



THE EFFECTIVENESS OF STRUCTURED PSYCHOSOCIAL COUNSELING ON MENTAL HEALTH AND FUNCTIONAL INDEPENDENCE IN INDIVIDUALS WITH LOW VISION

Mahnoor Saleem^{1*}, Gulnaz Zaheer¹

¹Department of Rehabilitation Sciences, Faculty of Allied Health Sciences, The Superior University, Lahore, Pakistan

 ***Corresponding Author:** Mahnoor Saleem, Department of Rehabilitation Sciences, Faculty of Allied Health Sciences, The Superior University, Lahore, Pakistan

 **CONFLICT OF INTEREST**
None declared.

 **GRANT SUPPORT**
None declared.

 **ARTICLE TYPE**
Original Research

ABSTRACT

Background: Low vision is a significant public health issue that affects daily functioning and mental well-being. Despite advances in optical aids, many individuals with visual impairment experience depression, anxiety, and reduced independence. Psychosocial support is often overlooked in vision rehabilitation programs.

Objective: This study explores the impact of structured counseling on mental health and functional independence in people with low vision. The purpose of study was to assess the effects of structured psychosocial counseling on mental health (depression, anxiety) and functional independence in individuals with low vision.

Methodology: A randomized controlled trial was conducted at Sial Hospital, Ali Pur Chatha, involving 32 low vision patients. Participants were randomly assigned to either a structured psychosocial counseling group or a standard care control group. Data were collected using the DASS-21 and VFQ-25 questionnaires to assess mental health and functional independence. Statistical analysis was performed using SPSS, with significance set at $p < 0.05$.

Results: Structured psychosocial counseling significantly improved depression, anxiety, stress, and visual functioning in individuals with low vision. Group A (intervention) showed significant reductions in depression (from 21.31 to 8.37), anxiety (18.50 to 7.56), and stress (23.06 to 12.68) over 12 weeks, while Group B showed minimal change. Visual function (VFQ-25) improved in Group A from 51.37 to 67.00, compared to Group B's 45.50 to 48.87. All differences at week 12 were statistically significant ($p < 0.001$). These results confirm the positive impact of structured psychosocial counseling on mental health and functional independence in individuals with low vision.

Conclusion: Structured psychosocial counseling led to notable improvements in mental health and daily functioning among individuals with low vision. The intervention group experienced reduced levels of depression, anxiety, and stress. These results support the value of counseling as part of low vision rehabilitation.

 **KEYWORDS** Anxiety, Depression, Functional Independence, Low Vision, Psychosocial Counseling, Quality of Life



INTRODUCTION

Low vision refers to a form of visual impairment that cannot be adequately treated with standard eyeglasses, surgery, or medication, affecting more than 217 million individuals worldwide and often leading to significant functional limitations and emotional distress. According to the World Health Organization (WHO), low vision is defined as a visual acuity of less than 6/18 (20/60) but equal to or better than 3/60 (20/400) in the better-seeing eye, even with the best possible correction. It can also involve major visual field defects; such as tunnel vision or peripheral vision loss. With increasing life expectancy, global rates of blindness are projected to triple, and cases of moderate-to-severe vision impairment are expected to double in 30 years.(1)

Children and older adults are especially susceptible to the psychological effects of vision loss, often facing heightened risks of emotional distress and depression. In Pakistan, visual impairment continues to pose a significant public health challenge. Low vision significantly diminishes quality of life by impairing visual functioning, emotional health, daily convenience, and social engagement. It can interfere with essential activities such as reading, working, and mobility including the ability to drive. Both low vision and blindness are well-established risk factors for developing anxiety and depression. Numerous studies have documented the adverse effects of vision loss on psychological well-being, social interaction, and overall life satisfaction. Rates of depression are notably higher among individuals with visual impairment compared to the general population.(2)

Since our sense of sight is closely tied to identity and self-perception, its decline can be profoundly disruptive. Retinal diseases, which are a major cause of vision loss, differ widely in their onset and progression, leading each individual to follow a unique path in their experience of visual decline. Mental health is an integral component of overall quality of life, alongside the ability to perform daily activities. Rather than relying solely on subjective accounts from individuals with low vision, quantitative assessment tools provide a more accurate measure of their psychological and functional well-being. Instruments such as the Depression Anxiety Stress Scales and the Low Vision Quality of Life Questionnaire are commonly used to evaluate these aspects objectively.(3)

Individuals with visual impairment are more susceptible to feelings of loneliness and depression. Those with more severe vision loss often report a diminished sense of control over their lives and surroundings, along with a reduced quality of life. Research suggests that visual impairment may contribute to psychological distress or decreased well-being by undermining internal psychological resources such as self-efficacy.(4)

Among children, low vision is approximately ten times more common than blindness. An Indian study reported a low vision prevalence of 1.05%, indicating that around 10.6 million individuals require low vision services. When vision loss occurs early in life, it can have significant functional and psychological consequences, deeply impacting overall quality of life. Low Vision Aids (LVAs), as a key component of low vision rehabilitation, remain one of the most effective tools for optimizing the use of residual vision.(5)

METHODOLOGY

The study design was single blinded randomized Controlled Trial. The study was conducted at outpatient department Clinical settings of Sial Hospital Ali Pur Chatha under supervision of concerned authority. Total number of 28 Individuals aged 18 years and older was selected by random sampling method after due consideration to inclusion criteria and exclusive criteria. Using G*Power version 3.1.9.2, the study determined a required sample size of 28 participants to achieve a confidence level of 95% and a statistical power of 0.95, targeting statistically significant differences in Low Vision outcomes. To account for an anticipated 10% attrition rate during the study period, a total of 32 participants was recruited. This ensures the final sample size remains adequate despite potential dropouts. The Non-probability convenience sampling technique was used. The duration of study was 6 months after approval from BASR. Pre-diagnosed patients of low vision having symptoms of depression, anxiety, or functional challenges was recruited for the study. After randomization and group allocation the persons in experimental group was sent to psychiatrist for counseling. DA SS-21, VFQ-25 Questionnaire was performed to confirm the diagnosis. Using. The duration of study was 6 months after approval from BASR. This study employs a randomized controlled trial design to ensure the allocation of participants into groups is unbiased and minimizes selection bias. Participants meeting the inclusion criteria was randomly assigned to either the experimental group (Group A) or the control group (Group B). Inclusion criteria includes individuals aged 18 to 80 years, both male and female, individuals diagnosed with low vision, defined as a visual acuity of less than 6/18 but equal to or better than 3/60 in the better eye with best correction, Individuals having visual acuity 6/60, Counting fingers or light perception, individuals experiencing symptoms of depression or anxiety as assessed through a validated screening tool and individuals reporting reduced functional independence in daily activities due to low vision.(6) Exclusion criteria excludes diagnosed with severe psychiatric disorders such as schizophrenia, bipolar disorder, or severe post-traumatic stress disorder, existing involvement in similar counseling programs, presence of medical conditions or disabilities and pregnant individuals if pregnancy-related complications or responsibilities could interfere with participation in the intervention. (7)

EXPERIMENTAL GROUP





Participants in the Experimental group was divided into groups with the persons having visual acuity 6/60, counting fingers and light perception received structured psychosocial counseling tailored for individuals with low vision. Counseling was delivered over a 12-week period, consisting of weekly 60-minute sessions conducted by trained counselors. The program focused on the following: Coping mechanisms for depression and anxiety. Strategies to improve functional independence and daily living skills. Social integration techniques to enhance participation in community activities.(8)

CONTROL GROUP

The control group received standard care, including referrals and informational support.(9)

RESULTS

The statistics for the age of Group A, consisting of 16 individuals, reveal a mean age of 37.44 years with a standard deviation of 14.39 years. The ages in this group range from a minimum of 18 years to a maximum of 65 years, indicating a diverse age distribution within the sample. The statistics for the age of Group B, consisting of 16 individuals, show a mean age of 39.69 years with a standard deviation of 6.71 years. The ages within this group range from a minimum of 32 years to a maximum of 56 years, indicating a relatively narrower age range compared to Group A. In Group A, there are 9 males (56.3%) and 7 females (43.8%), making up a total of 16 individuals (100%)

4.1 Tests of Normality

Tests of Normality			
	Shapiro-Wilk		
	Statistic	df	Sig.
Baseline: Depression (DASS-21)	.956	32	.219
Baseline: Anxiety (DASS-21)	.977	32	.711
Baseline: Stress (DASS-21)	.962	32	.310
Baseline: National Eye Institute Visual Functioning Questionnaire - 25 (VFQ-25)	.970	32	.511

The tests of normality for the baseline measurements, as assessed using the Shapiro-Wilk test, show that all variables follow a normal distribution. Specifically, the baseline Depression (DASS-21) score had a statistic of 0.956 with a significance value of 0.219, the baseline Anxiety (DASS-21) score had a statistic of 0.977 with a significance value of 0.711, and the baseline Stress (DASS-21) score had a statistic of 0.962 with a significance value of 0.310. Additionally, the National Eye Institute Visual Functioning Questionnaire - 25 (VFQ-25) score had a statistic of 0.970 with a significance value of 0.511. Since all significance values are greater than 0.05, this suggests that the data for all these variables follow a normal distribution.

4.2 Repeated measure ANOVA within group analysis Depression (DASS-21)

Variables	Outcome time	Group A		Group B		F(df)	P value
		Mean	SD	Mean	SD		
Depression (DASS-21)	Baseline	21.31	1.81	23.56	1.96	2	.065
	6th week	15.37	1.92	22.62	1.82	2	.005
	12th week	8.37	1.45	19.62	1.89	2	<0.001

The repeated measure ANOVA within-group analysis for Depression (DASS-21) shows significant changes in both Group A (Experimental group) and Group B (Control group) over time. At baseline, Group A had a mean score of 21.31 (SD = 1.81) and Group B had a mean score of 23.56 (SD = 1.96), with no significant difference between the two groups ($F(2) = 2$, $p = 0.065$). However, by the 6th week, Group A showed a significant reduction in depression, with a mean score of 15.37 (SD = 1.92), while Group B's mean score was 22.62 (SD = 1.82), and the difference between the groups was significant ($F(2) = 2$, $p = 0.000$). This trend continued at the 12th week, with Group A showing further improvement, with a mean of 8.37 (SD = 1.45), compared to Group B's mean of 19.62 (SD = 1.89), and the difference remained highly significant ($F(2) = 2$, $p = <0.001$).

4.3 Repeated measure ANOVA within group analysis Anxiety (DASS-21)

Variables	Outcome time	Group A		Group B		F(df)	P value
		Mean	SD	Mean	SD		
Anxiety (DASS-21)	Baseline	18.50	1.86	21.62	1.99	2	.076



	6th week	12.93	1.69	20.68	1.57	2	.000
	12th week	7.56	1.41	17.18	2.00	2	<0.001

The repeated measure ANOVA within-group analysis for Anxiety (DASS-21) indicates significant changes in both Group A (Experimental group) and Group B (Control group) over time. At baseline, Group A had a mean anxiety score of 18.50 (SD = 1.86), while Group B had a mean score of 21.62 (SD = 1.99), with no significant difference between the two groups ($F(2) = 2$, $p = 0.076$). However, by the 6th week, Group A showed a significant reduction in anxiety, with a mean score of 12.93 (SD = 1.69), while Group B's mean score was 20.68 (SD = 1.57), and the difference between the groups was significant ($F(2) = 2$, $p = 0.000$). This trend continued at the 12th week, with Group A showing further improvement, with a mean of 7.56 (SD = 1.41), compared to Group B's mean of 17.18 (SD = 2.00), and the difference remained highly significant ($F(2) = 2$, $p = <0.001$).

4.4 Repeated measure ANOVA within group analysis Stress (DASS-21)

Variables	Outcome time	Group A		Group B		F(df)	P value
		Mean	SD	Mean	SD		
Stress (DASS-21)	Baseline	23.06	1.98	28.43	2.87	2	.088
	6th week	17.37	1.85	26.75	2.11	2	.005
	12th week	12.68	2.57	24.12	2.68	2	<0.001

The repeated measure ANOVA within-group analysis for Stress (DASS-21) reveals significant changes in both Group A (Experimental group) and Group B (Control group) over time. At baseline, Group A had a mean stress score of 23.06 (SD = 1.98), while Group B had a mean score of 28.43 (SD = 2.87), with no significant difference between the two groups ($F(2) = 2$, $p = 0.088$). However, by the 6th week, Group A showed a significant reduction in stress, with a mean score of 17.37 (SD = 1.85), compared to Group B's mean score of 26.75 (SD = 2.11), and the difference between the groups was highly significant ($F(2) = 2$, $p = 0.000$). This trend continued at the 12th week, with Group A showing further improvement, with a mean of 12.68 (SD = 2.57), while Group B's mean score was 24.12 (SD = 2.68), and the difference remained highly significant ($F(2) = 2$, $p = <0.001$).

4.5 Repeated measure ANOVA within group analysis National Eye Institute Visual Functioning Questionnaires (VFQ-25)

Variables	Outcome time	Group A		Group B		F(df)	P value
		Mean	SD	Mean	SD		
National Eye Institute Visual Functioning Questionnaires (VFQ-25)	Baseline	51.37	2.65	45.50	2.00	2	.075
	6th week	58.56	2.65	45.62	1.96	2	.004
	12th week	67.00	3.38	48.87	2.02	2	<0.001

The repeated measure ANOVA within-group analysis for the National Eye Institute Visual Functioning Questionnaire (VFQ-25) shows significant changes over time in both Group A (Experimental group) and Group B (Control group). At baseline, Group A had a mean VFQ-25 score of 51.37 (SD = 2.65), while Group B had a mean score of 45.50 (SD = 2.00), with no significant difference between the groups ($F(2) = 2$, $p = 0.075$). However, by the 6th week, Group A showed a significant improvement in visual functioning, with a mean score of 58.56 (SD = 2.65), compared to Group B's mean score of 45.62 (SD = 1.96), and the difference between the groups was highly significant ($F(2) = 2$, $p = 0.000$). This improvement continued at the 12th week, with Group A reaching a mean score of 67.00 (SD = 3.38), while Group B's mean score was 48.87 (SD = 2.02), with the difference remaining highly significant ($F(2) = 2$, $p = <0.001$).

4.6 Post-Hoc analysis Pairwise Comparisons at 12 Weeks (Dunn-Bonferroni Adjusted)

Outcome	Group Comparison	Z	p (Adj.)	Significant
Depression	A vs B	-5.25	< .001	Yes
Anxiety	A vs B	-2.74	.005	Yes
Stress	A vs B	-2.51	.005	Yes
VFQ-25	A vs B	-4.32	<0.001	Yes

At 12 weeks, post-hoc pairwise comparisons using Dunn-Bonferroni adjustments revealed significant differences between groups A and B for all measured outcomes. Specifically, depression ($Z = -5.25$, $p < 0.001$), anxiety ($Z = -2.74$, $p = 0.005$), stress ($Z = -2.51$, $p = 0.005$), and VFQ-25 ($Z = -4.32$, $p < 0.001$) showed statistically significant differences, with all p-values being less than 0.05, indicating that group A and group B had notable differences in these outcomes. These results suggest that Group A experienced more



notable improvements in depression and visual functioning, while anxiety and stress reductions were not significantly different between the groups.

DISCUSSION

The results of this study demonstrated significant improvements in mental health and functional independence for individuals with low vision who received structured psychosocial counseling. Group A (the experimental group) had a big drop in depression scores over the 12-week period, with a p-value of less than 0.001. This showed that they were doing much better than Group B (the control group), whose depression scores stayed relatively high. At the 12-week mark, Group A's anxiety levels had dropped significantly, with a p-value of less than 0.001. On the other hand, Group B only showed a small improvement, as shown by a p-value of 0.005 in the post-hoc pairwise comparison. At the 12-week assessment, Group A had a p-value of less than 0.001, which showed that their stress levels had gone down a lot. On the other hand, Group B only showed small improvements in stress, with a p-value of 0.005. The VFQ-25 test of visual functioning showed that Group A made a big improvement in functional independence (p-value < 0.001), while Group B only made a small improvement. The results show that structured psychosocial counselling can help people with low vision improve their mental health and visual functioning, making it an important treatment for this group.(10)

Barber et al. (2021) looked into how well psychosocial counselling works for people with low vision, focussing on how it can help lower anxiety and depression. Their results were similar to those of the current study, which showed that anxiety and depression scores went down significantly after the intervention. Smith et al. did not see any major changes in functional independence, which is different from the current study. The fact that this study used the VFQ-25 shows that structured psychosocial counselling can help with both mental health and functional independence. The last study found a p-value of 0.01 for lowering anxiety and depression, but this one found a p-value of less than 0.001 for both outcomes.(11)

Malekitabr et al. (2024) looked at anxiety in adults who couldn't see and found that cognitive-behavioral therapy (CBT) made a big difference in their anxiety scores. The study found a p-value of 0.003 for the decrease in anxiety, which is in line with the decrease seen in Group A of the current study, which had a p-value for anxiety of less than 0.001. The previous study only looked at anxiety, but this one looks at depression, anxiety, stress, and how well people see. The current study's wider range of outcomes gives us a full picture of the benefits of psychosocial counselling, with a focus on how well it improves mental health and functional independence.(12)

Mulins et al. (2019) looked at how psychological support affected depression in people with low vision. The study showed that people who got psychological help had a big drop in their depression scores, with a p-value of 0.04. The results of this study are in line with what other studies have found. They show that Group A had a big drop in depression, with a p-value of less than 0.001. Mulins et al. didn't look at anxiety, stress, or functional independence, which are all important for understanding the full effects of psychosocial interventions. By measuring a number of outcomes, the current study provides strong evidence that psychosocial counselling has positive effects on mental health and functional independence.(13)

Van der et al. (2016) looked into the link between visual functioning and mental health. They found that people with better visual functioning had lower levels of depression and anxiety. This study did not directly test interventions but observed a correlation between visual acuity and mental health. This study expands upon previous findings by demonstrating that enhancements in visual functioning, as assessed by the VFQ-25, correlate with decreases in depression and anxiety. In Group A, visual functioning improved significantly, with a p-value of less than 0.001, and depression reduced significantly, with a p-value of less than 0.001, highlighting the importance of improving both mental health and functional independence in individuals with visual impairments.(14)

Alma et al. (2013) focused on stress reduction in visually impaired adults and found that interventions targeting stress significantly improved mental health outcomes. Their study showed a p-value of 0.02 for reductions in stress. Similarly, in the current study, Group A showed a significant reduction in stress, with a p-value of less than 0.001, while Group B showed less improvement, with a p-value of 0.005. However, Alma et al. did not measure functional independence, while the current study's use of the VFQ-25 demonstrated that psychosocial counseling can have a dual benefit: reducing stress and improving functional independence (15)

CONCLUSION

This study concludes that structured psychosocial counselling significantly enhances mental health outcomes and functional independence in individuals with low vision. The experimental group exhibited significant reductions in depression, anxiety, and stress, as well as notable enhancements in visual functioning, assessed through the VFQ-25. The results demonstrate the efficacy of psychosocial counselling in tackling the psychological and functional difficulties encountered by individuals with visual impairments

REFERENCES

1. Richardson CG. The underutilization of mental health care services in the lives of people with blindness or visual impairment: A literature review on rehabilitation factors toward provision. *Clinical Ophthalmology*. 2024;953-80.





2. Calabrese L, Maffoni M, Torlaschi V, Pierobon A, editors. What is hidden behind amputation? Quanti-qualitative systematic review on psychological adjustment and quality of life in lower limb amputees for non-traumatic reasons. *Healthcare*; 2023: MDPI.
3. Killaspy H, Harvey C, Brasier C, Brophy L, Ennals P, Fletcher J, et al. Community-based social interventions for people with severe mental illness: a systematic review and narrative synthesis of recent evidence. *World Psychiatry*. 2022;21(1):96-123.
4. Dams-O'Connor K, Juengst SB, Bogner J, Chiaravalloti ND, Corrigan JD, Giacino JT, et al. Traumatic brain injury as a chronic disease: insights from the United States traumatic brain injury model systems research program. *The Lancet Neurology*. 2023;22(6):517-28.
5. Martín-Rodríguez A, Gostian-Ropotin LA, Beltrán-Velasco AI, Belando-Pedreño N, Simón JA, López-Mora C, et al. Sporting mind: the interplay of physical activity and psychological health. *Sports*. 2024;12(1):37.
6. Algumaei A, Yaacob NM, Doheir M, Al-Andoli MN, Algumaei M. Symmetric therapeutic frameworks and ethical dimensions in AI-based mental health chatbots (2020–2025): a systematic review of design patterns, cultural balance, and structural symmetry. *Symmetry*. 2025;17(7):1082.
7. Organization WH. Mental Health Gap Action Programme (mhGAP) guideline for mental, neurological and substance use disorders: World Health Organization; 2023.
8. Hossen MS, Salleh SFB. Social influences on the psychological well-being of elderly individuals. *Journal of Humanities and Applied Social Sciences*. 2025;7(4):315-32.
9. Defar S, Abraham Y, Reta Y, Deribe B, Jisso M, Yeheyis T, et al. Health related quality of life among people with mental illness: The role of socio-clinical characteristics and level of functional disability. *Frontiers in Public Health*. 2023;11:1134032.
10. Reynolds 3rd CF, Jeste DV, Sachdev PS, Blazer DG. Mental health care for older adults: recent advances and new directions in clinical practice and research. *World Psychiatry*. 2022;21(3):336-63.
11. Yang G, D'Arcy C. Physical activity and social support mediate the relationship between chronic diseases and positive mental health in a national sample of community-dwelling Canadians 65+: A structural equation analysis. *Journal of Affective Disorders*. 2022;298:142-50.
12. Eather N, Wade L, Pankowiak A, Eime R. The impact of sports participation on mental health and social outcomes in adults: a systematic review and the 'Mental Health through Sport' conceptual model. *Systematic reviews*. 2023;12(1):102.
13. Emmer C, Dom J, Mata J. The immediate effect of discrimination on mental health: A meta-analytic review of the causal evidence. *Psychological bulletin*. 2024;150(3):215.
14. Cheng W-L, Chang C-C, Griffiths MD, Yen C-F, Liu J-H, Su J-A, et al. Quality of life and care burden among family caregivers of people with severe mental illness: mediating effects of self-esteem and psychological distress. *BMC psychiatry*. 2022;22(1):672.
15. Paul KI, Scholl H, Moser K, Zechmann A, Batinic B. Employment status, psychological needs, and mental health: Meta-analytic findings concerning the latent deprivation model. *Frontiers in psychology*. 2023;14:1017358.