

To Study the Coping Strategies of Visually Impaired Adults

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Abstract

Background: Unlike the majority of animals, humans are vulnerable from birth and require care and upbringing in a secure environment in order to survive. Human development is complex and all-encompassing. The ability to learn through the senses—such as sight, hearing, touch, taste, and smell—is crucial to growth. To understand their surroundings, people need to use all of their senses. About 253 million individuals worldwide suffer from vision impairment (VI). People infected with VI have a harder time getting by in comparison to those who are sighted, depending on the sort of visual impairment they have (congenital or accidental). Among the difficulties faced by people with VI are unemployment, injuries from falls and accidents, low self-esteem, loneliness, depression, and trouble getting around in their communities. Maintaining a visual impairment can have a significant effect on many areas of life, including employment, relationships with others, mobility, and mental and social health. When evaluating visual impairment, ophthalmologists must take into account the coping strategies that patients use and provide counseling and training in more constructive coping techniques.

Aim: The study aims to assess the coping strategies of visually impaired adults.

Material and Method: The Department of Ophthalmology carried out this cross-sectional investigation. The study involved the recruitment of adult patients (aged 24 to 70) who self-presented to the ophthalmology outpatient department and had a best-corrected visual acuity (BCVA) of less than 6/18, current refraction in the better eye, and vision loss duration of at least 6 months. All participants provided written informed consent. The cause of the visual loss had to be irreversible; in this case, irreversible low vision was defined as current BCVA in the better eye between <6/18 and <6/60 that could not be treated, irreversible blindness as current BCVA in the better eye between <6/60 and 3/60 (economic blindness), or irreversible social blindness as current BCVA in the better eye between <3/60 and <6/60 that could not be treated.

Results: Forty patients met the inclusion criteria and gave their permission to take part; twenty (50%) were female and ranged in age from 24 to 70 years; twenty (20%) had a co-occurring chronic illness but no other handicap except vision. The most common cause of reduced vision or blindness was degenerative myopia, which was caused by posterior segment disease. When all participants were combined, avoidance and reflective coping showed the greatest ratings, while strategic planning showed the lowest. The majority of vision-related QoL scores were low, with the psychosocial effects of sight loss being linked to the lowest QoL.

Conclusion: It was found that the combination of autopsy and CT scan results is a helpful diagnostic tool for different types of brain injury lesions, which aids in the creation of better policies. It was noted that while a CT scan can be helpful in diagnosing different types of head injury lesions, an autopsy is a more reliable method of finding them. Patients with traumatic head injuries can benefit greatly from the high-resolution CT scan, which is a very advanced procedure. As nonadaptive ways of functioning, demobilization and high mobilization for coping seem to be associated with worse quality of life, decreased self-esteem, and elevated feelings of pessimism, loneliness, and anxiety.

Keywords: Blindness, Coping Strategy, Proactive Coping Inventory, Quality of Life, Vision, Low and Vision-Related Quality of Life.

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Introduction

For the person afflicted, becoming visually handicapped can be a transformative event with lasting effects. When faced with this major loss, people who acquire a visual impairment exhibit a range of emotional, cognitive, behavioral, and social reactions. The Kübler-Ross model of mourning, which was first developed to explain coping in terminally sick individuals, has proven to be helpful in a range of contexts where people encounter a major crisis, change, or loss, like being diagnosed with a visual impairment. [1,2] Age-related increases in the risk of cataract development, glaucoma, and other ophthalmological illnesses are demonstrated by statistical data. About 20% of individuals between the ages of 65 and 74 have a cataract, which is the primary cause of blindness in 50% of those who are between the ages of 75 and 84. [3,4]

On the other hand, 2% of patients aged 45 and above have a 2% increased risk of getting glaucoma. This risk increases significantly for older individuals. An intense sense of anxiety can emerge because it can be challenging to detect a disease in its early stages and because the diagnosis itself may not be accurate. [5,6] One of the main causes of decreased quality of life, anxiety, and poor adaptation is limited vision, particularly in elderly patients who have dual issues with their age and health. [7] Thus, coping with stress seems especially important for adaptation to low vision. [8]

Since visual impairment impairs one's capacity to carry out independent everyday activities like mobility, reading, earning a living, and taking care of oneself, people with visual impairments have worse quality of life (QoL). [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 means facing difficulties and dealing with problems to overcome them. It is known that the ability to function and the approach toward perceived problems varies greatly from disabled to disabled; [14] however, there are no studies on people with low vision and blindness and the coping strategies that they use to manage their daily challenges.

A collection of hereditary progressive retinal dystrophies known as retinal pigmentosa (RP) are characterized by specific symptoms include night blindness and progressive loss of peripheral vision. [15] Visual impairments associated with RP have a detrimental effect on an individual's ability to conduct daily tasks, including driving, cooking, and grooming. As the RP advances to its ultimate stage, the capacity to carry out daily tasks steadily declines and finally reaches a plateau. The degree to which vision affects life satisfaction and one's

capacity to carry out everyday tasks consequently declines in vision-related quality of life. [16] There is currently no cure for RP, and its prevalence is estimated to be 1 in 4000 in the UK. [17] The primary goals of the research projects on the patient groups are to define the quality-of-life pattern and investigate post-treatment changes in the paradigm and vision-related functional status. Merely a small percentage of these studies addressed characteristics including anxiety and sadness, future expectations, loneliness, or self-esteem. [18,19] In glaucoma research, the significance of psychological variables like coping strategies and anxiety intensification factors has been appropriately highlighted. This is because the disease's hidden progression and the possibility of a poor prognosis may contribute to the development of anxiety. [20]

This study was conducted to assess coping strategies in patients with low vision or blindness and to determine whether particular coping strategies correlated with vision-related QoL. This should be investigated because RP is a life stressor that demands individuals to constantly adapt to daily challenges, which become increasingly difficult due to the progressive nature of RP.

Material and Methods

This was a descriptive, cross-sectional study conducted in the Department of Ophthalmology. Written informed consent, adult patients (24-70 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 24-70 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 – proactive coping (14 items), reflective coping (11 items), strategic planning (4 items), preventive coping (10 items), instrumental support seeking (8 items), emotional support seeking (5 items), and avoidance coping (3 items). Each item is rated on a 4-point scale – not at all true, barely true, somewhat true, and completely true. The total score for each subscale is calculated by adding the

individual scores of the items in that subscale. Three items in the proactive coping subscale (item 2, item 9, and item 14) are rated in reverse since they are negative items. In addition to individual subscale scores, we also calculated the total coping strategy score by adding the seven subscale scores. The higher the score, the better the coping.

The 33-item IND-VFQ33 has three subscales – general functioning (21 items), psychosocial impact (5 items), and visual symptoms (7 items). General functioning is rated on a 5-point scale (not at all, a little, quite a bit, a lot, and cannot do this because of my sight), while psychosocial impact and visual symptoms are rated on a 4-point scale (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-tests were used to compare coping scores based on gender, the presence or absence of chronic disease, and the category of BCVA distance and near vision.

Result

Forty patients fulfilled the inclusion criteria and consented to participate; of them, 20 were women (50%); ages ranging between 24 to 70 years; and 20 (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 40 participants with low vision or blindness

Proactive Coping Inventory sub-scales (minimum-maximum score)	Range Average score \pm standard deviation	Number of participants who scored above the halfway score (%)
Proactive coping (14-56)	23-55 37.0 \pm 8.11	10 (25)
Reflective coping (11-44)	12-42 22.1 \pm 7.55	32 (80.0)
Strategic planning (4-16)	4-15 5.3 \pm 0.98	12 (30.0)
Preventive coping (10-40)	13-37 23.1 \pm 2.81	19 (47.5)
Instrumental support seeking (8-32)	11-30 18.5 \pm 3.18	17 (42.5)
Emotional support seeking (5-20)	7-18 10.5 \pm 0.65	26 (65.0)
Avoidance coping (3-9)	3-8 4.8 \pm 2.88	32 (80.0)
Total coping (55-217)	87-196 125.3 \pm 20.25	19 (47.5)

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 40 participants with low vision

Domain of vision-related quality of life	Score (can range from 20-100) Range Average \pm standard deviation
General functioning	20.0-2.4 36.2 \pm 10.77
Psychosocial impact	24-66 24.1 \pm 9.10
Visual symptoms	23-70.2 34.2 \pm 13.21

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

Discussion

From the perspective of a disability, coping refers to how an individual manages their own limits. Reactive and proactive approaches to coping are two general categories. [21] Reactive coping is when a person responds to a stressor—in this case, disability—that they have previously experienced and attempts to lessen the subsequent stress. Proactive coping is a more recent idea, and traditional coping models have focused on how reactive coping is. It is a proactive coping technique in which the person looks ahead to any stressors that may arise due to his handicap and actively works to improve his capacity, create coping mechanisms, and acquire resources to help him better manage his life. [22]

Since coping is believed to be a multifaceted process, the PCI measures seven different coping mechanisms that people employ under pressure.²² Regarding the PCI, the proactive coping scale assesses an individual's capacity to independently create objectives and self-regulate achieving those objectives. The reflective coping scale assesses a person's capacity for behavioral alternative analysis and idea generation. The strategic planning scale assesses how well a person can divide complex activities into smaller, more manageable parts in order to finish an action plan. The preventative coping scale assesses a person's ability to foresee possible stressors and get ready for them before they materialize (threat appraisal). The instrumental support-seeking scale gauges an individual's willingness to ask those in his social network for guidance and assistance. The emotional support-seeking measure evaluates how well a person manages his emotional pain by communicating his emotions to close friends and family members and arousing empathy. The avoidance coping scale gauges how often a person delays taking action when faced with a stressful circumstance.

Ross David, et. al, 2009 [23] state that, orientation and way-finding are critical skills for the successful mobility of people with visual impairment. If these talents are not successfully executed, an individual may end up lost, hurt, or discouraged from moving

forward. It might not always be able to stay oriented. Creating and supporting technology that intelligently augments the senses with pertinent value-added information and fills in the "gaps" when accessible orientation cues are few is one way to improve mobility.

Ranjita Dawn 2005 [24] 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 2003 [25] 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. The findings showed that the adjustment patterns of challenged individuals differed significantly from those of normal individuals. These discrepancies may be related to the challenged people's sense of neglect, alienation, and distinction.

K. Sunil Kumari. 2009 [25] 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, 1982 [26] 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 processes for individuals with various disabilities

and visual impairments are covered in the article. Teachers of children and young adults with MDVI have expressed concerns about how their students will be able to integrate the different curricular aspects and specific skills they have been taught into a meaningful education. This project, an EU Comenius program, addressed such issues. Ophthalmologists play a crucial role in treating individuals who are visually impaired. In certain cases, the treating ophthalmologist or the person attesting to the handicap may recommend seeking assistance from a psychologist or social worker. Patients might benefit from changing unhealthy coping mechanisms and switching to healthier ones.

Conclusion

Individuals who are blind or have impaired vision employ a variety of coping mechanisms to manage their handicap. In our study, avoidance coping (a negative tactic) and reflective coping (a good tactic) were both often employed; strategic planning was the least common. Good coping techniques have been linked to improved psychosocial QoL and overall functioning. When evaluating visual impairment, ophthalmologists should be trained to recognize the coping strategies used by their patients and to suggest counseling and training in more constructive coping strategies. Research examining the changes in coping mechanisms over time in individuals with visual impairments through longitudinal studies may provide to a better understanding of the connection between coping and quality of life. Future studies could also be directed to assessing how modification in coping strategies impacts QoL in people with visual disability.

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