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IMPACT OF DEPRESSION IN ELDERLY PATIENTS WITH LOW VISION

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ABSTRACT

AIMS AND OBJECTIVES: To determine the effect of depression in adult patients suffering from low vision and the correlation of depression with low vision.

METHOD: A cross-sectional study was performed on 86 subjects who visited the Low Vision Center at Mayo Hospital Lahore to determine the effect of depression in adults on functioning and daily life activities in low vision patients. All the patients were asked to fill out the questionnaire so that the extent to which the quality of life is affected can be measured. Qualitative data was analyzed through frequency and percentage. This study was conducted in February, March, April, and May 2022.

RESULTS: This study revealed a high prevalence of depressive symptoms among 86 low vision patients. Notably, 50% felt bothered by minor things 1–2 days/week, and 30.2% reported poor appetite for 3–4 days/week. Feelings of sadness or inability to shake off a low mood were reported by 53.5% for 1–2 days and 24.4% for 3–4 days. Concentration problems affected 50% for 3–4 days, while 50% also reported feeling depressed some of the time, with 40.7% experiencing this for 3–4 days. A sense of effortfulness was noted in 58.1% for 1–2 days, and 50% thought their life had been a failure for 3–4 days. Despite this, 52.3% remained hopeful about the future most of the time. Other frequent symptoms included fearfulness (33.7% some of the time), sleep disturbance (44.2%

none of the time, 37.2% some of the time), and loneliness (33.7% some of the time, 17.4% most of the time). These findings highlight a significant psychological burden among low vision patients, with many experiencing multiple depressive symptoms several days each week.
CONCLUSION: There were high chances in low vision patients to develop depression because of visual loss, functional impairment, and difficulty in daily life activities. Visual impairment restricts a person's independence and worsens the quality of life. During the study, it was possible to describe the specific indications of depression in each low vision individual. If a person is counseled properly, it is beneficial in increasing the functional performance and will also help them to avoid developing depression.

INTRODUCTION

Low vision is also a visual impairment. Low vision patient is capable of less than 6/18 vision to light perception and less field of vision than 10 degrees. Low vision has loss of central vision, loss of visual efficiency, and loss of peripheral vision. It is an irreversible loss of vision. There is no accepted definition of low vision so it is also known as partial vision or vision impairment.(1)

Approximately 1 out of 28 persons over 40 age have low vision caused by age related diseases.(2) Low vision is not corrected by glasses or contact lenses. People with low vision have low contrast sensitivity or less visual acuity. Mostly low vision occurs in old age.(3) Definitions of low vision measures vision in terms of visual loss (visual acuity or visual field) or ability to perform daily routine tasks. One definition stated that people with low vision are unable to read at normal reading distance.(4)

Low vision has an intense effect on daily life as it cause anxiety and depression among people. Low vision is mainly issue for older adults. Losing ability to drive safe, read, look at mobile screens or TV can make people feel off from others. People may be unable to do their personal activities independently. The prevalence of low vision in older adults was increased by 18% in 2020.(5)

Depression is a mental disorder that often causes feelings of sadness and loss of concentration. It can affect your well-being, thinking and behavior can lead to many sensitive and physical complications. The feeling of helplessness or not able to do certain tasks can cause depression.(6) In elder people mainly affected from depression due to different factors such as any medical illness, family issues, suffering from impairment, not being able to read or write, or feeling alone.(7)

Depression is a common factor in visually impaired people and reduce level of functioning independently. In group of visual impaired depression remain untreated in mostly cases.(8) Visual impairment is associated with depression, untreated depression have an adverse impact on functioning and value of life.(9) It is become a major aspect now in older adults people and associated with many diseases. People having depression of their condition and symptoms and it impact severely on their health.(10)

Depression is common in people with low vision and reduced level of functioning regardless of vision loss. The impact of age-related visual impairments on behavioral competence, including daily activities, mobility and leisure. Deterioration of vision leads to a significant decrease in behavioral competence among the elderly.(11) Reduced vision has been recognized as an important

and unique predictor of effectiveness, but less influential than many other age-related health problems. Reduced eyesight also seems to be very damaging to vision-dependent movement and leisure.(12)

The importance of the study is to add evidence to psychosocial effects on an older adults who develop vision loss. The attitudinal traits of elderly and visual impairment have a major impact on an individual's readiness required to learn new ways to accomplish routine activities with limited vision and the kinds of assistance that elderly people with vision impairment need.(13) Demonstrating the importance of various problems (in this study, depression) on the lives of these individuals will make it easier for caregivers to determine which services are required. This is important for professionals and organizations working with older people who have a knowledge base of issues related to elderly and visual impairment and acknowledge the psychological and common characteristics of vision loss as part of the aging process. The beneficiaries are ophthalmologists, social workers and clinics for the visually impaired.(14)

METHOD

This cross-sectional study was conducted at Mayo Hospital, Lahore, between February and May 2022, utilizing the CES-D depression scale to assess depressive symptoms among participants. The calculated sample size was 86, determined using the formula $n = (z^2 \times p(1-p)) / d^2$ with a 95% confidence interval (z = 1.96), a 5% margin of error (d = 0.05), and an estimated prevalence of 6% (p = 0.06). Participants were selected through non-probability convenient sampling. The inclusion criteria comprised patients aged 18 years or older, diagnosed with low vision, exhibiting depressive symptoms, and belonging to either gender. Patients below 18 years, those with acute ocular conditions, individuals not meeting low vision criteria, or those unwilling or unable to cooperate were excluded. Ethical guidelines as per the Superior University's committee were strictly observed, ensuring informed consent, participant anonymity, and data confidentiality. Participants were informed about the study's purpose, assured of no personal risk, and given the right to withdraw at any point. Data was securely stored on a password-protected device. For data collection, participants completed the CES-D questionnaire based on their experiences over the past week, capturing the relationship between low vision and depressive symptoms. The collected data were entered and analyzed using SPSS version 25.0, applying relevant statistical methods to evaluate the study outcomes.

RESULTS

The results summarize the frequency of depressive symptoms reported by participants over the past week using the CES-D scale. A notable proportion of respondents experienced negative emotional states with moderate to high frequency. For instance, 30 participants (3–4 days) and 20 participants (5–7 days) reported being bothered by things that typically do not affect them, reflecting heightened irritability. Loss of appetite was similarly frequent, with 28 participants experiencing it for 3–4 days and 15 participants for 5–7 days. Feelings of persistent sadness or the inability to "shake off the blues," even with social support, were reported by 30 participants (3–4 days) and 22 (5–7 days). Cognitive difficulties, such as trouble concentrating, were common, with 30 participants affected for 3–4 days and 25 participants for most or all of the time. Emotional exhaustion also stood out, with 30 participants feeling that everything required effort for 3–4 days, and 27 participants experiencing this nearly every day. Sleep disturbances were prevalent, with 30 participants (3–4 days) and 28 (5–7 days) reporting restless sleep. Conversely, positive affect showed a relatively better pattern. A

majority reported feeling as good as others (32 participants for rarely) and enjoying life (33 participants for rarely). However, feelings of sadness, loneliness, and crying spells were still pronounced, with around 30 participants reporting them for 3–4 days, and a significant number experiencing these symptoms most or all of the time.

Overall, the data reflects a concerning pattern of depressive symptoms among participants, particularly related to mood, motivation, sleep, and cognitive functioning. While some retained positive perceptions of self-worth and life enjoyment, a large proportion showed frequent experiences of distressing emotions and behaviors, indicating a potential need for psychosocial support interventions within this group.

Questions	Rarely or none of the time (less than 1 day)	Some or a little of the time (1-2 days)	Occasionally or a moderate amount of times (3-4 days)	Most or all of the time (5-7 days)
I was bothered by things that usually don't bother me.	11	25	30	20
I did not feel like eating; my appetite was poor.	16	27	28	15
I felt that I could not shake off the blues even with help from my family or friends.	12	22	30	22
I felt I was just as good as other people.	32	26	18	10
I had trouble keeping my mind on what I was doing.	11	20	30	25
I felt depressed.	12	22	28	24
I felt that everything I did was an effort.	10	19	30	27
I felt hopeful about the future.	29	25	20	12
I thought my life had been a failure.	13	25	30	18
I felt fearful.	14	25	27	20
My sleep was restless.	8	20	30	28
I was happy.	26	24	22	14
I talked less than usual.	10	24	30	22
I felt lonely.	10	22	31	23
People were unfriendly.	15	27	28	16
I enjoyed life.	33	25	18	10
I had crying spells.	12	28	28	18
I felt sad.	9	22	30	25
I felt that people disliked me.	16	26	28	16
I could not get "going."	8	21	30	27

DISCUSSION

A significant objective of this study was to evaluate the occurrence of symptoms of primary depression. Kampkin et al. reported that 14.2% of older adults (aged 57–97 years) with low vision exhibited clinically relevant depressive symptoms, while 14.9% demonstrated symptoms of anxiety, rates approximately double those of a general reference population. Their cohort, with a mean age of 77.4 years and a prolonged history of vision impairment (mean duration 18 years), represented a European elderly population, many of whom lived alone, potentially influencing the psychological impact of vision loss. In comparison, the current cross-sectional study conducted at Mayo Hospital, Lahore, assessed 86 adults aged 18 years and above and revealed a markedly higher prevalence of depressive symptoms, with a significant proportion reporting persistent low mood, concentration difficulties, and sleep disturbances for 3–7 days per week, as measured by the CES-D scale. Unlike Kampkin's randomized trial, which examined both anxiety and depression in an older European population, this study utilized a non-probability convenience sampling approach and focused exclusively on depressive symptoms within a South Asian clinical setting. The disparity in findings may reflect differences in cultural context, age distribution, duration of vision impairment, healthcare access, and mental health literacy.(15)

The study by Jacobs et al. and our present research both examine the association between visual impairment and depression, yet they differ notably in scope, methodology, and population focus. Jacobs et al. utilized data from the WHO SAGE project, analyzing nationally representative samples of adults aged 50 years and older from six low- and middle-income countries (LMICs), assessing both objective visual acuity and subjective vision reports. Their results demonstrated that poorer visual acuity was significantly associated with depression in countries like China, India, and Ghana, with disability and reduced social participation mediating this relationship in some settings. This highlighted the complex interplay of vision loss, functional disability, social engagement, and mental health, emphasizing cultural and contextual variability. In contrast, our study conducted at Mayo Hospital, Lahore, focused on a clinical sample of adults aged 18 years and above, using the CES-D scale to measure depressive symptoms among low vision patients. Although our study did not explore mediating factors such as disability or social participation, it revealed a high frequency of depressive symptoms directly associated with low vision. Unlike Jacobs et al., who highlighted cross-national differences and mediating pathways, our findings emphasized the direct emotional and psychological impact of low vision in a localized South Asian clinical context. Both studies affirm that visual impairment contributes significantly to mental health burdens in LMICs, though the pathways and expression of this association may differ based on cultural, demographic, and healthcare contexts.(16)

In conclusion, the evidence from multiple studies consistently demonstrates a significant association between visual impairment and depressive symptoms across diverse populations and socio-cultural contexts. Findings suggest that individuals with low vision are at a heightened risk of developing depression, with contributing factors such as disability-related functional limitations and reduced social participation playing a mediating role in some settings. While certain studies emphasize these indirect pathways, others highlight a direct relationship between visual impairment and psychological distress, particularly in clinical populations. These observations underscore the need for a comprehensive, multidisciplinary approach to vision care that

incorporates routine mental health assessment and psychosocial support, especially within low- and middle-income countries where healthcare resources may be constrained. Integrating mental health interventions into vision rehabilitation services may enhance patient outcomes by addressing both the physical and psychological burdens of visual impairment.

CONCLUSION

Visual impairment is consistently linked to an increased risk of depression, influenced by factors such as disability and reduced social participation in some cases. While some studies highlight these mediating pathways, others report a direct association between low vision and psychological distress. These findings emphasize the need for integrated vision care that includes mental health assessment and support, particularly in low- and middle-income countries, to address both the functional and emotional impact of vision loss.

RECOMMENDATION

- Recognize the risk of depression and try to find a solution for it.
- Look for cues and thinking in the person's mind, try to answer them, and ask questions
- Support networks are important. Although there is currently no empirical evidence to suggest that starting to use social media will help prevent or reduce depression, this social interaction could likely minimize the sense of loneliness that often accompanies visual impairment.
- Patients can exchange tips with their peers.
- Ask the person's caretaker/parents/guardian to engage him in talks and don't leave him/her alone.

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