

Investigating Coping Strategies of Visually Impaired Adults

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Abstract

Background: Coping with visual impairment presents significant challenges that require adaptive strategies to manage daily life, professional responsibilities, social interactions, and emotional well-being. This study aims to explore the coping strategies employed by visually impaired adults and identify the factors influencing their effectiveness. Using a mixed-methods approach, the research combines in-depth interviews, focus groups, and surveys to gather comprehensive data from a diverse group of visually impaired adults aged 18 and above. The study utilizes thematic analysis for qualitative data and statistical analysis for quantitative data to uncover common themes and patterns. Preliminary findings suggest that visually impaired adults employ a range of coping strategies, including the use of assistive technologies, reliance on social support networks, and the development of personalized routines and techniques to navigate daily challenges. Emotional coping strategies such as acceptance, positive reframing, and seeking professional psychological support also play crucial roles. The research highlights the importance of accessibility, availability of resources, and societal attitudes in shaping the effectiveness of these coping strategies.

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

Results: Forty patients meeting the inclusion criteria agreed to participate, with half being female and aged between 24 and 70 years. Twenty percent of participants had a coexisting chronic illness but no other disability aside from vision impairment. Degenerative myopia caused by posterior segment disease was the most common reason for reduced vision or blindness. Across all participants, avoidance and reflective coping strategies received the highest ratings, while strategic planning received the lowest. Most quality-of-life scores related to vision were low, with the psychosocial impacts of vision loss being associated with the lowest quality of life scores.

Conclusion: The combination of autopsy findings and CT scan results has been identified as a valuable diagnostic tool for various types of brain injury lesions, contributing to the development of improved policies. While CT scans can aid in diagnosing various types of head injury lesions, autopsies are considered a more reliable method for detection. Patients with traumatic head injuries can greatly benefit from the high-resolution CT scan, which represents an advanced diagnostic technique. Maladaptive coping mechanisms, such as demobilization and excessive mobilization, have been linked to poorer quality of life, reduced self-esteem, and increased feelings of pessimism, loneliness, and anxiety.

Keywords: Brain injury lesions, Diagnostic tool, Policy development, Traumatic head injuries, High-resolution CT scan and Coping mechanisms.

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Introduction

Visual impairment, defined as a significant reduction in visual function, poses considerable challenges to individuals in various aspects of their lives, including daily activities, social interactions,

employment, and emotional well-being. According to the World Health Organization (WHO), an estimated 2.2 billion people worldwide have vision impairment or blindness, with the prevalence

expected to rise due to aging populations and increasing rates of chronic diseases such as diabetes. [1] Understanding how individuals cope with visual impairment is crucial for developing effective support systems, interventions, and policies to enhance their quality of life and well-being. The coping strategies employed by visually impaired adults play a critical role in their ability to adapt to and manage the challenges posed by their condition. Coping can be defined as the cognitive and behavioral efforts individuals employ to manage stressful situations or events. [2] These strategies may vary widely among individuals and can influence various outcomes, including psychological adjustment, emotional well-being, social integration, and overall quality of life.

Despite the importance of coping strategies in the lives of visually impaired adults, there is a notable gap in the literature regarding their exploration and understanding. [3] While numerous studies have investigated the psychosocial impact of visual impairment and the effectiveness of rehabilitation interventions, relatively few have focused specifically on coping mechanisms and strategies employed by individuals with visual impairments. Additionally, existing research often lacks a comprehensive understanding of the diverse range of coping strategies used by visually impaired adults and their effectiveness in different contexts. [4]

This study seeks to address these gaps by conducting a comprehensive investigation into the coping strategies of visually impaired adults. By exploring the coping mechanisms employed by individuals with visual impairments, this research aims to shed light on the adaptive strategies used to navigate daily challenges, manage emotional well-being, and maintain social connections. Through a thorough examination of coping strategies, this study aims to contribute to the development of targeted support services, interventions, and policies that can enhance the quality of life and well-being of visually impaired adults. [5]

To achieve these objectives, this introduction provides an overview of the prevalence and impact of visual impairment, the theoretical framework of coping, and the importance of understanding coping strategies in the context of visual impairment.

Subsequent sections of this paper will delve into the methodology employed in the study, including participant recruitment, data collection methods, and data analysis techniques.

The results of the study will be presented, followed by a discussion of the findings, implications for practice and policy, limitations of the study, and directions for future research.

Material and Methods

The Department of Ophthalmology conducted this cross-sectional study, recruiting adult patients aged 24 to 70 who self-presented to the ophthalmology outpatient department with a best-corrected visual acuity (BCVA) of less than 6/18 in the better eye, and had experienced vision loss for at least 6 months.

All participants provided written informed consent. The visual loss had to be irreversible. Irreversible low vision was defined as a BCVA in the better eye between <6/18 and <6/60 that could not be treated. Irreversible blindness was defined as a BCVA in the better eye between <6/60 and 3/60 (economic blindness). Irreversible social blindness was defined as a BCVA in the better eye between <3/60 and <6/60 that could not be treated.

Inclusion Criteria:

- Adults aged between 24 and 70 years.
- Self-presentation to the ophthalmology outpatient department.
- Best-corrected visual acuity (BCVA) of less than 6/18 in the better eye.
- Duration of vision loss of at least 6 months.
- Diagnosis of irreversible visual impairment, including conditions such as degenerative myopia caused by posterior segment disease.
- Written informed consent provided by the participant.

Exclusion Criteria

- Individuals below the age of 24 or above the age of 70.
- BCVA of 6/18 or better in the better eye.
- Duration of vision loss less than 6 months.
- Diagnosis of reversible visual impairment or conditions not related to visual impairment.
- Inability or refusal to provide written informed consent.
- Presence of cognitive impairments or other conditions that may hinder participation or accurate data collection.

Study Criteria:

Age, gender, binocular visual function (including distant and near visual acuity using Snellen's chart), and the presence of chronic systemic diseases or other disabilities were documented. Coping strategies were evaluated using the Hindi version of the PCI. This tool was selected due to its demonstrated good construct validity, homogeneity, acceptable reliability, and strong item correlations.

The adaptation of the PCI into Hindi enhances its reliability for assessing coping strategies among native Hindi speakers. Vision-related quality of life (QoL) was assessed using the Hindi version of the

IND VFQ33, a validated measure of the impact of vision impairment on daily activities and emotional well-being. Specifically designed for the Indian population, this instrument has been previously utilized in our department. Its suitability for use in populations with varied literacy levels and its brevity minimize respondent burden.

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 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 (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

In the context of disability, coping refers to how individuals manage the limitations imposed by their condition. Coping strategies can generally be categorized into reactive and proactive approaches. Reactive coping involves responding to stressors, such as disability-related challenges, as they arise, with the aim of reducing subsequent stress.

On the other hand, proactive coping is a more forward-thinking approach, where individuals anticipate potential stressors associated with their disability and actively work to enhance their capacity, develop coping mechanisms, and acquire resources to better navigate their lives. [6] Recognizing coping as a multifaceted process, the Proactive Coping Inventory (PCI) assesses various coping mechanisms individuals utilize when faced

with pressure. Specifically, the PCI measures seven distinct coping strategies. The proactive coping scale evaluates an individual's ability to independently set objectives and self-regulate in achieving those objectives.

The reflective coping scale assesses one's capacity for analyzing behavioral alternatives and generating ideas. The strategic planning scale measures the ability to break down complex tasks into manageable parts to develop an action plan.

The preventative coping scale evaluates the ability to anticipate potential stressors and prepare for them before they occur (threat appraisal). The instrumental support-seeking scale gauges the willingness to seek guidance and assistance from social networks.

The emotional support-seeking measure assesses how effectively individuals manage emotional distress by expressing emotions to close contacts and eliciting empathy. Lastly, the avoidance coping

scale measures the tendency to delay action when faced with stressful situations. [7] According to Ross David et al. (2009) [8], orientation and way-finding skills are vital for the mobility of individuals with visual impairment. Failure to execute these skills successfully can result in individuals becoming lost, injured, or discouraged from moving forward. There may be instances where maintaining orientation is challenging. One approach to enhancing mobility is by developing and supporting technology that intelligently enhances sensory input with relevant information and fills in gaps when orientation cues are limited.

In Ranjita Dawn's [9] study in 2005, higher self-esteem among visually impaired individuals in Canada was found to be significantly associated with reduced dependence on others for daily living tasks. Perceived independence emerged as a crucial factor linked to self-esteem and adjustment in this population. Geeta Das [10] conducted a comparative study in 2003 to examine the adjustment patterns of physically challenged individuals compared to those without challenges in Patna town.

The findings indicated significant differences in adjustment patterns between the two groups, potentially influenced by feelings of neglect, alienation, and distinction among the challenged individuals. K. Sunil Kumari's [11] research in 2009 focused on coping strategies developed by blind individuals, particularly those who recently acquired blindness or severe visual impairment. Some studies emphasized the importance of self-efficacy and mobility, while others evaluated psychological factors to predict the success of rehabilitation programs.

Adiron RJ's [12] study in 1982 assessed blindness associated with midfacial fractures, attributing the frequency of blindness to road traffic accidents and the lack of obligatory seat belt use. Early diagnosis and treatment of ophthalmic injuries were deemed crucial, necessitating involvement of ophthalmologists. Tellanik et al. (2004) [13] introduced an article on activity-based intervention for individuals with multiple disabilities and visual impairments. The article covered diagnostic, planning, and training processes for individuals with various disabilities, addressing concerns of educators regarding integrating curricular aspects and specific skills into meaningful education.

Ophthalmologists play a vital role in treating visually impaired individuals. In certain cases, they may recommend seeking assistance from psychologists or social workers to help patients transition from unhealthy coping mechanisms to healthier ones.

Conclusion

Individuals with blindness or impaired vision utilize various coping mechanisms to manage their condition. In our investigation, we found that avoidance coping, considered a negative approach, and reflective coping, recognized as a positive tactic, were frequently employed, while strategic planning was less common.

Research has established a correlation between effective coping techniques and enhanced psychosocial quality of life (QoL) and overall functioning. Therefore, it is essential for ophthalmologists assessing visual impairment to be trained in identifying their patients' coping strategies and recommending counseling and training in more constructive coping methods. Longitudinal studies examining changes in coping mechanisms over time among individuals with visual impairments could contribute to a deeper understanding of the relationship between coping and QoL. Furthermore, future research efforts could focus on evaluating how adjustments in coping strategies influence the quality of life of individuals with visual disabilities.

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