

## Awareness and Perception of Cardiovascular Physiotherapy in patients having Cardiac condition residing in Pune city

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### Abstract:

**Background:** Cardiovascular diseases are the number one cause of death worldwide. As we know Cardiovascular Physiotherapy has undisputable role in management of these Cardiac Diseases. Yet evidences suggests that we can see lot of non- adherence of these patients towards therapy. Therefore, this study helps us to understand the awareness and perception of Cardiac Patients towards Cardiovascular physiotherapy as this will tell us patient's level of understanding about the importance and implications of it on their condition and what are their perceptions regarding this therapy. **Method:** A self-made questionnaire was administered to people who are diagnosed of Cardiac Condition in various hospitals in Pune City and Descriptive data analysis was done using Microsoft Excel Software. **Results:** Only 35% subjects were aware of Cardiovascular Physiotherapy, 65% agreed that Cardiovascular Physiotherapy is important for their recovery, 55% thought it has positive effect on their Cardiac Condition yet 87.5% never consulted a Cardio physiotherapist, 25% thought there are no barriers where other considered barriers as follow- 28% were of opinion that PT is high cost, according to 14% it is time consuming, 17.5% says commute is difficult, and 10% gave barrier as Fear. **Conclusion:** This study concludes that the awareness is poor in patients having cardiac condition from Pune city. However, there is positive perception regarding Cardio physiotherapy most of them never consulted physiotherapist for their cardiac condition. Some of the factors were identified for this low adherence like high cost, commute, fear, time.

**Keywords:** Cardiovascular Physiotherapy, awareness, perception, barriers

### Introduction:

Cardiovascular diseases are the number one cause of death worldwide.[1] More people die annually of cardiovascular diseases than any other cause.[2] Most of these diseases can be prevented by addressing and dealing with the risk factors such as Obesity, Tobacco, Sedentary lifestyle etc.[2] The major causes to this increasing prevalence of Cardiovascular diseases in India is the changes in diet and lifestyles due increase in urbanization. Also, a major factor for rise in incidences is lack of early detection and screening. Some of the concerning aspects of Cardiovascular diseases epidemic in India are its accelerated buildup, the early age of disease onset in the population, and the high case fatality rate.[3] Primary and secondary prevention of these diseases can be facilitated by Cardiovascular

physiotherapy. Cardiovascular physiotherapy is a comprehensive multidisciplinary program individually tailored to the needs of patients with cardiovascular disease.[4] Many researchers suggest that Cardiovascular Physiotherapy reduces the risk of mortality and reduces future complications of the heart diseases.[1] Cardiovascular physiotherapy includes exercise training, Risks stratification, education regarding lifestyle modification, spreading awareness about the risk factors and the necessity to adapt to healthier lifestyle, emotional support etc.[1] The goals of Cardiovascular physiotherapy is to increase cardiac function, improve strength, improve cardiovascular endurance, address risk factors and rectify them, to bring cardiac patients back to their productive and active life as soon as possible inspite of the limitation faced due to the disease process.

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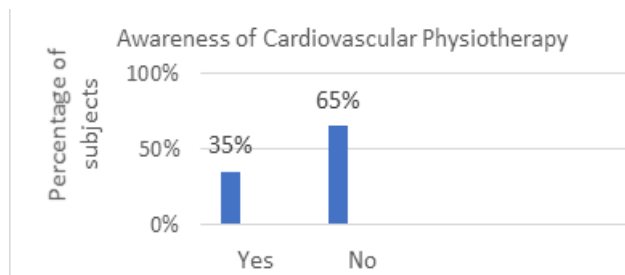
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But despite of many evidences which suggests us the positive influence of Cardiovascular Physiotherapy on mortality and morbidity, it still remains underutilized due to many factors.[5] Therefore this study throws some light on how these patients perceive Cardiovascular physiotherapy and how aware are they about this. As, once we know about these, we will have a better understanding about the underutilization of cardiovascular physiotherapy and likewise we can rectify and adapt to strategies to improve the utilization it.

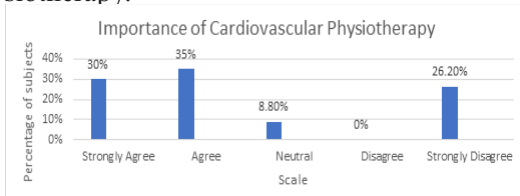
**Materials and Methods:**

The study was approved by the Institutional Ethical Committee. The research population was patients who have been diagnosed of cardiac condition but not operated for their cardiac condition from Pune city. A structured questionnaire was made and validated to assess awareness and perception. The questionnaire consisted of 16 close ended questions regarding awareness, effect of therapy, importance of therapy, barriers and benefits of cardiovascular physiotherapy. After validation, the questionnaire was translated into vernacular language and was validated. After taking consent from the participants, the questionnaire with the preference of their language was distributed to 80 patients meeting the inclusion criteria (Patients diagnosed with IHD and Valvular heart diseases) were asked to fill the questionnaire. and operated patients and previously admitted for same diagnosis were excluded. Once data collection was done, descriptive statistical analysis was done using Microsoft excel software.

**Results:**

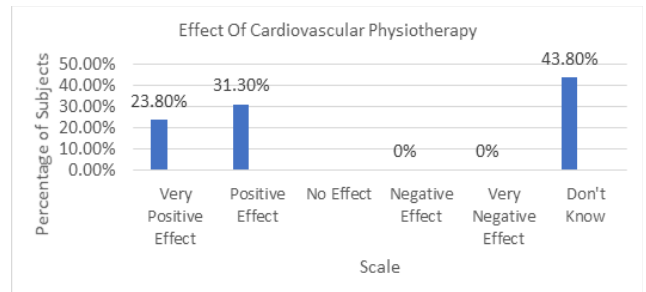


**Graph No.1:** Awareness of Cardiovascular physiotherapy  
According to the data obtained, only 35% subjects had heard about Cardiovascular Physiotherapy and 65% had didn't heard of Cardiovascular Physiotherapy.



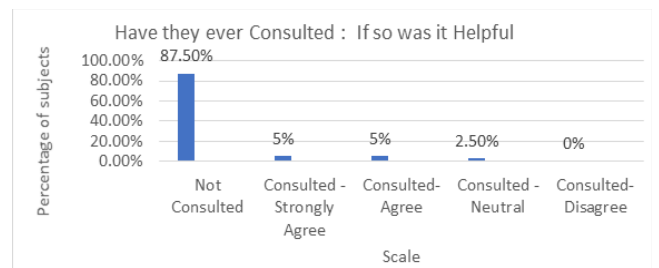
**Graph No.2:** Importance of Cardiovascular Physiotherapy for their cardiac Condition

On a Likert scale, when asked do they think Cardiovascular Physiotherapy is Important for their Cardiac Condition, 30% strongly agreed to this Statement and 35% Agreed on this statement whereas 26.2% strongly disagreed to this statement.



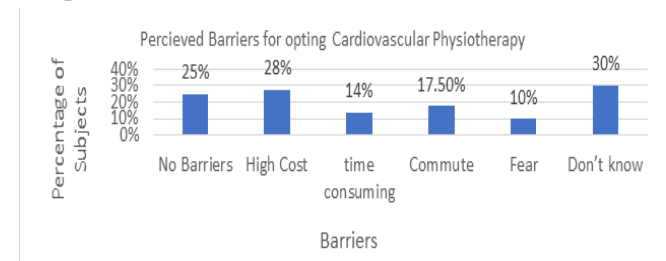
**Graph No.3:** Effect of Cardiovascular Physiotherapy on their Cardiac Condition

On a likert scale, when asked what effect they think will cardiovascular Physiotherapy will have on their Cardiac Condition, 23.8% subjects choose very positive effect and 31.3% choose Positive Effect on contrary 43.8% choose don't know what the effects would be.



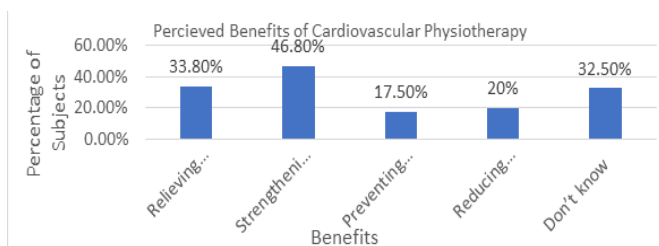
**Graph No.4:** Consultancy Rates

When asked if they have consulted, and if so, do they think it was helpful 87.5% subjects never consulted a cardiophysiotherapist. 12.5% consulted out of which 5% strongly agreed and 5% agreed that it was helpful for their condition.



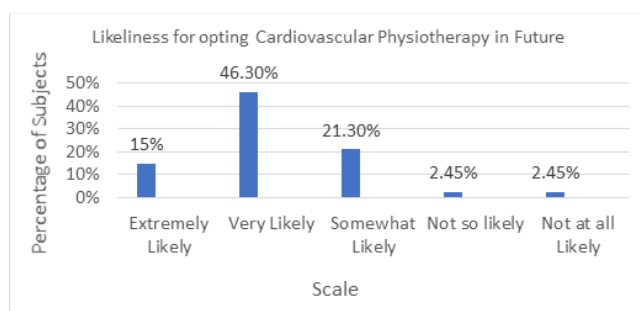
**Graph No.5:** Barriers perceived for Opting Cardiovascular Physiotherapy

When asked about what barriers they think prevents them from going to therapy, 25% subject said they don't have barriers, 28% thought high cost as barrier, 17.5% as commute to the clinic as barrier, 14% as therapy being time consuming, 10% as fear whereas 30% didn't know what the barriers are.



**Graph No.6:** Benefits Perceived of Cardiovascular Physiotherapy

When asked what are the benefits of cardiovascular Physiotherapy, 46.8% thought Strengthening your heart and body to make ADLs easier, 33.8% subjects thought relieving your symptoms like chest pain, breathlessness etc, 17.5% thought preventing future illness and complications of the disease, 20% as reducing stress, improving mood and building healthier lifestyle where as 32.5% didn't know what are the benefits.



**Graph No.7:** Likelihood for opting Cardiovascular therapy in future

When asked how likely are they to opt for Cardiovascular Physiotherapy in future, 15% were extremely likely, 46.3% were very likely, 21.3% were somewhat likely to go for therapy in future.

#### Discussion:

The intent of this study was to determine the awareness and perception of Cardiovascular physiotherapy in patients having cardiac condition who resides in Pune City. As stated by WHO, Cardiovascular Physiotherapy diseases are the leading cause of death globally and therefore awareness about Cardiovascular Physiotherapy in these patients is important.[2] Also International research indicates that attendance of patients to a proposed cardiac rehabilitation (CR) programme varies between 21% and 75%.[6]

According to the analysis of the data obtained, it was observed that out of 80 subjects, only 35% were aware that there is a specialised branch called cardiovascular physiotherapy that deals with cardiac conditions, this tells us that there is low awareness

about Cardiovascular physiotherapy in patient with cardiac condition who resides in Pune City. Also, this study suggests that out of these 35%, 22% subjects have heard about it through doctors and 15% through their family and friends. And this low awareness could be due to sub-optimal referral rates accuracy to Cardiac- Rehabilitation. Sehi Kweon et al also found that in their study that there was very low awareness regarding Cardiac rehabilitation and most of them have heard it through their physicians.[7]

Another aim of this study was to understand the perception of these patients regarding cardiovascular physiotherapy. Based on Likert type responses, majority of subjects that is 65% of subjects had a positive response that cardiovascular Physiotherapy plays an important role in their cardiac condition. However, even if on a Likert scale, 31.3% of subjects described effect of cardiovascular physiotherapy as positive effect and 23.81% as very positive effect their cardiac condition. Still, it was observed that 87.51% never consulted a Cardio physiotherapist for their condition. A study by K. Marwaha et al implies that, the factors for this non-adherence to physiotherapy are identified as poor awareness, poor infrastructure, time, economic factors, social cultural factors and poor communication from health workers.[8] Most of these factor were also observed as a barrier to Physiotherapy for Cardio Physiotherapy as 27.5% of subjects chose high cost as a barrier, 17.5% as commute to the Physiotherapy clinic and 13.8% as they are being time consuming and 10% as fear to exercise in cardiac condition. Another study by Sehi Kweon et al also suggests that even though 67.9% indicated that they would participate only 18.9% actually participated, which suggested us that there are some barriers for this non participation which were cited as majorly low awareness, distance, lack of time, and financial problems.[7] Cedric de vos et al also did a study Participating or not in a cardiac rehabilitation programme: factors influencing a patient's decision which also concluded that The main reasons mentioned by the respondents to refuse a CR programme were logistics (distance, means of transportation), time, and patients' personal belief they could solve the problem by themselves.[6]

As reality is consistent with the literature, we can say that the major barriers for this non participation in Cardiovascular physiotherapy is low awareness, time consuming, high cost, commute to the clinics/ distance and fear.

When asked about their perception for benefits of Cardiovascular physiotherapy 32.5% didn't know what the benefits are and 46.3% subjects thought strengthening your heart and body to make your ADL's easier and 33.8% choose Relief of symptoms like Chest pain, breathlessness and 20% chose reducing stress, improving mood and building healthier lifestyle and only 17.5% thought preventing future illness and complication of the disease. This tells us that there is still scope to increase the awareness regarding the benefits of cardiovascular Physiotherapy as only when they know the benefits of participating in the therapy, they can overcome the barriers and opt and avail the therapy. In spite of poor awareness and Perceived barrier, 46.31% of subjects are very likely, 15% are extremely likely and 21.3% are somewhat likely to go for cardiovascular physiotherapy in future.

As this study implies that the awareness is low and that 88.8% of subjects thought that they should have more knowledge about Cardiovascular Physiotherapy before consulting and this awareness can be increased through social media, seminars, advertisements, as when asked about how would they like to know more, 47.5% chose social media, 40% chose through seminars, 31.3% chose through advertisements. In order to address the barriers that were perceived and increase the utilization of cardiovascular physiotherapy a home-based programme can be a solution to overcome the problems of time, effort, expense, and distance, for example with the use of internet and for professionally active patients, offering flexible timing could help them to find a balance between work and the rehabilitation.[9] As we are in a new modern era of technologies utilizing tele-rehabilitation to improve participation and adherence can be our major strategy. Also, physicians need to improve their communication about the availability of CR program and thus increase the referral rates to increase the awareness.[6] In this way, awareness can be increased in these patients and by working on the barriers the adherence can be improved of these patients towards Cardio physiotherapy.

As, this study is limited to the perspectives of residents of Pune city only, a more detailed qualitative study across India would enhance our understanding of awareness and perception regarding Cardiovascular Physiotherapy.

#### **Conclusion:**

This study concludes that the awareness is poor in patients having cardiac condition from Pune city. However, there is positive perception regarding Cardio physiotherapy most of them never consulted physiotherapist for their cardiac condition. Some of

the factors were identified for this low adherence like high cost, commute, fear, time.

**Conflict of interest:** None

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