⁾ among people. Through this study it was found that patients still confused Physiotherapy with other professions like Massage therapy, Acupuncture therapy and Chiropractic Therapy⁽³⁵⁾ and many couldn't identify the role of a physiotherapist in the health sector despite undergoing treatment. A Study done by Avi Choudhary in the year 2019 on the General population of Delhi⁽³⁶⁾ revealed that "people of Delhi didn't have knowledge about the various specializations in Physiotherapy and that there is a dire need to improve awareness of people on the different conditions that a physiotherapist treats". Similar results were obtained in this study where patients believed that Physiotherapy specializes only in musculoskeletal conditions. This clearly shows that people are unaware of the other important branches of Physiotherapy which deals with Cardiorespiratory, Neurological, Woman and Child related health disorders.

Limitations of this study

- Time constraints
- Small sample size
- No scales or measurements were used to determine how effective physiotherapy was for patients. (Study is purely based

on patient's self-report and treatment experience)

- Small geographical area

Scope of further research

- A larger geographical area and on a larger population
- The reason behind lack of awareness

CONCLUSION

Through this survey study it was found that majority patients with musculoskeletal conditions residing in Delhi-NCR found their physiotherapy effective in decreasing their pain and helped them increase ROM, Muscle strength, Confidence, Functionality and independency to carry out ADL's. Majority patients were satisfied with their overall physiotherapy experience. The foundation of Physiotherapy was laid in India 1952. Yet after 69 years of its foundation, many patients couldn't identify the role of physiotherapy in health sector. Majority patients still get referred to Physiotherapy through a Doctor. Patients lack awareness about the various specializations in Physiotherapy and many patients were unable to identify the role of a Physiotherapist and confused them with other healthcare professionals like Massage Therapists, Chiropractors and Acupuncturist.

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Conflict of Interest: None

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Ethical Approval: Approved

REFERENCES

1. Pattanshetty Renu, Metgud Deepa. Awareness of physiotherapy among other health professionals in India: Current scenario. Indian J Phys Ther Res [Internet]. 2019 [cited 2021 May 3];1(2). Available from: https://scholar.google.com/citations?user=BkWA2AAAAAJ&hl=en#d=gs_md_cita-

- d&u=%2Fcitations%3Fview_op%3Dview_citation%26hl%3Den%26user%3DaBkWA2AAAAAJ%26citation_for_view%3DaBkWA2AAAAAJ%3A0EnyYjriUFMC%26tzom%3D-330
- James J, Murphy G. Community attitudes toward physiotherapy and other health professions. *Aust J Physiother* [Internet]. 1979 [cited 2021 May 3];25(2):69–72. Available from: <https://pubmed.ncbi.nlm.nih.gov/25026252/>
 - What is physiotherapy? | World Physiotherapy [Internet]. [cited 2021 May 3]. Available from: <https://world.physio/resources/what-is-physiotherapy>
 - Dastoor D. Looking back at 50 years of Physiotherapy. *Physiother Publ Sch Cent Physiother Seth GSMC KEMCH*. 2003;
 - Shimpi Apurv, Writer Hutoxi, Shyam Ashok, Dabadghav Rachana. Role of Physiotherapy in India-A Cross-sectional Survey to Study the Awareness and Perspective among Referring Doctors. *J Med Thesis* [Internet]. 2014 [cited 2021 May 3]; Available from: www.journalmedicalthesis.com
 - Association Canadian Physiotherapy. The Value of physiotherapy in Musculoskeletal Conditions [Internet]. 2012. Available from: https://physiotherapy.ca/sites/default/files/valuePT/cpa_valuept_musculoskeletal-en.pdf
 - Knight PK, Cheng ANJ, Lee GM. Results of a survey of client satisfaction with outpatient physiotherapy care. *Physiother Theory Pract* [Internet]. 2010 Jul [cited 2021 May 3];26(5):297–307. Available from: <https://pubmed.ncbi.nlm.nih.gov/20557260/>
 - Agarwal Y, Agarwal M, Gupta N. Awareness of Physiotherapy among Higher Secondary Students and Perseverance among Physiotherapy Students and Professionals in Meerut - A survey. *Indian J Physiother Occup Ther* [Internet]. 2012;6(1):176–7. Available from: <http://ez-sc.v.statsbiblioteket.dk:2048/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=ccm&AN=82958722&site=ehost-live>
 - Valevein Rodrigues E, Gomes A, Tanhoffer A, Leite N. Effects of exercise on pain of musculoskeletal disorders: A systematic review. *Acta Ortop Bras*. 2014 Nov 1;22:334–8.
 - Sanghavi S, Sanghavi D. Role of Physiotherapy in Pain Management [Internet]. *The Journal of the Association of Physicians of India*. 2015. Available from: <https://www.japi.org/u2c4e454/role-of-physiotherapy-in-pain-management>
 - Bello AI, Ababio E, Antwi-Baffoe S, Seidu MA, Adjei DN. Pain, range of motion and activity level as correlates of dynamic balance among elderly people with musculoskeletal disorder. *Ghana Med J* [Internet]. 2014 Dec;48(4):214–8. Available from: <https://pubmed.ncbi.nlm.nih.gov/25709137>
 - Kang KK, Ciminero ML, Parry JA, Mauffrey C. The Psychological Effects of Musculoskeletal Trauma. *J Am Acad Orthop Surg* [Internet]. 2021 Apr 1 [cited 2021 May 3];29(7):e322–9. Available from: <https://journals.lww.com/10.5435/JAAOS-D-20-00637>
 - Antonopoulou MD, Alegakis AK, Hadjipavlou AG, Lionis CD. Studying the association between musculoskeletal disorders, quality of life and mental health. A primary care pilot study in rural Crete, Greece. *BMC Musculoskelet Disord* [Internet]. 2009 Dec 20 [cited 2021 May 3];10(1):143. Available from: <https://bmcmusculoskeletdisord.biomedcentral.com/articles/10.1186/1471-2474-10-143>
 - Taba HA, Hagen JE, Parvataneni HK. Concise Review of the Effects of Orthopedic Surgery or Trauma on Muscle Function. *Tech Orthop* [Internet]. 2017 Dec [cited 2021 May 3];32(4):226–32. Available from: <https://journals.lww.com/00013611-201712000-00005>
 - Klamber Moffett JA, Richardson PH. The influence of the physiotherapist-patient relationship on pain and disability. *Physiother Theory Pract* [Internet]. 1997 Jan 1;13(1):89–96. Available from: <https://doi.org/10.3109/09593989709036451>
 - Harding V, Williams AC. Applying psychology to enhance physiotherapy outcome [Internet]. Vol. 11, *Physiotherapy Theory and Practice*. Informa Healthcare; 1995 [cited 2021 May 3]. p. 129–32. Available from: <https://www.tandfonline.com/action/journalInformation?journalCode=iptp20>
 - Sluijs EM. Patient Education in Physiotherapy: Towards a planned

- approach. *Physiother (United Kingdom)*. 1991 Jul 10;77(7):503–8.
18. Hoffmann TC, Lewis J, Maher CG. Shared decision making should be an integral part of physiotherapy practice. *Physiotherapy [Internet]*. 2020;107:43–9. Available from: <https://www.sciencedirect.com/science/article/pii/S0031940618302827>
 19. Hoffmann TC, Lewis J, Maher CG. Shared decision making should be an integral part of physiotherapy practice. Vol. 107, *Physiotherapy (United Kingdom)*. Elsevier Ltd; 2020. p. 43–9.
 20. Garg K, Sharma H, War D. Satisfaction Level Of General Population Towards Physiotherapy Services; A Cross Sectional [Internet]. Article in *International Journal of Current Research*. 2020 [cited 2021 May 3]. Available from: <https://www.researchgate.net/publication/343230735>
 21. Choksi TN, Anandh S. A Survey on Patient Satisfaction Levels Regarding Physiotherapy Treatment in Satara District. *Indian J Public Heal Res Dev [Internet]*. 2020 [cited 2021 May 3];11(5):517–21. Available from: <https://web.b.ebscohost.com/abstract?direct=true&profile=ehost&scope=site&authtype=crawler&jrnl=09760245&AN=146435366&h=gMQjZcTc1QXURSEUsBAhCHKvn4yYMGWc%2BLXxFm%2FOJo5OaXJG3QeaCSXuSgU39IDx1NoAHKBEj%2BzLmKNGP44Tpg%3D%3D&url=c&resultNs=AdminWebAuth&resultLo>
 22. Thaver S, Ganu AS. A Study of Patient Satisfaction During Physiotherapy Treatment at the Musculoskeletal OPD at MGM Hospital, Navi Mumbai. *Indian J Physiother Occup Ther*. 2012;6(4):234–8.
 23. Neha K, Mandar M. Assessment of Patient Satisfaction in Physiotherapy Department in Rural Area. *Indian J Public Heal Res Dev [Internet]*. 2020 May 24 [cited 2021 May 3];11(05):155. Available from: <https://medicopublication.com/index.php/ijphrd/article/view/9308>
 24. Huljev D, Pandak T. Holistic and team approach in health care. *Signa Vitae*. 2016 Jun 14;11:66–9.
 25. Paul A, Mullerpatan R. Review of Physiotherapy Awareness across the Globe. *Int J Heal Sci Res [Internet]*. 2015 [cited 2021 May 3];294(10). Available from: www.ijhsr.org
 26. Swagatika S. Awareness Of Physiotherapy & Its Scope Among Women In A Community-A Survey. *Int J Physiother Res [Internet]*. 2019 [cited 2021 May 3];7(6). Available from: <https://dx.doi.org/10.16965/ijpr.2019.198>
 27. Doshi D, Jiandani M, Gadgil R, Shetty N, Th BP. Physiotherapy Awareness In Medical And Non Medical Population: A Social Media Survey. *Orig Res Artic [Internet]*. 2017 [cited 2021 May 3];5(2):1971–5. Available from: <https://dx.doi.org/10.16965/ijpr.2017.119>
 28. Rathi AS, Chandra R. Awareness of Physiotherapy as Career Option among Higher Secondary Students of Nagpur City: A Cross Sectional Study. *Int J Heal Sci Res [Internet]*. 2020 Oct [cited 2021 May 3];10(10):13. Available from: www.ijhsr.org
 29. Riggare S. Self referral to physiotherapy and other services would empower patients and doctors We should make direct access easy when the benefits outweigh the risks [Internet]. Vol. 352, *BMJ (Online)*. BMJ Publishing Group; 2016 [cited 2021 May 3]. Available from: <https://www.bmj.com/content/352/bmj.h6977>
 30. Talpur M, Khanzada S, Khowaja A, of Physicaltherapy D. Assessment of the Referral of Patients for Physiotherapy among Medical Professionals of Isra University Hospital. *IOSR J Dent Med Sci e-ISSN [Internet]*. 2015 [cited 2021 May 3];14(5):73–6. Available from: www.iosrjournals.org
 31. Webster VS, Holdsworth LK, McFadyen AK, Little H. Self-referral, access and physiotherapy: patients' knowledge and attitudes-results of a national trial. *Physiotherapy*. 2008 Jun 1;94(2):141–9.
 32. Odebiyi D, Amazu A, Akindele M, Igwe S, Olaogun M. Evaluation of the Mode of Referral of Patients for Physiotherapy by Physicians. *African J Physiother Rehabil Sci [Internet]*. 2010 Dec 8 [cited 2021 May 3];2(1):14–20. Available from: <https://www.ajol.info/index.php/ajprs/article/view/62601>
 33. Contributors Physiopedia. Role of Physiotherapists in Global Health [Internet]. Physiopedia. [cited 2021 May 3]. Available from: <https://www.physio->

- pedia.com/index.php?title=Role_of_Physiotherapists_in_Global_Health&oldid=266663
34. Sundar Sahu K, Bharati B. Role of Physiotherapy in Public Health Domain: India Perspective. *Indian J Physiother Occup Ther.* 2014 Nov 24;Volume-8:2014.
35. Phang Hoong. Difference between Chiropractor and Physiotherapist or RMT [Internet]. 2017 [cited 2021 May 3]. Available from: <https://propelphysiotherapy.com/physiotherapy/difference-between-chiropractor-and-physiotherapist>
36. Avichoudhary. Awareness and Perception of Physiotherapy among General. *Int J Sci Res Rev.* 2019;8(3):129–35.

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