ORIGINAL
ARTICLE

DISPARITIES IN AWARNESS AND USE OF LOW VISION REHABILITATION IN
DISTRICT KOTLI AZAD JAMMU AND KASHMIR

Submitted: 22 January, 2019
Accepted: 08 July, 2019

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ABSTRACT

PURPOSE: *This study was carried out to identify the barriers in awareness and use of low vision rehabilitation and highlight the needs for improvement.*

METHOD: *A descriptive cross sectional study was conducted with a total of 76 low vision patients enrolled. The patient profile and data was collected with self-made questionnaire. The questionnaire was designed for assessment of the difficulties faced by low vision patients while performing daily life activities, knowledge about low vision devices, use of low vision devices, training, and the status of low vision services in the DHQ hospitals and presence of rehabilitation center, and the barriers in uptake of low vision services.*

RESULTS: *Majority of the participants were facing difficulty while performing daily activities. 92.1% of the participants were dependent on their family for their daily activities. More than 90% of the participants had no knowledge about non optical and optical devices; they were not trained for orientation, mobility and for other adaptive skills. Only 5% of participants were counseled by low vision specialist. The participants reported that there is no rehabilitation center in the district. There is no facility provided in the DHQ hospital regarding low vision services. The main barrier in uptake of low vision services is lack of knowledge (44.7%), followed by lack of reachable services (31.6%), lack of felt need (18.4%) and non-affordability (5.3%).*

CONCLUSION: *The persons with low vision in district Kotli, Azad Jammu and Kashmir, are not aware about low vision devices and the facilities of low vision rehabilitation that improves the quality of life. They are suffering difficulties while performing daily activities and are dependent on family and friends. The challenges in seeking services are lack of knowledge, lack of services, lack of felt need and affordability., cross fixation*

KEYWORDS: *Low Vision, rehabilitation*

INTRODUCTION

Low vision is a state of visual deterioration where refractive, medical or surgical treatment cannot improve vision.[1] According to World Health Organization, a person with low vision is one who has a visual impairment in which visual acuity is less than 6/18 to light perception in good eye or field of vision is less than 10 degree from point of fixation, with the potential to use residual vision for performing daily tasks.[2] Person with low vision is one who has a congenital or acquired impairment of visual acuity, visual field or other functionally disabling factors in sound eye. In this condition loss of vision interferes with the learning process, vocational or vocational tasks, social or personal relationships, or the activities of daily life.[3]

Low vision and blindness are serious global public health problems with increasing prevalence due to shifting of demographics and aging populations. A recent systematic review and meta- analysis by the Vision Loss Expert Group estimated that 36 million people to be blind and 216.6 million people to have moderate to severe visual impairment globally. More than 80% of the global visual impairment burden is preventable, and more than 90% of the visually impaired people live in developing countries.[4]

Worldwide there are an estimated three million children and young people with low vision. Families and healthcare and education providers need high-quality evidence to inform the choice of technology for a child or young person with low vision. Future research should

measure functional outcomes, such as reading accuracy, comprehension and speed, as well as the impact of assistive technologies on independent learning and quality of life, and outcomes relevant to families and teachers.[5]

Worldwide major causes of low vision are uncorrected refractive error, cataract and age related eye diseases. A study has also presented cataract and glaucoma as the leading causes of low vision and blindness. In younger age (35-59 years) amblyopia, corneal problem, albinism and retinitis pigmentosa are the major causes of low vision.[6] In older age (>60 years) cataract, glaucoma and age related macular degeneration are the major causes of low vision. There is a greater risk of visual impairment or low vision among patients with prolonged duration of diabetes mellitus or hypertension for >10 years. We can say that patient with diabetic retinopathy has 3.7 times enlarged risk of visual impairment.[7]

Elderly people also have enlarged risk to fall. According to ophthalmologist, hip fracture which occurs due to fall has strong severe visual loss, diminish contrast sensitivity and contraction of visual field.[8]

Low vision with ocular conditions affect various aspects or components of daily living, which include: orientation and mobility, execution of daily tasks, reading and writing, gathering information, emotional development and independent living.[9]

Vision screening for refractive error and early eye diseases can reduce or prevent a large proportion of people from experiencing unnecessary loss of vision, blindness and contribute to better quality of life.[10]

Low vision devices are made to improve visual performance in children with severe visual impairment fall in low vision category, allowing academic and social adaptation and enhancing daily experiences. There are two types of low vision devices, optical and non-optical devices. Optical devices consist of one or more lenses placed between eye and object to increase size of object on retina. Non optical devices are supplementary devices that do not use optical lenses in front of eyes.[11]

Rehabilitation is the primary treatment option for person with severe visual loss. Low vision rehabilitation can surrounds many types of services, not limited to an eye examination with assessment of visual function, but training in the use of optical aids and other devices. It also includes training in adaptive skills for performing everyday activities, psychological and vocational counseling. There are many multidisciplinary rehabilitation center for low vision persons which facilitate additional rehabilitation, for example change in environmental conditions, how to use computers and adjustability.[12]

Rehabilitation is essential for patients are suffering from severe neurological and ophthalmic problems. They can get benefits from services comprised of functional evaluation, education and proper follow up.[13]

The disparities in awareness and use of low vision rehabilitation include the following: lack of communication on the part of vision professionals, lack of knowledge, location and transport, the need for independent social views, negative influence of family and friends, inadequate visual insufficiency to guarantee services, and reduced perception of loss of vision in relation to other losses in life. Other factors that were associated with less use of LVS included the level of income, comorbidities and level of education.[14]

Many patients with low vision wanted psychological support but were not receiving this, which suggests barriers to receiving care. This highlights the need for early detection of emotional difficulties, education about depression, and easy access to psychological support within low vision services.[15]

RESEARCH DESIGN AND METHODOLOGY

A descriptive cross-sectional study with the help of non-probability purposive sampling was conducted in 76 randomly selected low vision patients in district Kotli, Azad Jammu and Kashmir. The study was conducted in the month of September, October, November, and December of 2018. Inclusion criteria was People with low vision of age group 5-60 years of any gender, People having visual acuity less than 6/18 to 3/60 or Perception of light. Data was collected with the self-designed questionnaire to assess the awareness and barriers in uptake of low vision services. All the data was entered and analyzed using Statistical Package for Social Science (SPSS Version 23.00) and Microsoft Excel 2010. In this quantitative variables were measured by taking mean and standard deviation and qualitative variables were presented as frequency as percentage.

RESULTS

Table 1:

Variables	Yes	No
Problem while walking	5.3%	94.7%
Problem while walking	97.4%	2.6%
Difficulty in seeing objects during night	100.0%	0.00%
Awareness about one's visual status	63.3%	36.8%
Depression and anger	71.1%	28.9%
Difficulty in recognizing different colors	100%	0.00%
Awareness about environmental improvement	42.1%	57.9%
Perform tasks independently	7.9%	92.1%
Knowledge about optical and non-optical devices	9.2%	90.8%
Training in adaptive skills for perorming daily activites	7.9%	92.1%
Visits to low vision counselor	6.6%	93.4%
Transport problems	78.9%	21.1%

It is concluded for above table that majority of the participants (94.7%) cannot recognize and have problem while walking. All of the participants have difficulty in seeing objects during night and almost 2/3 of the participants were unaware of their visual status. 71.1% of the participants were feeling depressed and angry and all of the participants had difficulty in recognizing colors. Almost 2/3 of the participants had lack of awareness about the environmental modification that improves the quality of image and majority of the participants were not able to perform their daily tasks independently. The result conducted from above table shows the lack of awareness regarding the use of optical and non-optical devices in district kotli AJK and participants were not trained in adaptive skills used for independent living. Majority of the participants were unaware of their remaining skills because there is no counseling center for low vision persons in district Kotli and almost 2/3 of the participants had transport problem.

Table 2:

Variables	Yes	No	Not Applicable
Difficulty in Class while Seeing White/balck board	42.1%	0.00%	65.8%
Difficulty in writing	0.00 %	2.6%	55.3%
Special education needs provided by you school/parents	34.2%	28.9 %	71.1%

The above table shows that 1/3 of the participants had difficulty in class while seeing white/black board and 2/3 of the participants were not applicable for this question. About 42.1% of the participants had difficulty in writing and 55.3% of the participants were not dealing with writing. Almost 1/3 of the participants were not facilitated with special educational needs and 2/3 of the participants were not the part the educational system.

Table 3:

Variables	Yes	No	Don't Know
Low vision rehabilitation center present in district Kotli	0.00%	65.8%	34.2%
Availability of low vision devices in DHQ Hospital	0.00%	65.8%	34.2%

There is no low vision rehabilitation center present in district Kotli and more than 1/3 of the participants had no idea about low vision rehabilitation center. Moreover, there in unavailability of low vision devices in DHQ hospital, Kotli and 1/3 of the participants had no knowledge about the availability of low vision devices in DHQ hospital.

Table 4:

Main barrier in uptake of low vision rehabilitation devices		
	Frequency	Percent
No knowledge about these devices	34	44.7
They are not accessible	24	31.6
They are not affordable	4	5.3
No felt of need because dependent of family	14	18.4
Total	76	100.0

The above table shows that lack of awareness is major disparity in uptake of low vision rehabilitation and second major disparity is that services are not accessible. In addition, minor disparities are unaffordable rehabilitation services and no felt of need.

DISCUSSION:

This study was conducted to identify the barriers in awareness and use of low vision rehabilitation in district Kotli, Kashmir. According to WHO low vision is defined as visual impairment even after treatment and standard refractive correction with visual acuity of <6/18 and visual field <10 degrees from the point of fixation. Globally, >246 million people are affected by low vision.

Quality of life of persons with low vision is highly affected as it limits educational, occupational and social interaction opportunities.

My study shows that there are no facilities regarding low vision in district Kotli, Kashmir.it was analyzed that the persons with low vision were not guided by the ophthalmologists regarding their visual status and the low vision devices. The low vision persons had no knowledge about low vision aids, training and techniques that can help them to execute and plan their daily activities.

The results shows that almost all of the participants were facing difficulties in performing their daily tasks such as recognizing faces, reading, writing, orientation and mobility. 36.8% of the participants cited that they were not aware of their visual status.

All of the participants reported that they were feeling difficulty in recognizing different colors. However, 57.9% had no knowledge about the environmental modifications that improves the quality of image and visual function.

92.1% of the participants reported that they are dependent on someone for their daily living tasks. Thus, 90.8% of participants were not aware about the low vision optical and non-optical devices, 90.2% had not get any training for the adaptive skills to perform daily activities and only 5% of the participants had visited low vision counselor. 28.9% of the participants reported that they have special education needs, which are neither provided by school nor by parents.

It is reported that there is not a single low vision rehabilitation center in district kotli, AJK. The DHQs are also not providing any optical and non-optical devices and referral for rehabilitation and training. Results shows that the main barrier in uptake of low vision services is lack of knowledge (44.7%), followed by lack of reachable services (31.6%), lack of felt need (18.4%) and unaffordability (5.3%).

Similar study was conducted by Lam N and Leat SJ in 2015. According to their study the main barriers were misconception of low vision services, miscommunication by eye care professionals, lack of awareness, location and transportation, influence of family and friends, lack of services and cost.

CONCLUSION

My study shows that people with low vision in district Kotli are not aware about the use of low vision rehabilitation. Low vision services are not available in the eye hospital and there is not a single rehabilitation center in the whole district.

The people with low vision in the district are not aware about the causes, treatment and techniques to tackle this condition. The participants were unable to execute the activities of daily living such as recognizing faces, reading, writing, driving, orientation and mobility. Majority of the participants were unaware of their visual status and suffering from anxiety. Due to lack of knowledge about the environmental modifications, adaptive skills and they cannot perform daily task independently.

The results shows that people in district Kotli have no knowledge about low vision devices, orientation and mobility training, occupational therapy and use of rehabilitation services. The main cause of this lack of awareness is lack of attention of eye hospitals and eye health personnel in providing the appropriate service and knowledge about low vision services.

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