

## DEVELOPING A DISABILITY INCLUSIVE MODEL FOR LOW VISION SERVICE

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### ABSTRACT

**PURPOSE:** To develop a disability inclusive framework or a model to ensure the provision of both clinical and rehabilitation components of management to the low vision persons and to determine the impacts of low vision services on the quality of life and adjustment to visual loss.

**METHOD:** A Descriptive Cross-sectional study was done on 62 subjects by using a Non-probability convenient sampling method. The participants of both genders were included in this study and were of different age groups. A self-designed questionnaire was also used during this study. The informed consent form was also signed by every participant individually before starting the procedure. Duration of study was 3 months after approval of synopsis. The Ethical Review Board of College of Ophthalmology and Allied Vision Sciences also approved the whole Research Protocol.

**RESULTS:** Total 62 participants were included in this study. About 95% said that they feel difficulty to do things due to this vision problem. Almost 42% said that they have problems to read white boards in normal room illumination, 46.8% said that they don't get information at the same time like other students get and 17.7% also told that their teachers didn't support them in this regard. About 37% had confidence to make their own way to school and 64% had faced problems to participate in recreational and social activities. And 67.7% said that they have no confidence to move safely at night. More than 60% of the Families behavior was supporting towards their education. Almost 69.4% didn't have independence to do their own work and more than 30% were also restricted to participate in the events. The care providers and doctors were encouraging and majority of the patients were getting proper attention. All of the questions results were significant (having p-value < 0.05) except two of them, in which people were uncomfortable roaming outside their homes and friends were letting them down for their special needs.

**CONCLUSION:** This article provided the clear perception and understanding for the development of a model or framework for low vision and rehabilitation services known as "Clinico-social model". It included all the approaches to help LV Persons to overcome all the barriers that they are facing in their daily life and their rehabilitation to develop enough confidence in them to get independent. And this disability inclusive model (DIM) also helped to divert the attention of care providers along with different hospitals & organizations towards persons with visual disabilities. And the approach of the persons with the visual impairment towards the LV services was seen less due to their exclusion from the society based on their disabilities.

**KEY WORDS:** Low vision, Visual Disorder, Rehabilitation

### INTRODUCTION

Low vision is a visual problem or reduction in visual functions that makes it difficult for the person to perform daily living activities. It is a condition in which a person's visual acuity is poorer in the good eye and it cannot get better with regular eyeglasses or any kind of contact lens.<sup>1</sup>

A person can have low vision if he/she cannot see well to perform things like reading and driving etc. Low vision can be defined in terms of both impairment and disability. The adults who are not

able to read newspaper even with the help of conventional lenses are included in "severe visual impairment category".<sup>2</sup>

A person with low vision also has constricted or narrowed visual field about <10 degrees. In the classification of low vision, contrast sensitivity has never been included but there are many studies that have estimated that contrast sensitivity functions among low vision persons differ from normal vision persons. Contrast sensitivity is also important in performing daily living activities such as face recognition,

orientation, driving and reading etc.<sup>3-5</sup>

The causes of low vision can be congenital, acquired via any kind of accident/trauma or due to any disease (Vitamin A deficiency, Lazy eye, Dry eye or albinism etc). With low vision one is not able to see properly or to perform daily life tasks. A person can be thought of as Low vision person if he or she is presenting with the following symptoms;

- Blurred vision
- Central visual loss
- Peripheral visual loss
- Night blindness

Low vision rehabilitation purpose is to make improvement of individual's lives with vision loss by enhancing many abilities. The improvement is done in many aspects such as improving quality of life etc.<sup>6</sup> It includes many services to reduce disability and enhance independent living of the person who have impaired functional status due to visual loss.<sup>7-9</sup>

The main aim for managing people with visual disabilities is not to manage the disease according to "patient centered approach" where there is less involvement of patient in making their own decisions and planning their management. Rather it should be person centered approach" where it includes whole perspectives to manage the persons with disabilities. It involves all the family members, community, caregivers and friends work together to plan the things that can manage the person with disability according to their needs.<sup>10,11</sup>

This article makes discussion about developing an inclusive low vision management model that is considered most suitable and efficacious for the best management of the person with disabilities. A review and analysis of the literature was done to fulfill the development of this model, followed by the conceptualization the model as "Clinico-

social model" for low vision service.<sup>12,13</sup>

Many studies also shows that disability should not be defined just on the basis of the person's physical impairments but there are many other barriers and lack of awareness that leads to it by less uptake of low vision services, So one should also pay attention to the limitations a person is facing in the environment he/she is living such as making it difficult for the person to participate in any social activity or avoid including them in any discussion.<sup>14,15</sup>

The way we treat low vision person by providing it devices or advising eyeglasses/contact lens is the clinical way but when we try to make it easy for them to perform independently and well by making the environment approachable for them in which they live this is actually the management according to their social problem.<sup>16</sup>

For the management of low vision, only provision of clinical aids is not enough but one must also consider vision rehabilitation services and a single person cannot make it possible, there is need to work as a team to help person with visual disabilities.

The team should include mainly optometrists for provision of clinical aids, social workers to help them socialize, special teachers to help them in studies, ophthalmologists, therapists, mobility trainers to help them move independently , counselors for their better counseling and to make them feel that they are no less than others, family and friends. The UN convention has also worked to respect the needs of the persons and to provide them the rights and respect that they deserve.<sup>17-19</sup>

These care providers have to play major role in every aspect like education, training, counseling and providing information. The training that should be given is about using the assistive aids that health care professionals provide them

initially like how to keep or use these devices and motivating them, to help them in adapting, mobility, to help in using audio or electronic devices, reading and writing systems and about daily living activities.<sup>20,21</sup> The purpose of the study is to develop a disability inclusive model for low vision service.

## MATERIALS AND METHODS

A Descriptive Cross-sectional study was done on 62 subjects by using a Non-probability convenient sampling method. The participants of both genders were included in this study and were of different age groups. A self-designed questionnaire was also used during this study. The informed consent form was also signed by every participant individually before starting the procedure. The Ethical Review Board of College of Ophthalmology and Allied Vision Sciences also approved the whole Research Protocol.

## RESULTS

About 95.2% faced difficulties due to the vision problems while doing their work and 4.8% did not face any problem. 71% people with the low vision faced no serious problems to see regular prints in books, only 9.7% faced this problem and 19.7% were not included due to illiteracy. By 41.9% people white board was not readable in normal illumination, about 9.7% said yes and to 48.4% this question was not applicable. 54.8% out of 100% said that they get proper support by their teachers, 17.7% said "No" and 27.4% did not fall under this question. About 46.8% said they don't get information like the others get, 14.5% said yes and 38.7% were not eligible for this question. 37.1% said that they can go to school by their own, about 17.7% said No and 45.2% were not falling under this question. About 64.5% faced difficulty to take part in recreational

activities, 17.7% did not and almost 17.7% were not eligible for this question. 67.7% said they don't have confidence to move around safely at night, 32.3% said that they are confident enough to make their own way at night. While roaming outside the home 56.5% said that they feel comfortable and 43.5% said No to this question. About 69.4% feel free while performing their work and 30.6% don't. About 32.3% were restricted from participating in social events and majority about 67.7% were not. 12.9% people told that they were discouraged by their doctor for their vision and 87.1% said No they weren't. Almost 91.9% were getting proper attention by their doctors and 8.1% said they don't get proper attention. About 75.8% said that they feel free to take their life decisions and 24.2% said they feel commanded by others. Out of 100%, only 1.6% said that they are getting proper counseling regarding their needs and 98.4% said No they are not getting proper counseling (Table 1).

**Table 01:** Different Responses of LV patients about their daily life activities (N=62)

No	QUESTIONS	YES		NO	
		Freq.	%	Freq.	%
1	Difficulties to do things faced due to vision problems	59	95.2	3	4.8
2	Difficulty seeing regular prints in the books	6	9.7	44	71
3	White board in normal room illumination readable or not	6	9.7	26	41.9
4	Getting support by your teachers according to your needs or not	34	54.8	11	17.7
5	Get information at the same time like other students do	9	14.5	29	46.8
6	Having confidence to make your own way to school	23	37.1	11	17.7
7	Difficulties faced to take part in recreational activities	40	64.5	11	17.7
8	Having confidence to move around safely at night	20	32.3	42	67.7
9	Family's supporting behavior towards education	39	62.9	11	17.7
10	Feel comfortable while roaming outside your home	35	56.5	27	43.5
11	Friends and family letting you down for special needs	26	41.9	36	58.1
12	Feel dominated while performing your own work	43	69.4	19	30.6
13	Restrictions from participating in social events	20	32.3	42	67.7
14	Ever discouraged by your doctor for your vision	8	12.9	54	87.1
15	Getting proper attention by your doctors at hospital	57	91.9	5	8.1
16	People make you uncomfortable in the family gatherings	18	29	44	71
17	Feel free to take your life decisions or not	47	75.8	15	24.2
18	Getting proper counseling regarding your special needs	1	1.6	61	98.4

## DISCUSSION

This study was done to take the estimate of impacts of the visual impairment on the person's quality of life and to develop a framework or a strategy accordingly by keeping in mind their needs, to overcome it and to help the people with low vision in improving their lifestyle.

About 62 patients were included in this study. Most of the low vision persons were young between 12 to 25 years and males were more in numbers than females. Low vision is a clinical term or chronic disease that's seen to have major impact on person's quality of life. It not only affects person's health but has also been found to have impact on his/her financial conditions.<sup>22</sup>

According to this study, almost 95% said that they face difficulty while doing the daily routine things. And when it was compared with the previous year's studies, the same results were found. Many previous studies estimated that person's with visual disability come across many problems like face difficulty while moving from one place to another and also to do the things in their daily life.<sup>23,24</sup>

In this study, it's also estimated that about more than 60% people with the low vision accepted that their activities are disturbed due to these vision problems and they feel difficulty to participate in recreational and other activities. And when another study about impacts of low vision was reviewed, the results were found almost similar to these. That study explained that severe visual disability also affects a person's activity no matter whether it is about recreational, social or any other.<sup>25,26</sup>

Another major impact that's found in this study was that most of the people like about 45% with the low vision also said that they feel dominated by others while performing their own work. Almost 50% of the students said that they feel

difficulty while reading white boards or classroom names sign and getting information at the same time like other students get and their families, friends also let them down for their special needs.

The behavior of majority of the parents towards their children education was fairly good. They showed interest in their children regarding their educational and social life no matter how other were treating them. Almost 90% people said that they are getting proper attention from their care givers and professionals in the hospitals. Their care providers are concerned about their betterment both clinically and socially. But about 90% also told that they are not getting proper counseling like what to do next, how to fulfill the needs and what can be done more to their vision. Just like the impacts of low vision on the person's quality of life, some of the causes of low vision were also studied. And among many others the major cause that was found to be the leading cause was uncorrected refractive errors among people with high refractive errors. And in comparison with one of the Nepal and many other studies, this cause was found to have the greater similarity.<sup>27,28</sup>

Most of the participants who were illiterate, they didn't show interest in those questions that were related to the education. And they had no understanding of their condition and were not even seeking any services to improve their vision for the sake of their better involvement within the environment they were living.

The focus of this study was on the impacts of the low vision on the person's quality of life, their inclusion in the society without any marginalization based on the visual disabilities, illiteracy or any other factor and then to develop a model according to this concept of inclusion. The main purpose to develop this model was to

help the persons with low vision in all aspects including educational, social life, financially and clinically too. And in those countries where resources are less, this strategy has found to be most effective.<sup>17</sup>

## CONCLUSION

This article provided the clear perception and understanding for the development of a model or framework for low vision and rehabilitation services known as “Clinico-social model”. It included all the approaches to help LV Persons to overcome all the barriers that they are facing in their daily life and their rehabilitation to develop enough confidence in them to get independent. And this disability inclusive model (DIM) also helped to divert the attention of care providers along with different hospitals & organizations towards the persons with visual disabilities. And the approach of the persons with the visual impairment towards the LV services was seen less due to their exclusion from the society based on their disabilities.

## RECOMMENDATIONS

There is need to overcome the barriers faced by LV persons towards service by making a proper strategy to include all the people regardless of the visual disability, financial condition and social restrictions. The focus should also be on diverting the attention of professionals, Care providers, rehabilitation centers and organizations towards the better management of the person with the low vision. The model that’s developed for the inclusion purpose should be followed to promote the use of LV services. These plans and framework has seen to have major impact on improving the functional vision and quality of life.

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