



## **Pattern of ocular disorders among psychiatric patients**

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## Abbreviations and Acronyms

AAU	Addis Ababa University
AMSH	Amanuel Mental Specialized Hospital
E.C	Ethiopian Calendar
GHQ	General Health Questionnaire
IOP	Intraocular Pressure
MDD	Major Depressive Disorder
MGD	Meibomian Gland Dysfunction
MSc	Master of Sciences
OD	Oculus Dexter     Right eye
OS	Oculus Sinister    Left eye
SF-MOS	Short-Form Medical Outcomes Study
SoM	School of Medicine
SPSS	Statistical Package for the Social Sciences
SSRIs	Selective Serotonin Reuptake Inhibitors
TCAs	Tricyclic Antidepressants
VA	Visual Acuity
VI	Visual Impairment
WHO	World Health Organization

## Abstract

Background: Ocular disorders are often overlooked among individuals with psychiatric illnesses despite their potential to cause significant visual impairment and affect quality of life. Limited data is available on psychiatric patients on the pattern and burden of ocular morbidity in Ethiopia.

Objective: To determine the prevalence and patterns of ocular morbidity among mental ill patients attending at AMSH, Addis Ababa, Ethiopia.

Methods – A cross sectional study was conducted among 414 mental ill patients selected using systematic random sampling. The sample size was calculated using a single population formula, considering a 41.3% prevalence of ocular morbidity, 95% confidence interval, and 5% marginal error. Data was collected under structural interview and ophthalmic examination, and analyzed using descriptive statistic and comparative interpretation with earlier studies.

Results: In this study the prevalence of ocular morbidity was 72.5%. The top rank among ocular morbidity was meibomian gland dysfunction (22.1%), refractive errors (17.2%), cataract (13.5%), and glaucoma (8.1%). Visual impairment was found in 22.1% of participants. The majority of affected individuals (64.2%) were aged between 26 and 50 years. Compared with previous studies in Kenya and Nigeria, the current study revealed a higher burden of ocular morbidity, likely reflecting both medication-related and functional ocular surface changes among psychiatric patients.

Conclusion: Ocular disorders are highly prevalent among psychiatric patients in AMSH, Addis Ababa, Ethiopia. It showed the need for establishment of ophthalmic screening and integrated eye care center in mental health institutions to tackle avoidable visual impairment and improve overall health.

## Introduction

Around 970 million or 1 in 8 people were living with a mental disorder around the world. Among them were anxiety and depressive disorder.(1) World Health Organization reports that 4,480,113 (4.7%) and 3,139,003(3.3%) population in Ethiopia are affected by depression and anxiety.(2)

Psychiatric patients can develop any kinds of ocular problems.(3) In Ethiopia cataract is the leading cause of preventable blindness(49%), corneal scarring is the second (19.3%), refractive error 7.8%, glaucoma 5.6%, macular degeneration 4.8% and other causes 13%.(4)

Worldwide, cataract still remains the leading cause of blindness mostly age related. (3). In psychiatric patients it is wise to see other ocular disease since they are on many anti psychiatric medications and this medications have their own adverse effects.

The adverse effect of the medications can be categorized in to seven groups.

1. Corneal and conjunctiva disorders : These are often caused by pigment deposits from drugs like phenothiazine and lithium.(5)
2. Uveal tract disorders: Commonly linked to medications such as typical antipsychotic, tricyclic antidepressant and SSRIs.(5)
3. Accommodation and cycloplegia issues: leads to dilated pupil among them typical antipsychotic, TCAs and SSRIs.(5)
4. Angle closure glaucoma: which can leads to narrow angle and put them at risk for glaucoma. SSRIs , TCAs and typical antipsychiatry. TCAs, typical antipsychotics, and SSRIs.(5)
5. Cataracts: Antipsychotics, especially high doses of chlorpromazine or thioridazine, are associated with cataract formation, often due to pigment deposits.(5)
6. Retinopathy: This is primarily linked to long-term use of high doses of typical antipsychotics, particularly chlorpromazine and thioridazine.(5)
7. Other visual disorders: These include ocular dystonias/oculogyric crisis , impair color perception and contrast discrimination ( TCAs, SSRIs and chlorpromazine)(5).

Mental ill patients are vulnerable minorities among large population. Only few studies examine the cause and pattern of ocular disorders among mental ill patients. This study will give us data on ocular disorders among psychiatric patients. The study emphasizes the importance of including eye tests in periodic comprehensive health assessments for mental health clinic patients. These data will aid in developing new policies to promote eye health among this population. (8)

## Statement of the problem

Individuals with mental illness are often considered a vulnerable group in research, largely due to concerns about decision-making competence and potential power imbalances, including coercion, stigma, and mental health legislation.(2,8) While these concerns are important, overprotectiveness can unintentionally exclude psychiatric patients.

Psychiatric patients are also at risk for ocular disorders, which can be overlooked in routine care. Studies among hospitalized mentally ill patients in China (6), Kenya (7), and Nigeria (9) reported ocular disorder prevalence of 54.6%, 41.3%, and 33%, respectively(6,7,9) . In Ethiopia, cataract, corneal scarring, refractive errors, and glaucoma remain major causes of visual impairment in the

general population(4), suggesting psychiatric patients may face compounded ocular health risks due to both underlying ocular disease and potential adverse effects of psychotropic medications(5)

Despite this, few studies have systematically examined ocular disorders among patients attending mental health clinics. Understanding the pattern of ocular disorders among psychiatric patients is beneficial for developing targeted intervention, integrating eye care into routine psychiatric services, and promoting comprehensive health assessments that empower patients rather than marginalize them (8)

### **Significance of the study**

In Ethiopia, psychiatric patients often face neglect and significant discrimination, both as individuals and towards the healthcare professionals working in psychiatric facilities. Despite the well-documented challenges, there has been no research on ocular morbidity among psychiatric patients in the country. By investigating this issue, the study aims to provide valuable insights into the potential comorbidities between psychiatric conditions and ocular health. The findings could serve as a basis for establishing ophthalmologic services within psychiatric hospitals, addressing a critical unmet healthcare need.

### **Literature review**

A 2013 study by Ahmadu Bello and Zaria at the Federal Neuro Psychiatric Hospital in Kaduna, Nigeria, assessed 255 patients aged 18 to 69. The study found that 77.2% had normal vision, while 54.6% had ocular disorders, mainly refractive errors (29.8%), cataracts (8.6%), and glaucoma (5.9%).(9). Comparing to a study which is done in Ethiopia the prevalence in this study is higher. For instance, community-based studies which is done in Gish Abay in north Ethiopia town found (6.7%) visual impairment (10).

A 2019 study by Folorunso OO and Ademola-Popoola Dupe at Lautech Teaching Hospital in Ogbomosho, Nigeria, examined 157 patients aged 18 to 69. The study found that 84.1% had normal vision, while 15.3% had moderate visual impairment, and 0.6% was blind. Ocular disorders were present in 63.1% of respondents. The most common conditions were refractive errors/presbyopia (43.3%), pterygium (21.7%), allergic conjunctivitis (20.1%), cataract (19.7%), and glaucoma (5.1%) .(12)

A 2006-2007 study by Muinde T and Kimani K at Mathari Hospital in Nairobi, examined 300 mentally ill patients. The study found that 41.3% had ocular disorders. The most common were

corneal and lens deposits(42.7%) , refractive error (25.8%)(, cataract (5.6) and glaucoma(4.8). Additionally, 18% of patients experienced ocular side effects from antipsychotic medications.(7).

A 2006 study by Bhaskar Pudukollu and Michael Phelan examined admitted mental ill patients in an inner-city area of the UK. They examined visual acuity and found problem on it. Out of 55 patients approached, 22 declined to participate, leaving 31 patients for analysis. The study found that approximately two-thirds of these patients had visual impairment.(14). This study lacks generalizability due to small sample size.

A study by Zheng et al. investigated distant visual impairment in 356 psychiatric inpatients in Beijing. They have found that the prevalence was 15.2% in schizophrenia, 11.9% in bipolar disorder, and 8.8% in major depressive disorder.(6)

Visual impairment was associated to ocular disease (  $p = 0.002$ , odds ratio =3.2). those with impairment reported lower quality of life in general. Vision domain of the National Eye Institute Visual Function Questionnaire, while no differences were found in mental health and in physical of the short- form medical outcome study. Since, most studies conducted outside of Ethiopia, the data are limited on characteristic and burden of ocular disorder among mental ill patients in Ethiopia context.(16)

## Objective

### General objective

- To assess Pattern of Ocular Disorders in psychiatric patients

### Specific objective

- To describe common ocular conditions in psychiatric patients.
- To determine risk factor of eye diseases in psychiatry patients.
- To determine causes of VI and blindness in psychiatry patients.
- To determine magnitude of eye conditions in psychiatric patients

## **METHODOLOGY**

### **Study area**

It is a hospital based cross sectional study at St Amanuel Specialized Hospital, which is a tertiary psychiatry hospital in Addis Ababa, Ethiopia. AMSH was established in 1930 E.C. by Italian invaders. It is located in Addis Ketema sub city. It is the pioneer mental hospital in the country which provides mental clinical services, conducting research and training professionals. It has both out and inpatient unit. The hospital occupies 300 bed for inpatient service, among this number 23 are for emergency and 277 for cold cases. It provides with 11 psychiatrics , 22 general practitioners, 29 public health officers. 111 nurses, 22 pharmacist and laboratory professionals for all patients across the country.(17)

### **Study design**

It is a cross-sectional study

### **Study period**

May 2025

### **Source population**

All psychiatric patients in St Amanuel mental specialized hospital

### **Study population**

Consecutive attendees at Amanuel mental specialized hospital above the age of 18

### **Sample Size**

Using a single population proportion formula sample size was determined, considering a 95% CI ( $Z = 1.96$ ), a 5% marginal error of ( $d=0.05$ ), and ocular morbidity of ( $p=41.3\%$ ) taken from study conducted in Kenya in 2006. 373 was the calculated sample size, and adding a 10% non-

respondent rate, the final sample size became 414 participants. Data collection was planned over 20 working days, resulting in a daily target of 21 patients. Given that there were 10 outpatient departments (OPDs), approximately two patients were selected from each clinic per day. To minimize selection bias, a systematic random sampling method was employed by selecting every 3rd or 5th patient, depending on the daily patient flow.

## **Eligible criteria**

### **Inclusion Criteria**

- Patients who had taken psychotropic medication for at list three months.
- Patients who provided informed consent.

### **Exclusion Criteria**

- Patients who were not fit for ocular examination due to illness or agitations

## **Data collecting procedure**

A formal letter obtained from AAU, department of ophthalmology and submitted to AMSH for beginning of the research.

Following describe the purpose of the study, informed verbal consent obtained and respondent's data collected using a pretested semi-structured questionnaire, which is administrated by interviewers.

Visual acuity taken by trained nurse using Snellen chart. Near visual acuity measured using near chart at a distance of 40.

Slit lamp bio microscopy, Fundus examination and IOP measurement conducted by principal investigator using 90 Volk and I care tonometry.

## **Operational definition**

Visual impairment and blindness classification:

- Normal/Near Normal Vision: Visual acuity  $\geq 6/18$

- Moderated visual impairment: Visual acuity 6/18 – 6/60
- Sever visual impairment: Visual acuity 6/60 -3/60
- Blindness: Visual acuity of less than 3/60 (WHO, 2019)

Refractive Error is any error of  $< 0.5$  diopters and VA  $< 6/18$

Meibomian Gland Dysfunction (MGD) is an eye lid disorder of meibomian glands causing ocular surface instability, identified via slit-lamp examination

Cataract is any Lens opacity with VA $< 6/18$

Glaucoma is defined as cup-to-disc ratio  $> 0.7$  and intraocular pressure (IOP)  $\geq 21$  mmHg

Retinal Pathologies is any retinal abnormalities detected via fundus examination.

Corneal Opacity is visible opacity with VA $< 6/18$

Duration of Psychiatric Medication Categorized as: less than 5 year short duration and  $\geq 5$  year as long duration.

## **Data quality control**

The data reviewed and checked for completeness every day during the study period and entered in to data analysis software using SPSS version 26.

## **Data processing and analysis**

Data entered, coded and analyzed using SPSS version 26. Mean, Median, Standard deviation, Range and Frequency determined. All variables compared using appropriate statistical tests.

## **Ethical consideration**

Ethical clearance received from research and publication committee of ophthalmology department, College of Health science, Addis Ababa University. Study participants provided verbal consent.

## Result

Overall 407 psychiatric patients contained in this study with respondent rate of 98.3%. The gender distribution was almost equal, 50.6% female and 49.4% males, with male to female ratio of 1:1.02. Most of the participants were 26-50 years (64.2%). (Table 1)

Among the participants, the most common diagnosis were Schizophrenia, affecting 206 patients (50.6%), followed by Bipolar disorder with 109 patients (26.8%) and Major Depressive Disorder (MDD) with 52 patients (12.8%). (Table 1)

Majority of the patients had no eye complaint which was around (62.7%). The most common complaint among patient were reduction of vision (19.4%), followed by itching or foreign body sensation (7.1%), redness (4.7%), and other minor symptoms (4.4%). Among the symptomatic patients around 92.1 % had no prior ophthalmic treatment. (Table 2)

Most prescribed psychiatric medications were second-generation antipsychotics (40.8%), followed by mood stabilizers (23.6%), first-generation antipsychotics (18.9%), and antidepressants (SSRIs – 4.9%). Regarding the duration of medication, 67.3 % patients took antipsychiatry medication more than 5 years and the rest less than 5 years. (Table 2)

Based on WHO classification around 77.9% had normal visual acuity, 19.4% with moderate visual impairment and 2.7 % severe visual impairment. No blind patients were identified. (Table 2)

Among the patients, 27.5% had normal ocular findings. More than ten types of ocular disorders were identified, Meibomian Gland Dysfunction (MGD) (22.1%), followed by refractive errors (17.2%), cataracts (13.5%) and Glaucoma (8.1%) were common. Other ocular conditions, including pterygium, retinal pathologies, and corneal opacity, were less frequent. (Table 3)

Those patients who took long-term antipsychotic medication had higher intraocular pressure (IOP) in both eyes (Right eye:  $\chi^2 = 5.03$ ,  $p = 0.025$ ; Left eye:  $\chi^2 = 6.20$ ,  $p = 0.013$ ) and increased optic disc changes (Right eye:  $\chi^2 = 4.28$ ,  $p = 0.039$ ; Left eye:  $\chi^2 = 4.34$ ,  $p = 0.037$ ). Other ocular

findings, including corneal opacity, lens changes, posterior segment abnormalities, visual acuity, and ocular alignment were not significant associated with medication duration associated ( $p > 0.05$  for all). (Table 3)

On binary logistic regression, only corneal changes in the left eye were significantly associated with duration of antipsychotic use (OR = 5.83, 95% CI: 1.50–22.72,  $p = 0.011$ ), while other ocular variables, including glaucoma did not reach statistical significance. (Table 5)

Table 1: Age, sex and clinical diagnosis of study participants psychiatric patients.

Variable		Frequency	Percentage
Age	18-25	44	10.8%
	26-35	122	30.0%
	36-50	139	34.2%
	>50	102	25.1%
Diagnosis	Schizophrenia	206	50.6%
	Bipolar disorder	109	26.8%
	MDD	52	12.8%
	Other	32	7.9%
	Anxiety disorder	7	1.7%
	Secondary Psychosis	1	0.2%
Sex	Male	201	49.4%
	Female	206	50.6%

Table 2: Ocular compliant, visual acuity .treatment received by patients and duration of anti-Psychotic medications

Variable		Frequency	Percentile
Ocular compliant	No complaint	255	62.5%
	Reduction of vision	79	19.4%
	Itching and FBS	29	7.1%
	Redness	19	4.7%
	Other complaints	18	4.4%
	Squint	7	1.7%
Visual Acuity Right eye	$\geq 6/12$	314	77.1%
	6/18 - $\geq 6/36$	69	17.0%
	6/60 - $\geq 3/60$	7	1.7%
	$< 3/60$	17	4.2%
Visual Acuity left eye	$\geq 6/12$	317	77.9%
	6/18- $\geq 6/36$	71	17.4%
	6/60- $\geq 3/60$	8	2.7%
	$< 3/60$	11	2.0%
Medications	Antipsychotic Second generation	166	40.8%
	Mood stabilizer	96	23.6%
	Antipsychotics: First generation	77	18.9%
	TCA's	24	5.9%
	None	20	4.9%
	Anti-depressant SSRIs	20	4.9%
	Other	4	1.0%
Duration of anti-psychiatric medication	$\leq 1$ year	60	14.7%
	1.1 -5	73	17.9%
	$\geq 5.1$	274	67.3%

Table 3. Ocular disorders in psychiatric patients

Ocular Disorder	Number of Patients	Percentage of Patients (%)
Normal Ocular Findings	112	27.5
Meibomian Gland Dysfunction (MGD)	90	22.1
Refractive Errors	70	17.2
Cataracts	55	13.5
Glaucoma (CD ratio $\geq 0.7$ )	33	8.1
Pterygium	22	5.5
Retinal Pathologies	22	5.5
Corneal Opacity	3	0.7

Table 4: Relation between duration of anti-psychiatric medication and ocular findings

Variable	Category	<5 years	≥5 years	$\chi^2$	p-value
VA Right	6/6 - 6/18	102 (26.3%)	197 (50.8%)	2.68	0.101
	≤ 6/24	3 (0.8%)	12 (3.1%)	–	-
VA Left	6/6 - 6/18	105 (27.1%)	197 (50.8%)	2.40	0.121
	≤ 6/24	24 (6.2%)	63 (16.2%)	–	-
IOP Right	<20 mmHg	127 (32.7%)	260 (66.9%)	5.03	0.025*
	≥20 mmHg	2 (0.5%)	14 (3.6%)	–	–
IOP Left	<20 mmHg	129 (33.2%)	260 (66.9%)	6.20	0.013*
	≥20 mmHg	0 (0%)	14 (3.6%)	–	–
Alignment	Central	124 (31.9%)	258 (66.5%)	0.82	0.366
	Squint	5 (1.3%)	2 (0.5%)	–	-
Cornea Right	Clear	103 (26.5%)	170 (43.8%)	0.01	0.909
	Opacities	26 (6.7%)	90 (23.2%)	–	-
Cornea Left	Clear	103 (26.5%)	171 (44.1%)	0.07	0.795
	Opacities	3 (0.8%)	6 (1.5%)	–	-
Lens Right	Clear	116 (29.9%)	208 (53.6%)	1.21	0.271
	Opacity/Deposit	13 (3.3%)	52 (13.4%)	–	-
Lens Left	Clear	119 (30.7%)	209 (53.9%)	1.33	0.249
	Opacity/Deposit	10 (2.6%)	51 (13.2%)	–	-
Optic Disc Right	<0.7	115 (29.6%)	239 (61.6%)	4.28	0.039*
	≥0.7	14 (3.6%)	21 (5.4%)	–	-
Optic Disc Left	<0.7	120 (30.9%)	246 (63.4%)	4.34	0.037*
	≥0.7	9 (2.3%)	14 (3.6%)	–	-
Posterior Segment Right	Normal retina	119 (30.7%)	247 (63.7%)	0.83	0.361
	Abnormalities	10 (2.6%)	13 (3.4%)	–	–
Posterior Segment Left	Normal retina	122 (31.4%)	245 (63.1%)	0.96	0.331
	Abnormalities	7 (1.8%)	15 (3.9%)	–	-

Table: 5, Binary Logistic Regression Analysis of Ocular Findings and Duration of Antipsychotic Medication

Variable	Exp(B) (OR)	95% CI for Exp(B)	Sig. (p-value)
Visual impairment Right	0.530	0.092 – 3.044	0.476
Visual impairment Left	1.75	0.29 – 10.49	0.539
Corneal opacity right	0.397	0.104 – 1.507	0.175
Cornea opacity left	5.830	1.496 – 22.717	0.011
Glaucoma Right	1.125	0.167 – 7.601	0.904
Glaucoma Left	0.728	0.093 – 5.685	0.762

## Discussion

The primary objective of the study is to assess the patterns of ocular disorder among mental ill patients in Addis Ababa. Our findings show ocular disorders are common in psychiatric population (72.5%), with Meibomian Gland Dysfunction (22.1%), refractive errors (17.2%), and cataracts (13.5%) being the most prevalent conditions. These results are broadly consistent with previous studies in psychiatric populations globally. For example, in Nigeria,(9) ocular disorders reported in (54.6%) of patients, mainly refractive errors (29.8%), cataract (8.6%), and glaucoma (5.9%), while another Nigerian study(12) reported (63.1%) prevalence, with refractive errors/presbyopia (43.3%), pterygium (21.7%), allergic conjunctivitis (20.1%), cataract (19.7%),

and glaucoma (5.1%). In Kenya (41.3%) of psychiatric patients had ocular disorders, with corneal and lens deposit (42.7%), refractive error (25.8%), cataract (5.5%) and glaucoma (4.8%) (7, 9, 12)

Comparable to the population-based study in Ethiopia Cherinet (16), which reported visual impairment in 17.6% of participants (95% CI: 15.2%–20.1%), our psychiatric study shows burden of visual impairment of 22.1% (95% CI: 18.1%–26.1%). In Cherinet et al.'s study, refractive errors were observed in 13.4% (95% CI: 11.2%–15.6%), cataract in 20.5% (95% CI: 17.7%–23.3%), and glaucoma 17.9% (95% CI: 15.4%–20.4%) of participants. In contrast, our study revealed a distinct pattern of ocular morbidity among psychiatric patients. Meibomian Gland Dysfunction (MGD) was the most prevalent condition (22.1%), followed by refractive errors (17.2%, 95% CI: 13.5%–21.3%), cataract (13.5%, 95% CI: 10.3%–17.4%), and glaucoma (8.1%, 95% CI: 5.7%–11.3%). The deference of cataract and glaucoma may be due to age distribution among the studies. Participants in Cherinet's study had shown mean age of 44.5 years (SD  $\pm$  21.85) and median age of 48 years, whereas the majority of our participants (64.2%) were aged 26–50. Conversely, the higher rates of MGD and refractive errors in our study likely reflect functional or medication-related ocular conditions rather than age-related degeneration. These findings suggest that, while cataract and glaucoma remain important ocular morbidities, ocular surface disease and refractive errors are key ophthalmic concerns among younger and middle-aged psychiatric patients. (16)

In other comparison from Debre Berhan and Gish Abay studies, the overall visual impairment in our psychiatric study is 22.1% (95% CI: 18.1%–26.1%), compared to 17.5% (95% CI: 14.0%–21.4%) in Debre Berhan and 20.3% (95% CI: 16.5%–24.5%) in Gish Abay. Regarding specific ocular comorbidities, cataract prevalence is 13.5% (95% CI: 10.3%–17.3%) in our study, 15.6% (95% CI: 12.1%–19.5%) in Debre Berhan, and 14.0% (95% CI: 11.0%–17.5%) in Gish Abay. Refractive errors are observed in 17.2% (95% CI: 13.5%–21.3%) of our study, 19.8% (95% CI: 15.7%–24.5%) in Debre Berhan, and 16.5% (95% CI: 13.1%–20.4%) in Gish Abay. Glaucoma prevalence is 8.1% (95% CI: 5.6%–11.4%) in our cohort, compared to 6.2% (95% CI: 4.0%–9.1%) in Debre Berhan and 7.5% (95% CI: 5.2%–10.4%) in Gish Abay. Meibomian Gland Dysfunction (MGD), the most common ocular finding in our study affects 22.1% (95% CI: 18.3%–26.3%) of psychiatric patients whereas this condition is not reported in the other two studies. Overall, psychiatric patients show comparable prevalence of cataract, refractive errors, and glaucoma to the general population in Debre Berhan and Gish Abay, with MGD being uniquely higher, likely related to long-term psychotropic medication or personal hygiene. (10,11)

About 37.3% of patients have a previously undiagnosed ocular condition, highlighting that ocular disorders in psychiatric populations are often under recognized. Among the symptomatic patients, approximately 92.1% never received any prior ophthalmic evaluation or treatment, this emphasize the gap in eye care for psychiatric population. These findings underscore the

importance of routine ophthalmologic assessments for psychiatric patients and suggest that regular screening can help prevent progression of ocular morbidity.(1,5)

Patients on long-term antipsychotic medications in our study exhibit optic disc changes and higher intraocular pressure, suggestive of glaucoma, which is consistent with literature reporting ocular toxicity associated with prolonged use of first-generation antipsychotics.(5) However, these associations are not statistically significant in our study. Given the cross-sectional design, causal relationships cannot be established. Larger sample sizes or longitudinal study are needed to clarify potential cause-and-effect relationships between psychotropic medication use and glaucoma or other ocular outcomes.

Findings from our study suggest that ocular morbidity in psychiatric patients is likely multifactorial, influenced by age, underlying psychiatric conditions, and limited access to routine eye care, rather than solely by medication exposure. The study further emphasizes the importance of incorporating regular eye health screening into psychiatric care, aligning with WHO recommendations on comprehensive care for individuals with chronic mental illnesses.(1) Addressing ocular morbidity in this population can improve overall quality of life, enhance social functioning, and reduce additional disability in an already vulnerable group.(1,5)

### **Strengths and Limitations:**

Strengths of this study include a relatively sample size (n=407), comprehensive ocular examination, and assessment of medication duration effects. Limitations include the cross-sectional design, which precludes causality inference, and the hospital-based sample, which may limit generalizability to community psychiatric populations. . It also doesn't include all range of ages and those with severe mental disorder that are excluded from the study that may have different ocular conditions.

### **Conclusion**

Ocular disorders are highly prevalent among psychiatric patients, with Meibomian Gland Dysfunction, refractive errors, and cataracts being the most common. Most patients are asymptomatic, underscoring the importance of routine ophthalmic screening in psychiatric settings. Long-term antipsychotic use is associated with glaucoma, which can lead to blindness if not detected and managed early, highlighting the need to include ocular health monitoring as part of medication management.

These findings highlight the need for integrating ophthalmology department in psychiatry hospital might be important since one third of them have eye conditions that need treatment or surgery. Further longitudinal studies are warranted to investigate causal relationships between psychiatric medications and ocular morbidity

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## WORK PLAN

	Activity	Date
1	Proposal writing	July-Oct 2024
2	Proposal presentation	OCT 28 2024
3	Data collection	March 2025
4	Data analysis	May 2025
5	Final research writing	August 2025
6	Research result presentation	November 2025

## BUDGET PLAN

	MATERIALS	COST
1	Stationary ( 2 pack 500 sheets paper * 1500) + print ( 4 birr * 1000)	7000 birr
2	Human resource ( 2 staff * 300 * 30 days)	18000 birr
3	Communication ( Mobil card)	500birr
4	Transportation ( 60 birr for Taxi *30 days)	1800 birr
8	Total	27200 birr

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