



To Investigate Coping Mechanisms in Blind or Low-Vision People

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ABSTRACT

Background: The most severe and devastating physical impairment is considered to be blindness. This happens when there is an obstruction in the path of a light stimulus as it travels from the outside to the inside and then to the brain. People with visual impairments are a very diverse group. According to a study on the comparison of the divergent development of gross motor skills in children who were blind and sighted, they experience a wide range of issues, including behavioral issues, social adjustment issues, learning difficulties, low IQ, academic difficulties, and slower speech, among others. The findings showed that around twenty-eight percent of visually impaired children had extreme developmental delays and that forty-five percent of visually impaired children had strong developmental delays in the skills that were examined. People with visual impairments may have a lower quality of life as a result of their coping mechanisms. Ophthalmologists who assess visual impairment should take into account the coping strategies used by their patients and send them for counseling and training in healthier coping strategies.

Aim: The aim of the study is to assess coping in patients with low vision or blindness.

Material and method: The Department of Ophthalmology conducted this descriptive, cross-sectional study. The study included adult patients (25–65 years old) who self-presented to the ophthalmology outpatient department and had a best-corrected visual acuity (BCVA) of 6/18, current refraction in the better eye, and a period of vision loss of at least six months. The cause of visual loss had to be an irreversible one; here, the irreversible low vision was defined as current BCVA between $6/18-6/60$ in the better eye that could not be treated by any means, irreversible blindness was defined as current BCVA $6/60-3/60$ in the better eye (economic blindness), or BCVA $3/60$ in the better eye (social blindness) that could not be treated by any means.

Results: 50 patients met the requirements for inclusion and gave their consent to participate; of these, 25 (50%) had a co-morbid chronic illness but no other disability other from visual impairment, and their ages ranged from 25 to 65. Degenerative myopia was the most common posterior segment pathology and the main cause of reduced vision or blindness. When all participants were considered, avoidance coping and reflective coping both received the highest marks, whereas strategic planning received the lowest. The psychosocial effects of visual loss were connected with the lowest quality of life (QoL) scores for vision, which were typically low.

Conclusion: It was found that the diagnosis of different types of brain injury lesions may be made using a combination of CT scan and autopsy results, which aids in developing better policies. Although a CT scan is a useful tool for the diagnosis of different types of head injury lesions, it was shown that the autopsy was more successful in finding them. Patients with catastrophic head injuries can benefit greatly from the highly advanced, high resolution CT scan procedure. Both high mobilization and demobilization for coping seem to be nonadaptive modes of functioning that result in decreased life satisfaction, diminished self-esteem, and elevated levels of pessimism, loneliness, and anxiety.

Keywords: Blindness, coping strategy, proactive coping inventory, quality of life, vision, low, vision-related quality of life

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INTRODUCTION

Vision plays a crucial role in maintaining a sense of control over one's immediate surroundings and fostering a sense of connection with the outside world. Therefore, it is not strange that situations related to vision problems and vision loss involve increased anxiety and a dread of having their

autonomy restricted.^{1,2} Statistics demonstrate that age increases the likelihood of acquiring glaucoma, cataracts, and other ophthalmological conditions. Nearly 20% of people between the ages of 65 and 74 are affected by cataracts, and for 50% of persons between the ages of 75 and 84, cataracts become the primary cause of blindness.^{3,4}

On the other hand, 2% of patients who are 45 years of age and older are at risk of developing glaucoma, with that risk rising significantly as one gets older. An intense feeling of worry can emerge because it can be challenging to detect the disease in its early stages and because the diagnosis may not be accurate.^{5,6} One of the main causes of decreased quality of life, anxiety, and poor adaptation, particularly in older patients who have two different types of difficulties connected to their age and health, is limited vision.⁷ As a result, managing stress appears to be particularly crucial for low vision adaptation.⁸

People with visual impairment have lower quality of life (QoL) because it interferes with their ability to carry out daily tasks on their own, such as moving around, reading, working, and taking care of themselves.^{9,10} Emotional well-being and social relationships are also affected.^{11,12} Visual disability forces the individual to cope with challenges every day.¹³ Coping literally refers to addressing challenges and issues in an effort to overcome them. There are no research on people with limited vision and blindness and the coping mechanisms they employ to manage their everyday obstacles, despite the fact that it is well known that the ability to function and approach toward perceived problems differ significantly from disabled to disabled.¹⁴

The inherited progressive retinal dystrophies known as Retinitis Pigmentosa (RP) are characterized by a variety of different symptoms, including decreased night vision and a progressive loss of peripheral vision.¹⁵ Visual impairments brought on by RP make it difficult for people to do daily tasks including driving, cooking, and self-care. As the RP advances to its terminal stage, the capacity to successfully execute daily tasks gradually declines and eventually plateaus. As a result, there is a decline in vision-related quality of life, which measures how much vision affects everyday functioning and life enjoyment.¹⁶ The frequency of RP in the UK is thought to be 1 in 4000, and there is currently no known cure.¹⁷ The majority of the patient group research studies are devoted to determining the quality-of-life pattern and assessing changes in the treatment's paradigm and functional status related to vision. Only a small portion of these studies examined issues like loneliness, self-esteem, expectations for the future, despair, and

anxiety.^{18,19} The significance of psychological factors, such as coping mechanisms or factors that increase anxiety, has been appropriately emphasized in glaucoma research because the disease's hidden progression and the potential for a poor prognosis may both contribute to the development of anxiety.²⁰

In order to discover whether certain coping mechanisms were connected with vision-related quality of life, this study evaluated coping mechanisms in patients with low vision or blindness. This needs to be looked at because RP is a life stressor that requires people to constantly adapt to daily obstacles, which get harder and worse as RP progresses. It might be challenging to give this demographic advice on how to self-manage life with RP without first looking at how individuals react to RP-related challenges in their daily lives.

MATERIAL AND METHODS

This was a descriptive, cross-sectional study conducted in the Department of Ophthalmology. written informed consent, adult patients (25–65 years) with a best-corrected visual acuity (BCVA) of <6/18 with current refraction in the better eye and vision loss duration of 6 months or more, who self-presented to the ophthalmology outpatient department were recruited in the study. The cause of visual loss had to be an irreversible one; here, the irreversible low vision was defined as current BCVA between <6/18–6/60 in the better eye that could not be treated by any means, irreversible blindness was defined as current BCVA <6/60–3/60 in the better eye (economic blindness), or BCVA <3/60 in the better eye (social blindness) that could not be treated by any means.

Inclusion Criteria:

- Visually challenged patients within the age group of 25-65 years.
- Patients who were willing to participate.
- Males visually challenged were included.
- Patients who were able to interact in Hindi and English.

Exclusion Criteria

- We excluded patients who were not willing to participate; had cognitive impairment; had congenital onset of visual impairment or onset in the first 5 years of life; had a history of any co-

morbid condition (except those related to vision loss); or had a history of psychosocial disorders; or of taking long-term psychiatric medications such that it would impact their ability to respond to the questionnaire.

Study Criteria:

Age, gender, binocular visual function (distant visual acuity using Snellen's chart and near visual acuity), and presence of chronic systemic disease or other disability were recorded. Coping strategies were assessed using the Hindi version of the PCI. The PCI was chosen as it has shown good construct validity, homogeneity, and acceptable reliability, and shows good item correlations. The Hindi adaptation makes it a potentially reliable tool for measuring coping strategies among native Hindi speakers. Vision-related QoL was assessed with the Hindi version of the IND-VFQ33, which is a psychometrically sound measure of the impact of vision impairment on daily activity and emotional well-being. It is designed specifically for the Indian population and has been used in our department before. It is suitable for use in populations of mixed literacy and is short enough to keep respondent burden to a minimum.

Rating of scales

The 55-item PCI has seven scales: avoidance coping (3 items), reflective coping (11 items), proactive coping (14 items), preventive coping (10) items, instrumental support seeking (8 items), preventive coping (10 items), preventive coping (10 items), preventive coping (10 items), and preventive coping (10 things). On a 4-point scale, each statement is scored as either not at all true, slightly true, moderately true, or entirely true. The individual scores of the items in each subscale are added to

determine the subscale's overall score. The ratings for three of the proactive coping subscale's questions are reversed because they are negative (items 2, 9, and 14). We added the seven subscale scores to determine the overall coping strategy score in addition to the individual subscale scores. The better the result, the higher the coping.

The psychosocial effect (5 questions), visual symptoms (7 items), and general functioning (21 items) are the three subscales of the 33-item IND VFQ33. On a 5-point scale, general functioning is scored as "not at all, a little, quite a bit, and cannot do this because of my sight," while psychosocial impact and visual symptoms are rated as "not at all, a little, quite a bit, and a lot."

STATISTICAL ANALYSIS

Kerlinger defines analysis as the categorizing, ordering, manipulating, and summarizing of data to obtain answers to research questions. The purpose of the analysis is to reduce the data into interpretable form. So that relations of a research problem can be studied and used. Analysis of variance (ANOVA) and t-test were used to compare coping scores based on gender, on the presence or absence of chronic disease, and on the category of BCVA distance and near vision.

RESULT: -

Fifty patients fulfilled the inclusion criteria and consented to participate; of them, 25 were women (50%); ages ranging between 25 to 65 years; and 25 (50 %) had a co-morbid chronic illness but no other disability other than visual. Posterior segment pathology was common with degenerative myopia being the leading cause of low vision or blindness.

Table 1: Proactive Coping Inventory scores in 50 participants with low vision or blindness

Proactive Coping Inventory subscales (minimum-maximum score)	Range Average score \pm standard deviation	Number of participants who scored above the halfway score (%)
Proactive coping (14-56)	23-55 35.0 \pm 6.13	25 (48.3)
Reflective coping (11-44)	12-42 24.3 \pm 6.65	42 (75.0)
Strategic planning (4-16)	4-15 8.6 \pm 1.88	16 (33.3)
Preventive coping (10-40)	13-37 25.1 \pm 4.92	29 (56.7)

Instrumental support seeking (8-32)	11-30 20.6±4.28	27 (53.3)
Emotional support seeking (5-20)	7-18 11.6±1.72	36 (63.3)
Avoidance coping (3-9)	3-8 6.5±1.77	42 (75.0)
Total coping (55-217)	87-196 133.6±22.37	29 (56.7)

Table 1 details the coping strategies reported by the participants. When all participants were taken together, the highest scores were seen for reflective coping and avoidance coping, while the lowest score was seen in strategic planning.

Table 2: Vision-related quality of life scores (IND-VFQ33) in 50 participants with low vision or blindness

Domain of vision-related quality of life	Score (can range from 20-100) Range Average ± standard deviation
General functioning	20.0-2.4 38.5±12.88
Psychosocial impact	24-66 30.1±11.13
Visual symptoms	23-70.2 40.1±16.28

Vision-related QoL scores were generally low with the poorest QoL being associated with the psychosocial impact of visual loss.

DISCUSSION

From a disability standpoint, coping is the way in which people deal with their particular limitations. Coping can broadly be classified as reactive or proactive.^{12,14,21} In reactive coping, the person responds to a stressor that they have already experienced (in this case, handicap) and attempts to lessen the subsequent stress. Proactive coping is a more recent idea, since traditional coping models have focused on the reactive aspect of coping. It is a healthy coping technique where the person actively works to improve his abilities, develop strategies, and acquire resources in order to better manage his life. The person predicts potential stressors that may arise as a result of his impairment.²²

The PCI measures seven coping mechanisms that people use when under stress. Coping is believed to be a complex process. The proactive coping scale, in relation to the PCI, assesses an individual's capacity to independently define objectives and self-regulate the accomplishment of those goals. The reflective coping scale gauges one's capacity to consider behavioral options and come up with

workable game plans. The strategic planning scale gauges how well a person can divide large tasks into manageable parts in order to finish an action plan. The preventative coping scale gauges a person's capacity to foresee possible stressors and mentally get ready for them before they materialize (threat appraisal). The instrumental support-seeking scale gauges a person's willingness to turn to his social network for guidance and assistance. The emotional support-seeking scale measures how well a person controls his or her emotional distress by sharing his or her feelings with those who matter to him or her and generating empathy. The avoidance coping scale gauges how much a person utilizes postponement strategies to avoid acting in a difficult scenario.²²

Ross David, et. al,2009²³ states that, orientation and way-finding are critical skills for the successful mobility of people with visual impairment. The inability to perform these skills successfully may result in a person becoming lost, injured, and discouraged from further mobility. At times, it may be impossible to maintain orientation. One method of improving mobility is to develop, and assist in technology that fills in the "gaps " when available orientation cues are lacking and that intelligently

augments the senses by providing relevant value-added information.

Ranjita Dawn 2005²⁴ investigated the self-esteem and independent living skills among visually impaired persons in Canada and found that higher self-esteem was significantly related to a lower level of dependence on others in performing daily living tasks and found that these results were perceived independence as one of the most important factors related to self-esteem and adjustment in individuals with visual impairment

Geeta Das.2003²⁵ conducted a comparative study to see the adjustment pattern of 50 physically challenged and 50 normal samples in Patna town. Data were analyzed using the T-test. Results indicated a significant difference in the adjustment patterns of challenged persons as compared to their normal counterparts. These differences could be attributed to the feelings of isolation, differentiation, and negligence experienced by the challenged.

K. Sunil Kumari. 2009²⁵ reveals research on the coping strategies developed by blind people has mainly been carried out with individuals who had recently acquired a condition of blindness or serious visual impairment. Some of these studies highlight in particular the importance of self-efficiency and mobility, whereas other studies focus on the evaluation of psychological factors with the aim of predicting the success or lack of success of rehabilitation programs

Adiron RJ, 1982²⁶ conducted a study to assess the blindness associated with midfacial fractures, they conclude that the frequency of blindness associated with midfacial fractures in this series was attributable to the predominance of road traffic accidents as the major cause and absence of an obligatory seat belt. Early diagnosis of the exact nature of the ophthalmic injury and treatment is important, and the involvement of the ophthalmologist is mandatory. **Tellanik, et.al 2004**²⁸ introduced an article about activity-based intervention for multiple disabled visually impaired people. The diagnostic, planning, and training procedures for people with various disabilities and visual impairments are covered in the article. The impact of this project, an EU Comenius initiative, addressed issues raised by instructors of kids and teens with MDVI about how they are expected to incorporate the varied curricular components and specific skills they have been taught into a

meaningful education. Ophthalmologists play a crucial part in treating people with visual impairment. If necessary, the treating ophthalmologist or the person who certifies the handicap may suggest seeking assistance from a social worker or psychologist. Patients may benefit from changing unhealthy coping mechanisms and replacing them with better coping mechanisms.

CONCLUSION:

People who are blind or have impaired vision employ a variety of coping mechanisms. Both positive (reflective coping) and negative (avoidance coping) coping methods were often used in our study; strategic planning was used the least frequently. The use of effective coping mechanisms was linked to improved psychosocial quality of life and overall functioning. Ophthalmologists who assess visual impairment should be taught to recognize the coping strategies used by their patients and should think about referring them for counseling and training in more adaptive coping strategies. In order to better understand the connection between coping and quality of life, longitudinal research examining the development of coping mechanisms through time in individuals with a visual impairment may be helpful. Further studies might also examine the effects of changing coping mechanisms on the quality of life (QoL) of people with visual impairment.

REFERENCES: -

1. M. Lundstrom, K. G. Brege, I. Florén, B. Lundh, U. Stenevi, and W. Thorburn, "Cataract surgery and quality of life in patients with age-related macular degeneration," *The British Journal of Ophthalmology*, 2002;86(12):1330–1335.
2. C. C. Langdell and T. Langdell, *Coping with Vision Loss: Understanding the Psychological, Social, and Spiritual Effects*, Praeger/ABC-CLIO, Santa Barbara, Calif, USA, 2011.
3. C. M. Mangione, R. S. Phillips, M. G. Lawrence, J. M. Seddon, E. J. Orav, and L. Goldman, "Improved visual function and attenuation of declines in health-related quality of life after cataract extraction," *Archives of Ophthalmology*, 1994;112(11):1419–1425.
4. S. A. Obstbaum, "Utilization, appropriate care, and quality of life for patients with cataracts," *Ophthalmology*, 2006;113(10):1878–1872.
5. A. L. Coleman, "Glaucoma," *The Lancet*, 1999;354:1803–1810.

6. J. Derek, "Coping with sight loss: Getting used to glaucoma," *British Journal of Visual Impairment*, 2006;24(1):44–45.
7. M. Yamada, Y. Mizuno, and Y. Miyake, "A multi-center study on the health-related quality of life of cataract patients: baseline data," *Japanese Journal of Ophthalmology*, 2009;53(5):470–476.
8. A. K. Bittner, L. Edwards, and M. George, "Coping strategies to manage stress related to vision loss and fluctuations in retinitis pigmentosa," *Optometry*, 2010;81(9):461–468.
9. Siqueira RC, Messias A, Messias K, Arcieri RS, Ruiz MA, Souza NF, et al. Quality of life in patients with retinitis pigmentosa submitted to intravitreal use of bone marrow-derived stem cells (Reticell-clinical trial). *Stem Cell Res Ther* 2015;6:29.
10. KeKM, Montgomery-M, Stevenson, O'Neill C, Chakravarthy U. Formal and informal care utilization amongst elderly persons with visual impairment. *Br J Ophthalmol* 2007;91:1279-81.
11. Mohanraj B, Immanuel Selvaraj C, Selvaraj B, Srinivasan T. Assessment of psychological and psychophysiological problems among visually impaired adolescents. *Iran J Psychiatry Behav Sci* 2016;10:3895.
12. Stevelink SAM, Malcolm EM, Fear NT. Visual impairment, coping strategies and impact on daily life: A qualitative study among working-age UK ex-service personnel. *BMC Public Health* 2015;15:1118.
13. Finger RP, Kupitz DG, Holz FG, Balasubramaniam B, Ramani RV, Lamoureux EL, et al. The impact of the severity of vision loss on Vision-Related Quality of Life in India: An evaluation of the IND-VFQ-33. *Investig Ophthalmology Vis Sci* 2011;52:6081-8.
14. Glen FC, Crabb DP. Living with glaucoma: A qualitative study of functional implications and patients' coping behaviors. *BMC Ophthalmol* 2015;15:128.
15. Bittner AK, Edwards L, George M. Coping strategies to manage stress related to vision loss and fluctuations in retinitis pigmentosa. *J Am Optom Assoc*. 2010;81:461–8.
16. Chacón-López H, Pelayo FJ, López-Justicia MD, Morillas CA, Urena R, Chacon-Medina A, Pino B. Visual training and emotional state of people with retinitis pigmentosa. *J Rehabil Res Dev*. 2013;50:1157–68.
17. Hartong DT, Berson EL, Dryja TP. Retinitis pigmentosa. *Lancet*. 2006;368:1795–809.
18. R. Fagerstrom, "Correlation between depression and vision in " aged patients before and after cataract operations," *Psychological Reports*, 1994;75(1):115–125.
19. C. Zhou, S. Qian, P. Wu, and C. Qiu, "Quality of life of glaucoma patients in China: sociodemographic, clinical, and psychological correlates—a cross-sectional study," *Quality of Life Research*, 2014;23:999–1008.
20. L.-L. Gao, Q.-Q. Gao, R. Yang, and C.-L. Lv, "Relationship among psychological health, social support, and coping styles in patients with low-vision," *Chinese Mental Health Journal*, 2009;23(4):242–245.
21. Vaculíková J. Proactive coping behavior in a sample of university students in helping professions. *Soc Educ* 2016;4:38-55.
22. Greenglass E, Schwarzer R, Taubert S. The Proactive Coping Inventory (PCI): A Multidimensional Research Instrument The 7 Subscales of the Proactive Coping Inventory: In 20th International Conference of the Stress and Anxiety Research Society (STAR). Cracow, Poland; 1999;7-9.
23. Ross David. Critical skills for the mobility of people with visual impairment. *Journal of visual impairment & Blindness*. 2009;(103):229-239
24. Ranjita Dawn. A comparative study of self-esteem of blind students in integrated and non-integrated school settings. *Journal of Disabilities and Impairments* 2005;(14):129-134.
25. Geeta Das. Psychosocial Profiles of Blind Adolescent Girls. *Indian Journal of Rehabilitation*. 2003;(1):1-13.
26. K. Sunil Kumari. Problems and coping strategies of blind children. *Journal of Nightingale Nursing Times*. 2009;(5):54-56.
27. Adiron RJ. Personality assessment of the early visually impaired person. *Journal of visual impairment blindness*. 1982;(26):172-178
28. Tellanik. Activity Based intervention for multiple disabled visually impaired people. *British Journal visual impairment*. 2009;(27):204-220.