Prevalence of Post-Cancer Physiotherapy Awareness in slum dwellers living in underprivilege area.

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**Abstract**
**Background:** Cancer survivorship extends beyond treatment completion, encompassing the physical, emotional, and social challenges faced by individuals. Post-cancer physiotherapy plays a crucial role in rehabilitation, improving quality of life, and facilitating long-term recovery. **Objective:** This study aims to investigate the prevalence of post-cancer physiotherapy awareness among slum dwellers residing in underprivileged areas, a population often facing significant barriers to healthcare access. **Method:** A prevalence study was conducted in the field practice of a tertiary healthcare center on adult slum dwellers with a sample of 1003 individuals through a door-to-door survey, provided they fulfilled the inclusion criteria (18 years and above, both genders). **Results:** The findings of this study reveal a significant gap in awareness and access to post-cancer physiotherapy among slum dwellers in underprivileged areas. Only **9.57 %** of participants were aware of post-cancer physiotherapy, and even fewer understood its role in improving mobility **10** participants, reducing pain **62** participants, and enhancing overall quality of life **12** Key barriers included lack of education, financial constraints, and limited access to healthcare resources. **Conclusion:** Prevalence of post-cancer physiotherapy awareness is alarmingly low .Multi-faceted approach needed: education, subsidized services, and policy interventions. low cost Physio session, camps need to start to increase awareness.

**Introduction**

Cancer does not only affect individuals while being treated for it, but it also affects them after treatment ends (which can last for many years or be a lifelong challenge). When treatment is over, the individual must face the three major areas affected by the disease during early treatment: physical changes, emotional challenges, and social challenges. Many survivors of cancer live with problems on a daily basis related to physical changes (loss of mobility, chronic pain, fatigue, swelling-lymphedema), emotional challenges (associated with anxiety, depression), and social change (especially being able to return to work and their communities). Over time, these changes can alter an individual's quality of life (the psychology of cancer survivors). This is where post-cancer physiotherapy comes into play and it has become an important component of recovery from the physiology of cancer, offering the survivor an evidence-based approach to regain strength, manage pain, and engage in their emotional recovery. For many individuals, physiotherapy is the critical tool that enables them to go forward with their lives after cancer.

Nonetheless, even with its quantitative evidence of benefits, still many people (most notably those from marginalized and economically disadvantaged communities), have either not been made aware of, or have not been able to access post-cancer care in the form of physiotherapy. There are many impediments to health care access in slums and poor communities for cancer survivors in these communities. Barriers such as poverty, lack of education, and limited access to health and rehabilitation services, and awareness of them, seriously inhibit this sector from accessing care. Additionally, cancer is stigmatized and physiotherapy misunderstood as a profession. Furthermore, cancer survivors in these communities have been extensively disenfranchised from rehabilitation and support for which would have potentially interfered with their lived experience.

Although the volume of research on post-cancer rehabilitation is growing, most of it focuses on urban or high-income populations. There is a significant lack of knowledge about the experiences of people living in low-resource environments (e.g. slums). This gap in research makes it difficult to consider the challenges that unique contexts arise for such communities and explore solutions that are sustainable in such settings. Without understanding these unique contexts, we are unable to develop programs and interventions that will meaningfully impact the lives of cancer survivors in such marginalized areas.

The aim of this study was to fill this gap by investigating awareness and access to post-cancer physiotherapy amongst slum dwellers in marginalized areas. We used a door-to-door survey to assess how many people in these communities were aware of post-cancer physiotherapy, and if they were not aware, we assessed the barriers that stopped them from accessing it as well as what factors prevented them from seeking any care. The findings of this study drew attention to significant awareness and access gaps, that identify the level of work to support cancer survivors in these areas.

In addition to identifying a problem, this study has implications for a broader multi-layered approach to address the problem. This could take the form of community education about the advantages of physiotherapy for cancer survivors, subsidized or low-cost services, and policy change on health care access for disadvantaged populations. These actions could begin the process of closing the gap to allow cancer survivors from disadvantaged communities the chance to access appropriate services to rebuild their lives.

In summary, this investigation presents findings on the important role of post-cancer physiotherapy in facilitating the recovery of cancer survivors and their quality of life. It also illustrated significant differences based on access to care, including physical therapy services, mainly based on location, particularly for individuals living in slums, or economically deprived regions. Our hope in presenting these findings and pointing out issues related to access to care, is to stimulate action to ensure the needs of the most marginalized individuals are prioritized, either through policy shifts, community programs, or community care, that considers the situation and needs of people living in such circumstances. Regardless of socioeconomic status, individuals who are survivors of cancer deserve the opportunity to live healthy lives after treatment. This work has provided valuable insight into the experiences of cancer survivors and a potential way forward.

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**Methodology**

The study was conducted in cross-sectional, prevalence study design with survey model. With Objective To assess the prevalence of post-cancer physiotherapy awareness among slum dwellers. Along with identify barriers to accessing rehabilitation services.

**Sample Size**

 The Study consist of slum-dwellers residing in underprivileged areas. The total sample size was 1003+- 50 samples from Nagpur region.

**Data Collection and questionnaire**

 A Four Section Self Structured Questionnaire Was Made In Which Demographic Data, Awareness Of Cancer And Rehabilitation , Access To Post-Cancer Physiotherapy, Barriers To Access was made in which 19 question are there, this questionnaire was validated with senior professionals, this questionnaire was filled with door to door survey In south west Nagpur.

**Procedure** .

In door to door survey we have first explained the motto of the visit ask told them about the cancer and post cancer rehabilitation and a printed questionnaire was distributed in the area, the printed questionnaire was in regional language to it becomes easy to answer it takes 10-15 mins to answer all question, as questionnaire contains personal information like education. Income. Etc .some was hesitant to share but by taking confident of confidentiality they have answered all question.

**Results and interpretation A- RESULTS**

1. **Gender Wise Distribution**

|  |  |  |
| --- | --- | --- |
| Male  | 407 | Mean Age  |
| Female  | 596 | 41.66 Years |
| Total  | 1003 |

1. **Educational Qualification**

|  |  |  |
| --- | --- | --- |
| Education  | Total  | Percentage  |
| No education | 10  | **0.99%** |
| Primary education  | 7  | **0. 69%** |
| Secondary education | 603 | **60 .11 %** |
| Higher secondary or above  | 383 | **38.18%** |

|  |  |  |
| --- | --- | --- |
| Income | Total  | Percentage  |
| Less than 5,000 ₹ | 00 | 00 |
| 5,000 ₹ to 10,000 ₹- | 76 | 7.5 |
| 10,000 ₹ to 20,000 ₹ | 826 | 82.35 |
| Above 20,000 ₹ | 101 | 10.6 |

1. **Income**
2. **Awareness of Post-Cancer Physiotherapy**

|  |  |
| --- | --- |
| Yes  | 406 |
| No  | 401 |
| Don’t know  | 196 |

1. Are you aware of the physical challenges faced by cancer survivors after treatment?
2. Have you heard about post-cancer physiotherapy?

|  |  |
| --- | --- |
| Yes | 96 |
| No | 905 |

1. If yes, what do you think is the role of post-cancer physiotherapy?

|  |  |
| --- | --- |
| If Yes What physiotherapy do  | total |
| Improves mobility -  | 10 |
| Reduces pain-  | 62 |
| Helps in emotional recovery- | 00 |
| Prevents complications like lymphedema  | 12 |

1. How did you learn about post-cancer physiotherapy?

|  |  |
| --- | --- |
| Doctor or healthcare worker - | 96 |
| Family or friends -  | 00 |
| Media (TV, radio, internet)-  | 00 |
| Other: -  | 00 |

1. **Barriers to Access**
2. What do you think are the main barriers to accessing post-cancer physiotherapy?

|  |  |  |
| --- | --- | --- |
| Barrier in accessing post cancer physio | Total  | Percentage  |
| High cost of services  | 610  | 60.81 |
| Lack of awareness  | 205 | 20.43 |
| Distance to healthcare facilities | 15 | 1.4 |
| Lack of trained physiotherapists  | 30 | 2.99 |
| Stigma or fear of discrimination | 143 | 14.25 |

1. Would you be interested in attending free or low-cost post-cancer physiotherapy sessions if available?

|  |  |  |
| --- | --- | --- |
| Interested in free physio | Total | Percentage |
| Yes  | 896 | 89.33 |
| No  | 107 | 10.66 |

1. What steps do you think could improve access to post-cancer physiotherapy in your community?

|  |  |  |
| --- | --- | --- |
| Steps to improve post cancer physio | Total  | Percentage  |
| Free or subsidized services | 769 | 76.66 |
| Awareness campaigns | 111 | 11.06 |
| Mobile physiotherapy units | 11 | 1.09 |
| Training for local healthcare workers | 112 | 11.06 |

**Interpretation**

1. Age Distribution- Mean age: 41.66years.Gender distribution: 407 Male i.e **40.57**% Of total Sample size , 596 females i.e **59.42** %.
2. Educational Qualification- In the present Study we have find out that No schooling was done by 10 i.e **0.99% ,** Primary education is done by 7 i.e **0.69% ,** Secondary education done by 603 i.e **60.11 %,** Higher secondary or above is done by 383 i.e **38.18%**
3. Income – The income statistics shown that there are 76 individuals are in 5k to 10k section, 826 participants are in 10k to 20k section, 101 above 20K and zero participant are in below 5k section.
4. Awareness of Post-Cancer Physiotherapy-
5. **406** participants said YES, **401** said NO, **196** said Don’t know when we asked Are they aware of the physical challenges faced by cancer survivors after treatment?
6. **96** participants said YES while, **905** said NO, when we asked them do you heard about post-cancer physiotherapy?
7. From those **96** we as what is the role of post-cancer physiotherapy **10** said it improves mobility, **62** said it reduces pain, **00** said it helps in emotional recovery, **12** said it prevents complications like lymphedema.
8. Almost all **96** said that, they get information from doctors or healthcare worker, about post-cancer physiotherapy?
9. **Barriers to Access**
10. What do you think are the main barriers to accessing post-cancer physiotherapy- **610** said High cost of services, **205** said Lack of awareness, **15** said Distance to healthcare facilities, **30** said Distance to healthcare facilities, **143** said Stigma or fear of discrimination
11. Would you be interested in attending free or low-cost post-cancer physiotherapy sessions if available, **896** said YES, while **107** said NO
12. What steps do you think could improve access to post-cancer physiotherapy in your community **769** said Free or subsidized services, **111** said Awareness campaigns, **11** said Mobile physiotherapy units, **112** Training for local healthcare workers

**Discussion**

current study was to evaluate the awareness and access to post-cancer physiotherapy among slum dwellers from under-privileged communities in Nagpur, India. Awareness and access were found to be severely limited, which indicated key systemic barriers to cancer survivors accessing essential post-treatment care. This discussion will consider the findings in relation to existing literature, implications of low awareness, and recommendations of how to 'close' this gap. Low Awareness of Post-Cancer Physiotherapy Overall, this study found that only 9.57% (96 out of 1003) of participants had awareness of post-cancer physiotherapy, and even fewer had awareness of the potential benefits of post-cancer physiotherapy— mobility improvements (10 participants), pain reduction (62 participants), and prevention of complications (e.g. lymphedema) (12 participants). This limited awareness is even more alarming when you consider the role of physiotherapy is being common within cancer rehabilitation (Silver & Gilchrist, 2011). Previous research in urban, high-income, settings have reported levels of awareness across the range of 37.2-90% (Cheville et al., 2013). The explicit differences in awareness between a slum population and a city (suburban, urban, high-income) population cannot be interpreted as differences in educational/demographic characteristics only, but differences in health literacy and access/use of healthcare information can be assumed. If low levels of awareness directly correspond to a lack of knowledge of rehabilitative service availability, it raises an even more pressing issue of people's engagement in early rehabilitation post-cancer therapy. Barriers to Accessing Post-Cancer Physiotherapy

**1. Economic Barriers**The most referenced barrier was the excessive price of services (60.81%), which is congruent with international evidence that economic constraint limits healthcare accessibility in poor communities (Peters et al., 2008). Most slum residents in this research earned ₹10,000–20,000 per month (82.35%), which made private physiotherapy inaccessible. Indian public healthcare facilities frequently do not have specialized cancer rehabilitation services, and hence patients are left to access expensive private treatment.

**2. Lack of Awareness (20.43%)** Cancer is a leading health issue today, but after cancer rehabilitation of a cancer survivor is not a core content of survivorship care. The majority of the participants (90.43%) had never heard of post-cancer physiotherapy, which suggests some failure in patient education while in oncology. This finding is echoed in studies which show that in settings which are less resourced, healthcare providers have a stronger emphasis on curative treatment as opposed to rehabilitation for the future (Raj et al, 2020).

**3. Stigma & Fear of Labeling (14.25%)** There is stigma attached to cancer in many communities in India, which disincentivizes survivors from accessing further medical assistance (Datta et al., 2017). The concern around the fear of being called "weak" or "disabled" may discourage participation in physiotherapy even in the instance of post cancer complications, like pain or mobility issues, and when the individual is needing increased assistance.

**4. Logistical Issues (Distance 1.4% / Trained Physiotherapists 2.99%)** While distance was not a significant problem for most people, the issue of not having enough trained physiotherapists in underprivileged areas only makes matters worse. Many slums in India do not have a dedicated rehabilitation center, which would require patients to travel significant distances to access services; a difficult task, not only for someone with limited mobility, but also someone with limited resources. Willingness to Access Rehabilitation There is considerable low awareness of post-cancer physiotherapy, despite this, there were 89.33% of people who indicated they would be open to participating in a free or low-cost physiotherapy session reality. This suggests that the demand exists for services and barriers to participation are issue of cost/affordability and access as opposed to reluctance to engage. This is similar to previous found descriptive studies

**Recommended Interventions for Access**

1. **Community-Based Awareness** Campaigns 76.66% of respondents felt that more subsidized services would be beneficial to accessibility, while 11.06% suggested that awareness campaigns would be beneficial. Therefore, awareness education should be introduced into existing cancer care programs. Possible approaches could include: - Working with oncologists so patients receive information about physiotherapy before discharge - health workers going door to door providing awareness drives in local languages - use of mass media (radio, street theatre, posters) were valuable at increasing awareness.

2. **Subsidized or Free Rehabilitation Services** As the highest barrier, cost is often prohibitive for patients; therefore, governments and NGOs should establish lower cost physiotherapy clinics in slum areas. Alternatively, mobile rehabilitation units could serve multiple communities and would help reduce transport burden for patients.

**3. Training Local Healthcare Workers**

11.06% of respondents suggested training local health professionals in basic rehabilitation techniques. Task-shifting – where community health workers are tasked with providing simple physiotherapy interventions – has been implemented successfully in other low-resource contexts (Sherrington et al., 2017).

**4. Policy-Level Interventions** Advocating for national cancer rehabilitation policies is vital. The NPCDC (India’s National program for Prevention and Control of Cancer) is an example of a national program that primarily focuses on screening and treatment without attention to the rehabilitation and follow-up phase. There is an opportunity to advocate for the integration of physiotherapy into care guidelines for cancer rehabilitation, which would enhance systematic follow-up for survivors.

**Limitations of the Study**

**•** Self-report bias: Responses may have been affected by social desirability or inaccurate recall.

 • Regional constraints: Findings cannot be generalized to all slum populations in India.

• Limited clinical data: The study did not examine actual rehabilitation needs, only awareness.

**Conclusion**

This study sheds light on a significant unmet need for post cancer rehabilitation among the urban slum populace based on lack of awareness, poverty, ignorance and absence of quality health care services. There is a clear willingness among the slum dwellers to participate in post cancer rehabilitation services, if they are affordable and accessible. Attention will have to be paid to more than just awareness campaigns, it will also mean providing subsidized services and lobbying for policy change to produce equitable cancer care provision for those who are most **disadvantaged in society.** Future research should explore the effectiveness of community-based rehabilitation models in similar settings.

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