



AWARENESS OF TELEREHABILITATION AS RELATED TO IT'S IMPLEMENTATION AND BARRIERS AMONG INDIAN OPTOMETRISTS

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ABSTRACT

Purpose: The purpose of this study was to assess the awareness, practice experience, technical quality and perceived barriers to implementation of telerehabilitation into the current practice of Indian optometrists.

Methods: The study was conducted using the focused group discussion method in order to find out the different perspective of individuals .Qualitative approach was considered for the collection and analysis of data. Focused group discussion was conducted in department of optometry SRIHER during the time frame of Jan 2021.A focused group discussion guide was prepared in order to address necessary questions to the participants and was completely based on research questions of the study. Questionnaire made as per focused group discussion was sent to experts in the field and as per their recommendations final questionnaire was made The participants included in the study were selected based on inclusion criteria and officially contacted through mail id's. They were then segregated into two groups based on their awareness in providing telerehabilitation.. SPSS version 16 was used to do data analysis. An online survey was conducted among PAN India optometric practitioners using Google forms. 196 respondents provided information regarding their interest in telerehabilitation for low vision patients.

Results: Of the 196 participants 54.3% were females and the rest 45.7% were males, and 85.2% were less than thirty years of age. 79.2% of the participants were optometry practitioners of which 11.2% of them had greater than ten years of experience in the field of low vision care. Awareness about telerehabilitation was noted among 70.9% (n=139) of the participants however only 87.9% of them have practiced telerehabilitation. 98.5% of these practitioners felt that more awareness has to be created. 21.9% still project unperceived blocks in providing telerehabilitation.

Conclusion: This study states that practitioners possess adequate knowledge about telerehabilitation in low vision however lack of technical assistance, man power, and proper infrastructure restricts them from practicing it routinely. These results highlight the necessity to improve technical knowledge, legal rules to implement telerehabilitation in to the practice for low vision.

Keywords: Awareness, Low vision, Rehabilitation, Technical knowledge, Telerehabilitation.

1. INTRODUCTION:

During the times of crisis like covid-19 many have faced mental and emotional imbalances. For a person with low vision as he already goes through these stages it is difficult to cope up with individuals in such times the need for rehabilitation will be more. As situations do not support to walk in person telerehabilitation play a major role. Every low vision individual for a short or long span have undergone

- physical and functional measures¹ (e.g. activities of daily living, mobility and orientation, reading);
- psychological measures¹ (e.g. depression, mood, anxiety, adaptation to vision loss, self-esteem);
- social measures¹ (e.g. loneliness or independence).

Thus, a trained rehabilitation can take care of those people emotional needs.

The clinical services offered to low vision may include orientation and mobility training, training to utilize and use assistive technology, occupational therapy services, social work services, work support services and rehabilitation services. Low vision rehabilitation² uses strategies that maximizes or substitute for the lost sight supporting independence and a way of self-worth.

Low vision rehabilitation can improve reading ability function for visually impaired individuals³but its effectiveness depends on applying appropriate rehabilitation techniques, skill reinforcement with correct magnification devices, patient motivation, and compliance⁴.

The study aims to know the knowledge, awareness, and perception (KAP) of practitioners about telerehabilitation so that the gap can be bridged.

2.METHODOLOGY:

The study was conducted using the focused group discussion method in order to find out the different perspective of individuals. Qualitative approach was considered for the collection and analysis of data. The participants included in the study were selected based on inclusion criteria and officially contacted through mail id's. They were then segregated into two groups based on their awareness in providing telerehabilitation. Focused group discussion was conducted in department of optometry SRIHER during the time frame of Jan 2021. A focused group discussion guide was prepared in order to address necessary questions to the participants and was completely based on research questions of the study. SPSS version 16 was used to do data analysis.

RESULTS:

One hundred and ninety-six low vision practitioners across India participated in this study. Of the 196 participants 54.3% were females and the rest 45.7% were males. The years of experience varied among the participants and nearly 14.2% of the participants were over thirty years of age and 11.2 % of them had greater than ten years of experience. Nearly one third of the participants were from Tamilnadu, followed by Andhra Pradesh and Karnataka. Among the participants 79.2% were optometry practitioners and 8.1% were ophthalmologist. Others included post graduate students of optometry and ophthalmology. Detailed demographic details of the participants are as shown in Table 5.1.

Table 1: Demographic details of the participants

| Variables | Number (%) |
|---------------------|------------|
| Gender | |
| Female | 108(55.1) |
| Male | 88(44.9) |
| Age in years | |
| Less than 30 | 167(85.2) |
| 30-40 | 20(10.2) |
| 40-50 | 6(3) |
| More than 50 | 2(1) |
| Years of experience | |
| Less than 10 | 175(88.8) |
| 10-15 | 14(7.1) |
| 15-20 | 5(2.5) |
| More than 20 | 3(1.5) |
| Region of practice | |
| Tamilnadu | 62(31.5) |
| Andhra Pradesh | 31(15.7) |
| Karnataka | 25(12.7) |
| Odisha | 19(9.6) |
| Others | 60(30.1) |

AWARENESS:

With regards to the awareness on telerehabilitation of the 196 participants only 139 (70.9%) were aware of telerehabilitation for low vision. Of the 66 of them have provided telerehabilitation. Among them 58 (87.9%) are comfortable in providing telerehabilitation. Among the providers 51.5% of them feel that the technical quality consultation is excellent, only 10.6% faces technical glitches.

As far as the overall effectiveness of telerehabilitation was considered 45.5% felt it gave excellent outcomes. Further more 50 % of the practitioners who are currently providing telerehabilitation for low vision felt that the quality of care was excellent compared to traditional low vision care provided.

A detailed description of the technical quality, overall effectiveness and the quality of care delivered are depicted in fig 5.1

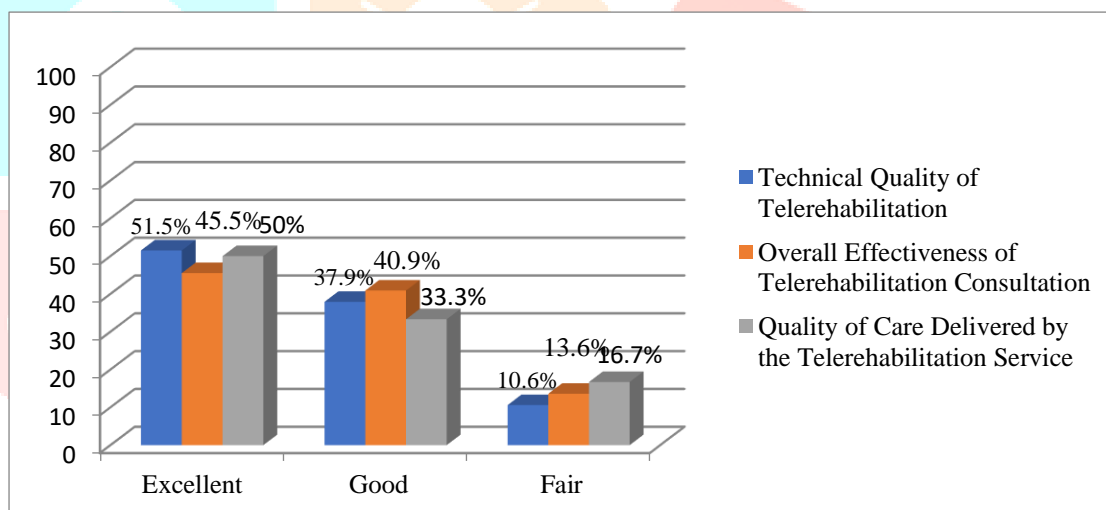


FIG:5.1 Description of the technical quality, overall effectiveness and the quality of care delivered.

55.1% of the providers were highly satisfied with the outcome.98.5% of them felt that more awareness has to be created and 93.9% also felt that the telerehabilitation can have a positive impact on the quality of life of patients with low vision.77.3% felt more awareness should be created on the legal policies of the telerehabilitation. However, 78.8% of the practitioners felt telerehabilitation may pose economic burden on patients compared to traditional rehabilitation. A detailed description of the said criteria are depicted on fig 5.2

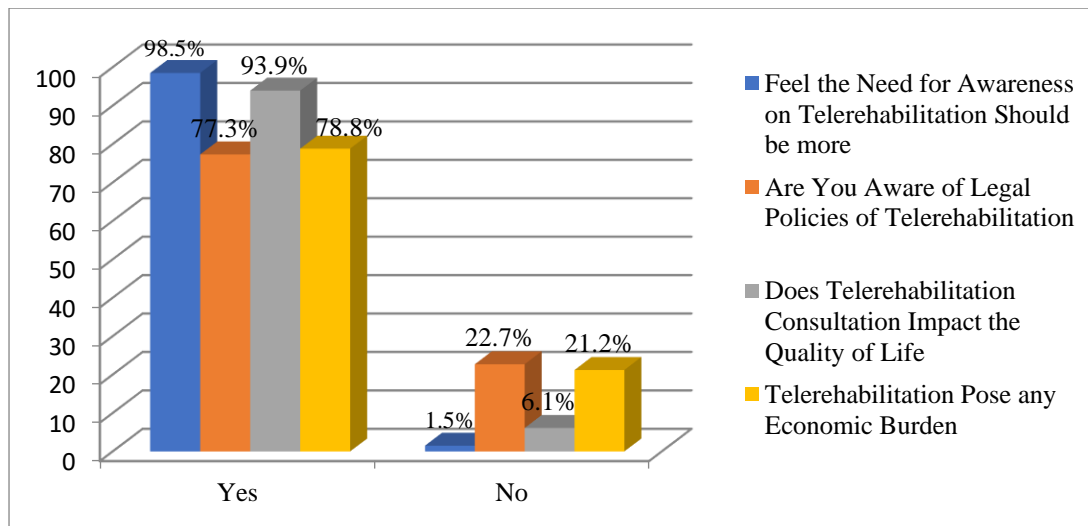


FIG 5.2: Need for awareness ,Legal policies and Economic burden

WILLINGNESS AND CHALLENGES:

Among those who were not providing telerehabilitation (N=73) though they were aware of it, 98.6% also insisted that telerehabilitation can be implemented only if necessary technical trainings were provided. 21.9% still project unperceived blocks in providing low vision telerehabilitation. However, 90.4% also felt that telerehabilitation would be a challenging option. The various challenges perceived in implementing telerehabilitation were depicted in fig 5.3

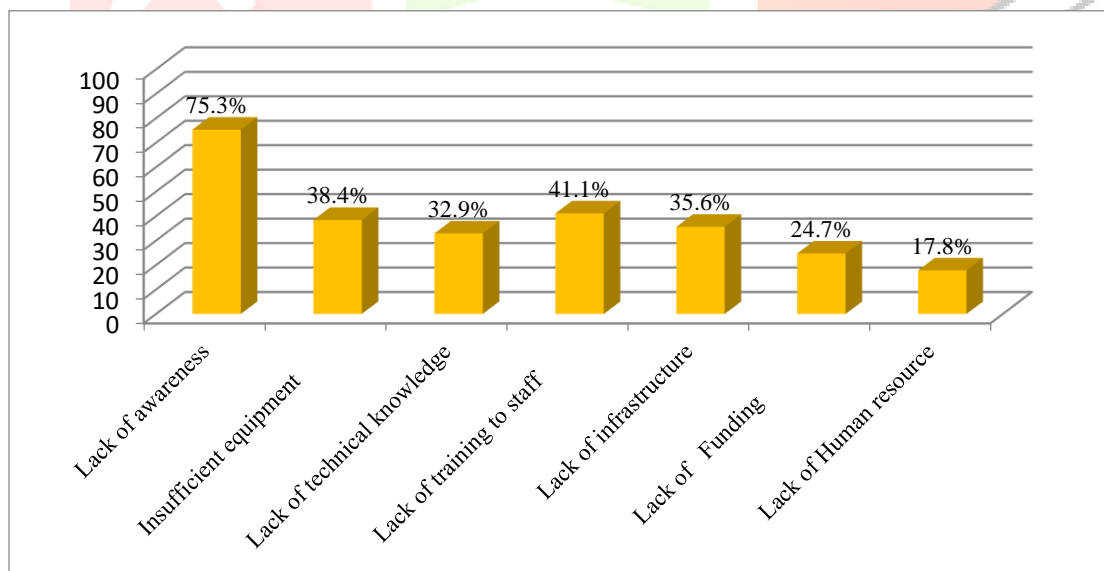


FIG:5.3 Various challenges perceived in implementing telerehabilitation

DISCUSSION:

The current study elicited the awareness, knowledge and experience of Indian practitioners in providing telerehabilitation to low vision subjects. Though practitioner attitudes towards telerehabilitation have been documented across various faculties, this is the first of its kind to have been completed by Indian optometrists. The significance of this study lies on its participants being practitioners across the nation being facilitated by conducting a web based survey.

Only a small group of participants (37.2%) were unaware of telerehabilitation in current study as against the majority of the participants (86.1%) being unaware of telerehabilitation in Kim et al⁵ study. Even after being aware of telerehabilitation 45.2% has not given telerehabilitation at any point of time in their practice. This implies that awareness alone is not important to implement telerehabilitation into one's practice.

Various challenges in implementing telerehabilitation were also identified and the perceptions of the respondents on those challenges were also elicited. Only 53.3% of the respondents were willing to incorporate telerehabilitation into their service provided technical supports are extended whereas in another study 97.5% were interested in providing telerehabilitation if specific infrastructure is provided⁶.

This shows awareness was improved a lot but still needs to remove barriers to implement. Lack of awareness, insufficient equipment, lack of technical knowledge, lack of training to staff, lack of infrastructure, lack of funds, lack of human resource are all the challenges preventing the implementation of telerehabilitation into routine practice.

Conclusion :

This is the first study to report the knowledge, awareness and drawbacks with respect to telerehabilitation for low vision among eye care practitioners in India. Even when all other means of delivering low vision services are challenged especially during times like the COVID-19 pandemic, telerehabilitation can support delivering quality eye care services. Upgrading the existing infrastructure, training the staffs accordingly, increasing the manpower and instigating legal policies can support the implementation of telerehabilitation

for low vision subjects across the nation. Hoping that this study fills the gap and identifies the barriers further research on these lines can improve the effectiveness of low vision care.

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