

Assessment of Quality of Life in Patients with Low Vision

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Received: 20-08-2021 / Revised: 28-08-2021 / Accepted: 22-09-2021

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Conflict of interest: Nil

Abstract

Background: Visual impairment' includes both low vision and blindness. The present study was conducted to assess quality of life (QoL) in patients with low vision.

Materials & Methods: 84 patients of low vision both genders were classified into 2 groups of 42 each. Group I were moderate visual impairment and group I had patients with visual acuity in better eye between 6/24 to 6/60 and group II were severe visual impairment with visual acuity in better eye between 5/60 to 3/60. Patients were interviewed as per NEI-VFQ.

Results: Group I had 22 males and 20 females and group II had 21 males and 21 females. The mean score for part 1 was 38.2 and 40.6, for part 2 was 33.5 and 37.3, for part 3 was 39.1 and 40.6, for part 4 was 86.2 and 82.9, for part 5 was 60.4 and 36.5, for part 6 was 45.7 and 44.2, for part 7 was 41.2 and 42.6, for part 8 was 46.5 and 44.2, for part 9 was 40.5 and 39.2, for part 10 was 55.4 and 53.1, for part 11 was 80.3 and 62.4, for part 12 was 60.3 and 59.2, for part 13 was 58.6 and 54.8, for part 14 was 27.4 and 41.5, for part 16 was 21.3 and 42.6, for part 17 was 36.3 and 47.5, for part 18 was 41.2 and 45.7, for part 19 was 84.3 and 83.1, for part 20 was 50.4 and 55.2, for part 21 was 38.2 and 36.5, for part 22 was 51.4 and 47.8, for part 23 was 63.1 and 45.2, for part 24 was 62.4 and 54.1, for part 25 was 39.2 and 45.2 in group I and II respectively. The difference was significant ($P < 0.05$).

Conclusion: Low vision affects quality of life of patients in both categories.

Key words: Low vision, quality of life, Visual impairment

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Introduction

Visual impairment' includes both low vision and blindness. Low vision includes category 1 is defined as visual acuity between 6/24 to 6/60 in better eye and category 2 is defined as visual acuity between 5/60 to 3/60 in the better eye.[1] In India, prevalence of visual impairment is 4.6% per 100 population and

occurrence of blindness is 0.7% per 100 population. Worldwide the number of people of all ages who are visually impaired is projected to be 285 million, of whom 39 million are blind. The major causes of visual impairment are uncorrected refractive errors and cataract. The commonest cause of

blindness is cataract (51%). Preventable causes are 80% of the global burden.[2]

Vision has a vital role for best performance in functional and social life. Eyesight/vision accounts for about 80% of the function of all the five senses combined.[3] Hence, visual impairment leads to a restriction in all areas of life and, in particular, VRQOL by reducing activities associated with participation in society and religion, mobility, recreation, daily living, and intense visual tasks.[4] In addition, visual impairment is linked with depression, frustration, and anxiety not only because of the impairment but also because of the accompanying worry that the condition may deteriorate or the difficulty in adjusting to reduced activity. The most frequent causes of low vision in India are cataract, refractive error, glaucoma, posterior segment disorder, surgical complication, corneal blindness and posterior capsular opacification.[5] The present study was conducted to assess quality of life (QoL) in patients with low vision.

Results

Materials & Methods

The present study comprised of 84 patients of low vision both genders. The consent was obtained from all enrolled patients.

Data such as name, age, gender etc. was recorded. Patients were classified into 2 groups of 42 each. Group I were moderate visual impairment and group I had patients with visual acuity in better eye between 6/24 to 6/60 and group II were severe visual impairment with visual acuity in better eye between 5/60 to 3/60. Each patient was assessed using a Snellen's chart placed 6 meters away in a well illuminated area. The tumbling E-chart was used for illiterate patients. Refraction, radiology, slit-lamp examination, tonometry and funduscopy was done. Patients were interviewed as per NEI-VFQ. Reasons for low vision were also recorded. Data thus obtained were subjected to statistical analysis. P value < 0.05 was considered significant.

Table I Distribution of patients

Groups	Group I	Group II
Status	moderate visual impairment	severe visual impairment
M:F	22:20	21:21

Table I shows that group I had 22 males and 20 females and group II had 21 males and 21 females

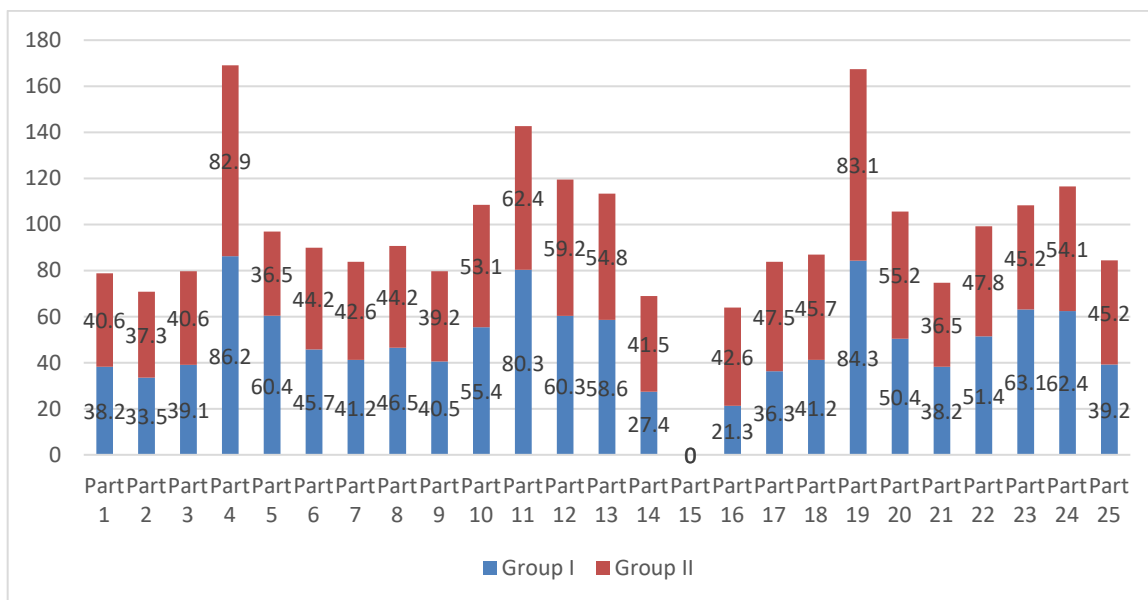
Table II Comparison of mean score of questionnaires

Questionnaires	Group I	Group II	P value
Part 1	38.2	40.6	0.12
Part 2	33.5	37.3	0.19
Part 3	39.1	40.6	0.11
Part 4	86.2	82.9	0.14
Part 5	60.4	36.5	0.01
Part 6	45.7	44.2	0.82
Part 7	41.2	42.6	0.90
Part 8	46.5	44.2	0.72
Part 9	40.5	39.2	0.94
Part 10	55.4	53.1	0.12

Part 11	80.3	62.4	0.01
Part 12	60.3	59.2	0.12
Part 13	58.6	54.8	0.92
Part 14	27.4	41.5	0.01
Part 15	0	0	0
Part 16	21.3	42.6	0.02
Part 17	36.3	47.5	0.04
Part 18	41.2	45.7	0.15
Part 19	84.3	83.1	0.93
Part 20	50.4	55.2	0.94
Part 21	38.2	36.5	0.99
Part 22	51.4	47.8	0.05
Part 23	63.1	45.2	0.03
Part 24	62.4	54.1	0.05
Part 25	39.2	45.2	0.04

Table II graph I shows that mean score for part 1 was 38.2 and 40.6, for part 2 was 33.5 and 37.3, for part 3 was 39.1 and 40.6, for part 4 was 86.2 and 82.9, for part 5 was 60.4 and 36.5, for part 6 was 45.7 and 44.2, for part 7 was 41.2 and 42.6, for part 8 was 46.5 and 44.2, for part 9 was 40.5 and 39.2, for part 10 was 55.4 and 53.1, for part 11 was 80.3 and 62.4, for part 12 was 60.3 and 59.2, for part 13 was 58.6 and 54.8, for part 14

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Graph I Comparison of mean score of questionnaires

Discussion

Vision-related quality of life (VRQOL) is defined as a person's contentment with their visual ability and how their vision impacts on their daily life. Since it is a broad concept, it can be affected in a complex way by the person's physical health, psychological state, level of independence, and social relationships.[6] Visual impairment is a global public health problem which leads to a variety of public health, social, and economic problems, especially in developing countries where over 90% of the world's individuals with visual impairment live.[7] There are various techniques to measure the effects of low vision on QoL. One of the widely used techniques is a questionnaire developed by American National Eye Institute (NEI-VFQ51).[8,9] Its shorter version was made in the year 2,000 and called National Eye Institute Visual Function Questionnaire NEI-VFQ25. NEI-VFQ25 is an extensively used technique for assessment of vision specific quality of life. NEI-VFQ25 measures the following vision dependent functions: General health, general vision, ocular pain, near & distant activities, social functioning, mental health, role difficulties, dependency, driving, colour vision and peripheral vision.[10,11] The present study was conducted to assess quality of life (QoL) in patients with low vision.

We found that group I had 22 males and 20 females and group II had 21 males and 21 females. Geetanshu et al[12] studied the quality of life in patients with low vision and comparison of QoL in patients with moderate and severe visual deficits. Category 1 comprised of a total of 100 cases of low vision who belonged to category of moderate visual impairment and Category 2 comprised of a total of age matched 100 patients with low vision who belonged to the category of severe visual impairment. Mean age of Category 1 patients was 59.26 ± 12.61 years and 60.49 ± 9.75 years in Category 2 ($p > 0.05$). Mean comparison of various questions asked related to IOL during the study period was

found to be statistically significant, when compared between the two categories. It shows that Category 2 people have more difficulty in reading ordinary print in newspaper, seeing how people react to things, going to street festivals / fairs and accomplish less than they would because of their vision. They trusted too much on others because of their eye sight. Based on NEI-VFQ-25, Category 2 people have more problem in reading small print in telephone book, on a medicine bottle, or on legal forms, reading and outdoor activities.

We found that mean score for part 1 was 38.2 and 40.6, for part 2 was 33.5 and 37.3, for part 3 was 39.1 and 40.6, for part 4 was 86.2 and 82.9, for part 5 was 60.4 and 36.5, for part 6 was 45.7 and 44.2, for part 7 was 41.2 and 42.6, for part 8 was 46.5 and 44.2, for part 9 was 40.5 and 39.2, for part 10 was 55.4 and 53.1, for part 11 was 80.3 and 62.4, for part 12 was 60.3 and 59.2, for part 13 was 58.6 and 54.8, for part 14 was 27.4 and 41.5, for part 16 was 21.3 and 42.6, for part 17 was 36.3 and 47.5, for part 18 was 41.2 and 45.7, for part 19 was 84.3 and 83.1, for part 20 was 50.4 and 55.2, for part 21 was 38.2 and 36.5, for part 22 was 51.4 and 47.8, for part 23 was 63.1 and 45.2, for part 24 was 62.4 and 54.1, for part 25 was 39.2 and 45.2 in group I and II respectively. Yibekal et al [13] assessed vision-related quality of life and associated factors among adult patients with visual impairment. A total of 484 study subjects participated with a response rate of 98.9%. The median age of the participants was 60 years. The proportion of poor vision-related quality of life was 238 (49.2%). Authors found that Age >75 years (AOR = 1.87 (95% CI: 1.02–3.40)), rural residency (AOR = 1.71 (95% CI: 1.13–2.60)), severe visual impairment/blindness (AOR = 2.76 (95% CI: 1.80–4.23)), and history of visual impairment longer than 3 years (AOR = 2.85 (95% CI: 1.61–5.04)) had statistically significant association with poor vision-related quality of life.[14]

They concluded that almost half of the patients with visual impairment had poor vision-related quality of life. Severe and long duration of visual impairment, elderly age, and rural residency had a significant connotation with poor vision-related QOL.

Conclusion

Authors found that low vision affects quality of life of patients in both categories.

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