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St. Paul's Hospital Millennium Medical College

DEPARTMENT OF OPHTHALMOLOGY

**THE EFFECT OF AGE RELATED MACULAR DEGENERATION ON QUALITY OF LIFE AMONG OUT
PATIENTS ATTENDING OPHTHALMOLOGY DEPARTMENT AT SAINT PAUL'S HOSPITAL
MILLENIUM MEDICAL COLLEGE IN**

ADDIS ABEBA, ETHIOPIA

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**A research thesis to be submitted to the Department of Ophthalmology at St. Paul's
Hospital Millennium Medical College in partial fulfillment of the requirements for the
specialty certificate in ophthalmology.**

FEBRUARY, 2026.

Addis Ababa, Ethiopia.

ST. PAUL’S HOSPITAL MILLENNIUM MEDICAL COLLEGE

Department of ophthalmology

**THE EFFECT OF AGE RELATEDMACULAR DEGENERATION ON QUALITY OF LIFE AMONG AGE
RELATED MACULAR DEGENERATION PATIENTS AT SAINT PAUL’S HOSPITAL MILLENIUM
MEDICAL COLLEGE**

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Abstract

Background: Age-related macular degeneration is a chronic progressive disease that mainly affects the central retina. It is estimated that 200 million people worldwide have AMD as of 2020, and this number is expected to reach 288 million in 2040. These numbers make Age-related macular degeneration one of the leading causes of blindness in adults over 50 years of age, according to the World Health Organization.

In Ethiopia, the burden of vision impairment is substantial, with national surveys indicating that 1.6% of the population lives with blindness and 3.7% with low vision, translating to approximately 5.4 million people affected by vision loss. While comprehensive national data on AMD specifically remain limited, recent multicenter studies in Ethiopia have reported AMD prevalence of 15.4% among older adults attending hospital diabetic clinics, highlighting the significance of this condition in the Ethiopian healthcare context. At St. Paul's Hospital Millennium Medical College, where this study was conducted, the ophthalmology department serves as a major referral center for patients with retinal diseases, including AMD, yet the specific burden and impact of AMD on patients' quality of life in this setting have not been systematically documented.

Objective: To assess the effects of Age-related macular degeneration on the quality of life among outpatients attending Ophthalmology Department in SPHMMC.

Method: A facility based cross sectional study was carried out on patients who attended outpatient ophthalmology clinics. Using a consecutive sampling strategy (a non-probability sampling), a total of 308 patients included in the study, keeping into thought the diverse makeup of the population. A structured questionnaire administered by the interviewer used to collect data, then cleaned and coded in (EPI-INFO) version 7.2 before being exported to SPSS version 28.0 for analysis. Both bivariate and multivariate logistic regression was done to assess the association between quality of life and various independent variables. When determining a significant connection, a P-value of less than or equal to 0.05 and the 95% confidence interval are taken into account. The outcome displayed through the use of tables, graphs, and diagrams.

Result: Age-related macular degeneration stage was the strongest independent predictor of poorer quality of life (QoL) and severely limited daily function. Lower educational

attainment was significantly associated with more advanced AMD and poorer QoL. Wet AMD was linked to greater functional difficulty and more frequent pain than dry AMD. Older age independently predicted poorer QoL and No significant associations were found for QoL with sex, residence, income, or disease duration in the multivariate model.

Conclusion: The study highlights a significant burden of advanced AMD and visual impairment in the study participants. AMD severity (stage) is the primary driver of reduced QoL and functional limitations. Lower educational attainment is a key sociodemographic factor linked to both more advanced disease and poorer outcomes. Findings underscore the need for stage-targeted interventions and support, with particular attention to patients with advanced disease, wet AMD, and lower education levels

Key words: Age related macular degeneration, Quality of life, Saint Paul's Hospital Millennium Medical College

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ABBREVIATIONS AND ACRONYMS

AMD: age related macular degeneration

AWI: average weighted impact

BEVA: best eye visual acuity

CI: confidence interval

e-AMD: exudative age related macular degeneration

HRQOL: health related quality of life

IVI: impact of vision impairment

LOCS: lens opacities classification system

MacD QoL: macular disease dependent quality of life

NEI VQ25: national eye institute 25 item visual function

QOL: quality of life

SPHMMC: Saint paul's hospital millennium medical college

SD: standard deviation

VA: visual acuity

VR: VITRO RETINA SURGEON

WEVA : worst eye visual acuity

WHO: world health organization

1. Introduction

1.1 Background

The best orientation in social and functional life depends on visual function, which also affects one's physical and mental health. The primary motivation of man for survival is visual, and sight is believed to be responsible for around 80% of the functions of all five senses combined. As a result, visual impairment causes limitations in all spheres of life, especially in terms of quality of life.(1).

The central retina is the primary target of age-related macular degeneration (AMD), a chronic, degenerative condition. By 2040, that figure is projected to rise to 288 million(2). These numbers make AMD one of the leading causes of blindness in adults over 50 years of age, according to the World Health Organization (2).

The most important risk factor for AMD, according to epidemiological studies, is age; in resource-rich nations, 10% of those over 65 and 25% of individuals over 75 have AMD. High waist-to-hip ratio in men, positive family history, smoking, raised levels of C- reactive protein and other inflammatory markers, female sex, hypertension, hypercholesterolemia, cardiovascular illness, hyperopia, and light iris color are additional risk factors. Cigarette smoking has been shown to be the most significant modifiable risk factor on multiple occasions. Other significant risk factor is racial origin(3)(4). The 10- year longitudinal Multi- Ethnic Study of Atherosclerosis (MESA) found that the prevalence of AMD was highest in whites (5.4%) and lowest in African Americans (2.4%); prevalence was intermediate in Hispanics (4.2%) and Asians (4.6%)(4)(5).

WHO identified nine leading causes of visual impairment and blindness in its report .Of these nine leading causes; three were non communicable disease (NCDs), which are posterior segment in location that primarily includes: glaucoma, age-related macular degeneration (AMD) and diabetic retinopathy (DR) (6). Among the later, age-related macular degeneration accounts for 8.7% of all blindness worldwide and is the most common cause of blindness in developed countries particularly in people older than 60 years (7). There are two clinical forms of AMD, dry AMD and exudative AMD(8).

Treatment success is frequently measured by how well the patient's existing vision is preserved as opposed to how well their vision improves (9). While extensive research is being conducted to develop cutting-edge treatments, identify potential new genetic and environmental risk factors, and develop predictive and preventive approaches (9)(10). There has been less focus on the impact of vision impairment on people with AMD.

Central vision, which directly affects a person's ability to interact with the environment, is essential for performing daily routines. Central vision loss frequently leads to disability, dependency, impairment, and consequent emotional, functional, and psychological damage, while also reducing quality of life (QoL)(11). Patients with visual impairment caused by AMD frequently report depression (12), (13) and develop psychological issues similar to those experienced by patients with other serious chronic diseases(11).

1.2. STATEMENT OF THE PROBLEM

Almost half of the patients with visual impairment had poor vision-related quality of life. Severe visual impairment, blindness, long duration of visual impairment, older age, and rural residency had a statistically significant association with poor vision-related quality of life(14). It is sufficient to state that patients' quality of life is impacted by visual impairment. There was always a noticeable decline in the social, psychological, environmental, and physical aspects of their being. Significant visual impairment had a negative impact on quality of life. It came to light that participants of all ages experienced vision impairment.(15).

Related to age In Ethiopia, elderly patients seeking tertiary eye treatment are frequently afflicted with macular degenerative disease. Every ten years that a person is older than sixty, the likelihood of developing the illness increases (3).

The effects of AMD on quality of life are extensive and include not only activities like reading that require strong eyesight but also mental well-being, leisure time, and other activities that individuals choose to engage in(16)(17). Even mild vision impairment (VA ,6/12) can have a substantial impact on vision related quality of life(18)..

AMD patients often had lower HRQoL than non-AMD patients, particularly on the NEI-VFQ-25's subscales measuring general difficulty and mental health(11).

1.3. Significance of the study

Existing studies consistently suggest that AMD is significantly associated with declines in functional status and HRQOL(19)(20). Patients with AMD are more likely than others to need help with daily activities; their ratings for HRQOL and emotional distress are significantly worse than similarly aged community-dwelling adults(19). AMD also causes a substantial decrease in patient utility values(21).

AMD's impact reaches beyond mere physical limitation. It affects mental health, emotional wellbeing and social interactions in profound ways. Understanding these elements equips us to foster support networks and mental health resources tailored to unique needs of those with AMD.

As far as we know, no research has been done in Addis Ababa, Ethiopia, to assess how AMD affects patients' quality of life.

As well as serving as reference data for our center and future research, the study's findings can aid in the creation of evidence-based guidelines for low vision aids for AMD patients.

2. LITRATURE REVIEW

AMD has an impact on many aspects of everyday functioning and independent life, such as ability to read, shopping, driving and cooking for oneself(8). Individuals experiencing advanced AMD stages may also experience psychological sorrow, isolation from society, anxiety, and depressive disorders, all of which may negatively impact their quality of life with regard to health(HRQoL)(19).

Patients with age-related macular degeneration were divided into four severity groups (BEVA, 20/40; WEVA, 20/200), and a cross-sectional, prospective, observational, multicenter study was conducted in France, Germany, and Italy on health-related quality of life and utility. The National Eye Institute 25-Item Visual Function Questionnaire was completed by patients. The mean (SD) global score for the patients was 52.6 (22.0) on the NEI-VFQ-25. This score indicated a decreasing trend from patients with the least amount of VA loss (mean [SD] QoL, 67.0 [19.1]) to those with the greatest amount of loss (mean [SD] QoL, 40.7 [18.1]).Patients with intermediate levels of VA severity had intermediate QoL values. The finding also shows no significant differences of QoL between countries(20).

The study shows that the mean (SD) scores for the 11 NEI-VFQ-25 dimensions ranged from 41.4 (26.4) for mental health to 77.2 (28.6) for color vision for each of the four VA severity categories, with the exception of the driving dimension, which concerned (52.8%) and had a

mean (SD) score of 39.4 (38.7). The mean (SD) ratings for the following categories were low: role problems (41.9 [27.9]), near vision (44.8 [26.4]), and overall vision (47.5 [18.9]). Dimensions with high mean scores included ocular pain (76.9 [24.9]) and social function (66.9 [30.0]). Patients with a BEVA of 20/40 or better produced the highest mean scores across all NEI-VFQ-25 dimensions except general health (mean, 42.0 [19.7]), which was low across all 4 severity levels, and ocular pain which was high across all levels(20). A highly significant effect of BEVA was shown by analysis of variance on 10 out of the 12 dimensions as well as the overall score. Additionally, there was a statistically significant impact of WEVA on the global score and five categories (distance vision, general health, mental health, and driving). Visual acuity did not have a significant influence on the ocular pain dimension, and general health was significantly affected only by WEVA(20).

The same multi center cross sectional study was done using another tool which is MacDQoL scale questionnaire and the mean (SD) AWI score of the MacDQoL Scale was -3.5 (2.01). The mean (SD) AWI decreased with AMD severity from -4.62 (1.81) for BEVA worse than 20/40 plus WEVA worse than 20/200 to -2.68 (2.12) for a BEVA of 20/40 or better plus a WEVA of 20/200 or better. Mean AWI values were nearly identical for the 2 groups with a BEVA of 20/40 or better. The study shows that mean AWI values were similar across countries. Both the BEVA and WEVA had a significant influence on AWI, and a significant WEVA and BEVA interaction was observed(20)

Based on a retrospective study done in Poland that there are some differences between the subpopulations of patients with AMD living in rural and urban environments. It is interesting to note that difficulties in reading were more notably mentioned by rural patients. This suggests that prescribing low-vision devices in rural areas may be less common or probably that patients are not so well informed about such conveniences. Furthermore, rural patients felt that they achieved much less because of their vision loss in contrast to urban patients who did not perceive such an association. Presumably, this situation has something in common with previously mentioned reading difficulties and psychological distress caused by frustration or loss of independence. Another problem that occurred to be significantly different in these two subgroups was driving a car. 44.2% of urban patients declared having given up driving, in contrast to only 25% of the rural patients. This could be explained by the availability of public transport in the cities and

much less so in rural areas. Thus, patients living in urban area who feel uncertain about their eyesight may choose other options than driving a car, whereas in the villages there are fewer such possibilities. This feature appears even stronger considering the fact that in the current study 40.47% of the rural patients were drivers, compared to 22.8% of patients in urban. This is probably the result of public transport diversification. The third issue that is different in these two subpopulations of AMD patients is that rural patients felt that they achieved much less because of their visual impairment, while urban patients saw no such association(22).

As to what was found of a population-based descriptive cross-sectional study that took place in Kazakhstan, the mean (SD) NEI-VFQ-39 total score was 58.0 (23.8). Mean (SD) subscale scores varied from 39.8 (29.5) for the General Health subscale to 70.4 (26.8) for the Ocular Pain subscale. The mean (SD) NEI-VFQ-39 total scores by age groups varied from 29.9 (15.8) among patients that aged 85 and older to 80.3 (19.6) among patients aged 45-54. Among subscales, Driving had the highest range for the mean score from 5.9 (24.2) for patients aged 75 – 84, to 95 (7.5) for patients aged <35(23).

likewise, QOL assessment in the Turkish study demonstrates that patients in the e-AMD group excelled the controls in all aspects of the NEI-VFQ-25 assessment, with significant variance(general health, general vision, vision-specific mental health, vision-specific social functioning, vision-specific dependency, ocular pain, near and distant activities, driving, color vision and peripheral vision). The NEI-VFQ-25 scores for general vision, near vision, peripheral vision, color vision, dependency and ocular pain were significantly lower among the patients with bilateral e-AMD than among those who had unilateral disease(17). The test results declined with the level of vision. The age and length of the disease had a strong negative correlation with the scores. The SF-36 ratings for emotional role difficulty, mental health, social functioning, and pain were positively connected with vision levels but negatively correlated with the length of e-AMD and patient age.(17).

In Kenya, a population-based cross-sectional study conducted in Nakuru reported a prevalence of 11.2% for early AMD and 1.2% for late AMD. In contrast, a facility-based cross-sectional study conducted at SPHMMC in Ethiopia reported a higher overall prevalence of 24.2%, with 51% of cases classified as early AMD, 18% as intermediate AMD, and 31% as late AMD. Despite these

findings on prevalence, there is limited evidence regarding the impact of AMD on patients' quality of life in Ethiopia or across Africa.

3. OBJECTIVES

3.1 General objectives

To measure the effect of AMD on quality of life among AMD patients in SPHMMC, Addis Ababa, Ethiopia.

3.2 Specific objectives

- To determine the prevalence and severity of functional limitations in activities of daily living among patients with AMD attending St. Paul's Hospital Millennium Medical College during the study period.
- To measure the extent of impairment in interpersonal functioning and social participation among AMD patients and compare these across different stages of disease severity.
- To assess the association between AMD stage and type with the degree of functional limitation and social participation restriction.

4. METHODS

4.1 Study area and period

The study conducted at Saint Paul's Hospital Millennium Medical College- SPHMMC which is found in the Gullele sub-city, 1271 Swaziland Street, Addis Ababa, Ethiopia. The hospital was first inaugurated in 1947 by the government with the intent to help poor communities who could not afford medical expenses. The hospital is a government hospital administered by the ministry of health. The ophthalmology department is one of the specialty services given by the hospital with an OPD and follow-up sub-speciality clinics. The department has a number of staffs including optometrists, nurses, residents, general ophthalmologists and sub-specialists. Various services are given by the department from new patient clinic and OPD follow ups to different ophthalmologic surgical services. This study was conducted from June 2025 to January 2026.

4.2. Study Design

A hospital-based cross sectional study design was conducted on effect of age-related macular degeneration on quality of life in patients with AMD who attended ophthalmology department of SPHMMC.

4.3 Population

4.3.1. Source Population

All patients visiting the GOPD CLINIC and RETINA clinic of ophthalmology department of SPHMMC.

4.3.2. Study of population

All patients with AMD at the ophthalmology department of SPHMMC during the study period.

4.3.3 Inclusion and exclusion criteria

4.3.3.1. Inclusion criteria

All adult AMD patients who visited SPHMMC ophthalmology outpatient department with in the study time period

4.3.3.2 Exclusion criteria

Patients with media opacity so that it makes AMD diagnosis difficult

1.visually significant corneal opacity

2.visually significant cataract (>stage 2 LOCS 3 classification),

4.4. Sample size determination and sampling technique

4.4.1 Sampling determination

Sample size determined using single population proportion formula in the following assumptions:

$$n = \frac{(Z_{\alpha/2})^2 P (1-p)}{(d)^2}$$

n = is the size of the sample

Z= is the standard normal value corresponding to the desired level of Confidence (**95%** confidence level assumed where corresponding value of **Z α /2 is 1.96**)

D= margin of error=**5%**

P= Proportion of 0.242(24.2%) which is taken from similar study done in the same institution

$$= \frac{(1.96)^2 \cdot 0.5(1-0.5)}{0.242 \times 0.242}$$

$$= 280$$

After adding 10 % non-response rate, the final sample size is 308

4.4.2 Sampling technique

Consecutive sampling technique used which means the participants selected consecutively until the sample size is achieved since the population was heterogeneous in nature.

4.5 Study variables

4.5.1 Dependent variable

Quality of life

4.5.2 Independent variable

1) Socio-demographic characteristics

Age, sex, income, educational status, marital status and occupational are independent variables under socio demography characteristics.

2) Duration of diagnosis

3) Type of AMD

- DRY AMD and
- Wet AMD

4) Stages of AMD

Early AMD

Intermediate AMD

Advanced AMD

5) Objective measurements of visual function

-best corrected visual acuity at distance

4.6 Data collection Instruments and process

The quality-of-life status of respondents determined using both Amharic and English version of modified National Eye Institute vision function questionnaire (NEI VFQ -25). The questionnaire is developed using standard methods, including forward translation, back translation, evaluation

of the translation quality by bilingual speakers. A pilot study was carried out at St. Paul's Hospital Millennium Medical College among 15 patients with AMD who were not included in the main study sample. A growing body of evidence supports the reliability, validity, and responsiveness of the NEI VFQ-25 in patients with AMD(25). The NEI-VFQ-25 test is among the most commonly used vision-specific QoL scales. There are also few studies concerning AMD patients, it is found that NEI-VFQ-25 scores were positively correlated with good vision in AMD patients. In the Age-Related Eye Disease Study, the researchers assessed NEI-VFQ-25 scores twice, with a four-year interval between assessments, and demonstrated that there was a significant association between NEI-VFQ-25 scores and the progression of AMD and vision loss(26–28).

The NEI VFQ-25 contains 25 questions that measure different components of visual function, with six additional optional items that enhance the reliability of both the near and distance activities subscales(28). Scores range from 0 (worst) to 100 (best, perfect vision-related function), with higher scores indicating better vision-related function. There are 12 subscales: 1 general health subscale and 11 vision subscales, including general vision, difficulty with near- and distance-vision activities, difficulty with driving, vision-specific dependency, social functioning, role difficulties, limitation in peripheral and color vision, ocular pain, and mental health issues related to vision(29). The overall composite score is calculated by taking the mean of all the NEI VFQ-25 subscales, excluding the general health subscale(30).

Data collected using interviewer administered questionnaire. Before the data collection a 2 days training on how to collect and record data, obtain informed consent and approach and communication skill given to fellow residents by the primary investigator.

Clinical examination of patients done to assess the stage and type of AMD. Visual acuity measured by Snellen chart patients evaluated under a slit lamp biomicroscope for posterior segment examination, dilated fundus examination with a 90D Volk lens done

4.7 Data quality assurance

Data quality assured by giving training for the data collectors on how to administer questionnaires, on how to collect and record data, and how to communicate with the study participants. In addition, pretesting of the questionnaire done for 21 patients which is 5% of the sample size before data collection period. The primary investigator followed every steps closely.

4.8 OPERATIONAL DEFINITION

For the purpose of this study Quality of life was operationally defined as the composite score derived from the modified NEI VFQ-25 questionnaire, encompassing three domains: (1) difficulty performing vision-dependent daily activities, (2) psychosocial impact including worry and frustration about eyesight, and (3) participation restrictions in social and recreational activities. Scores ranged from 0 (no impairment) to 4 (severe impairment/complete cessation of activities), with higher scores indicating poorer vision-related quality of life.(31).

The International Classification of Diseases 11 (2018) classifies vision impairment into two groups: distance and near presenting vision impairment.

Distance vision impairment

- Mild – presenting visual acuity worse than 6/12
- Moderate – presenting visual acuity worse than 6/18
- Severe – presenting visual acuity worse than 6/60
- Blindness – presenting visual acuity worse than 3/60

Near vision impairment:

- Presenting near visual acuity worse than N6 or M.08 with existing correction.
- Poor vision-related quality of life: individuals who scored less than the overall mean in the National Eye Institute Visual Function Questionnaire-25 (NEI VFQ-25) score are considered to have poor vision-related quality of life.
- Good vision-related quality of life: individuals who scored the overall mean and above in the National Eye Institute Visual Function Questionnaire-25 scores are considered to have good vision-related quality of life.
- Early AMD: Defined by the presence of numerous small (<63 microns, “hard”) or intermediate (≥63 microns but <125 microns, “soft”) drusen.
- Intermediate AMD Macular disease characterized by either extensive drusen of small or intermediate size, or any drusen of large size (≥125 microns).

- Advanced AMD Defined by the presence of either geographic atrophy or choroidal neovascular membrane along with its sequelae, such as subretinal or sub-RPE hemorrhage or serous fluid, and subretinal fibrosis.

4.9 Data processing and analysis

Each questionnaire checked for completeness. The coded data entered into Epi Info version 7 and then exported into SPSS Version 28.0 (SPSS, Chicago III) for analysis. The Kolmogorov-Smirnov test and Chi-Square test employed to check the evenly distribution of data. Using descriptive analysis and cross-tabulation frequencies, mean, percentage and standard deviation determined. All variables entered into bivariate analysis model to explore potential confounding factors and variables with p value greater than equal to 0.25 with 95% CI eliminated. Furthermore, the remaining variables entered into multivariable analysis model to see a significant association by taking the assumption of 95% CI and p-value less than 0.05.

4.10 Ethical considerations

Ethical clearance was obtained from the ethical review board of SPHMMC. Oral consent obtained from the study participants before the data collection and the confidentiality of the data assured by keeping the study participants anonymous.

5.Results

Sociodemographic Characteristics of Study Participants

The study included 308 patients diagnosed with age-related macular degeneration (AMD) attending the ophthalmology clinic at St. Paul's Hospital Millennium Medical College making the response rate of 100 %. The sociodemographic profile of participants revealed a predominantly elderly population with a mean age of 66.93 years (± 8.12), ranging from 50 to 92 years. Female participants constituted the majority (55.34%, n=170) . Geographically, most participants resided in urban areas (65.05%, n=200) while 34.95% (n=108) were from rural areas.

Educational attainment among participants showed considerable variation, with 27.92% (n=86) being illiterate, 33.77% (n=104) literate without formal education, 23.38% (n=72) having primary education, and only 14.94% (n=46) attaining secondary education or higher. (T)

Table 1:Sociodemographic Characteristics of Study Participants (n=308)

Characteristic	Category	Frequency	Percentage	Mean $\pm$ SD
Age (years)				66.93 $\pm$ 8.12
Sex	Female	170	55.34%	-
	Male	138	44.66%	-
Residence	Rural	108	34.95%	-
	Urban	200	65.05%	-
Education	Illiterate	86	27.92%	-
	Literate	104	33.77%	-
	Primary	72	23.38%	-
	Secondary+	46	14.94%	-
Monthly Income (birr)				5952.32 $\pm$ 5182.13
Disease Duration (years)				3.92 $\pm$ 3.07

Clinical Characteristics of Study Participants

The clinical characteristics revealed a mean disease duration of 3.92 years (± 3.07), ranging from recent diagnoses to 20 years of living with AMD. The distribution of AMD stages showed that 36.54% (n=110) had advanced AMD in the right eye, while 39.80% (n=119) had advanced AMD in the left eye. Intermediate and early AMD stages were present in approximately one-third of participants each, with early AMD being slightly more prevalent in the right eye (33.55%, n=101) compared to the left (32.44%, n=97). The overwhelming majority of cases were dry AMD (84.72% right eye, 83.95% left eye), while wet AMD accounted for approximately 15-16% of cases bilaterally.

Visual acuity assessment demonstrated significant visual impairment among participants. In the Only 22.01% (n=68) maintained visual acuity of 6/12 or better, while 47.90% (n=148) had moderate impairment (6/18 to 6/60), and 30.09% (n=92) had severe visual impairment (counting fingers or worse).

Clinical Profile and AMD Characteristics

The bilateral nature of AMD was evident, with similar patterns observed between right and left eyes. Advanced AMD was the most severe form present in approximately 37-40% of eyes, indicating a substantial burden of late-stage disease in this population. Dry AMD predominates accounting for approximately 84-85% of cases and wet AMD constitutes of the remaining (15-16%) proportion.

Table 2: Clinical Characteristics of AMD by Eye

Characteristic	Category	Right Eye (OD)	Left Eye (OS)
AMD Stage	Advanced AMD	110 (36.54%)	119 (39.80%)
	Intermediate AMD	90 (29.90%)	83 (27.76%)
	Early AMD	101 (33.55%)	97 (32.44%)
AMD Type	Dry AMD	255 (84.72%)	251 (83.95%)
	Wet AMD	46 (15.28%)	48 (16.05%)

Association Between Sociodemographic Factors and AMD Stage

Statistical analysis revealed significant associations between educational attainment and AMD stage ($\chi^2=77.05$, $df=6$, $p<0.001$). A clear gradient emerged where participants with lower educational levels were disproportionately affected by advanced AMD. Specifically, 62.7% ($n=52$) of illiterate participants had advanced AMD, compared to only 15.6% ($n=7$) of those with secondary education or higher. Conversely, early AMD was most prevalent among those with higher education (68.9%, $n=31$ of secondary-educated participants).

The relationship between sex and AMD stage showed no statistically significant association (right eye: $\chi^2=1.28$, $p=0.528$; left eye: $\chi^2=0.71$, $p=0.700$). Both sexes were similarly distributed across AMD stages, with approximately equal proportions in each category.

Table 3: Association Between Education Level and AMD Stage

AMD Stage	Illiterate	Literate	Primary	Secondary+	Total
Advanced	52 (62.7%)	41 (40.6%)	9 (12.7%)	7 (15.6%)	109
Intermediate	16(19.3%)	40 (39.6%)	27 (38.0%)	7 (15.6%)	90
Early AMD	15 (18.1%)	20 (19.8%)	35 (49.3%)	31 (68.9%)	101

Quality of Life Assessment by AMD Stage

Quality of life (QoL) scores demonstrated a clear and statistically significant association with AMD stage. One-way analysis of variance revealed substantial differences in mean QoL scores across AMD stages ($F=176.93$, $p<0.001$). Participants with advanced AMD reported the highest QoL scores (mean= 2.20 ± 0.62), indicating the poorest quality of life, followed by intermediate AMD (mean= 1.30 ± 0.48), and early AMD (mean= 0.72 ± 0.60).

Post-hoc Scheffe tests confirmed that all pairwise comparisons between AMD stages were statistically significant ($p<0.001$). The magnitude of difference was most pronounced between advanced and early AMD stages (mean difference=1.48), highlighting the progressive impact of AMD severity on quality of life. The total variance explained by AMD stage alone was substantial, with the model accounting for approximately 55% of variability in QoL scores.

Table 4: Quality of Life Scores by AMD Stage

AMD Stage	Mean QoL Score	95% Confidence Interval	N
Advanced AMD	2.20	(2.08, 2.32)	110
Intermediate AMD	1.30	(1.20, 1.40)	90
Early AMD	0.72	(0.60, 0.84)	101
Total	1.44	(1.34, 1.54)	301

Visual Function and Activity Limitations

Analysis of difficulty scores revealed significant differences based on AMD type. Participants with wet AMD reported substantially higher difficulty scores (mean= 3.36 ± 1.09) compared to those with dry AMD (mean= 1.81 ± 1.11). This difference of 1.55 points was statistically significant ($t=-6.24$, $df=210$, $p<0.001$), suggesting that wet AMD, despite its lower prevalence, imposes greater functional limitations on daily activities.

The correlation analysis demonstrated a moderate positive relationship between age and QoL scores ($r=0.504$, $p<0.001$), indicating that older participants experienced poorer quality of life.

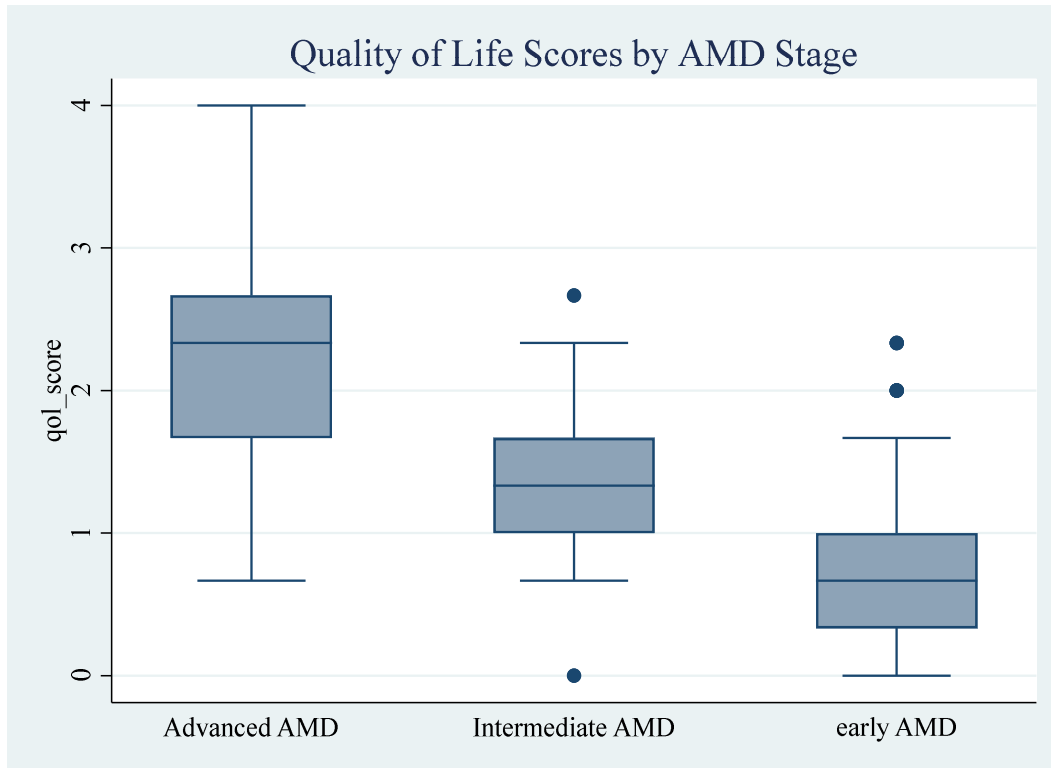


Figure 1: QoL Scores by stages of AMD

Multivariate Analysis of Quality-of-Life Determinants

Multiple linear regression analysis identified several independent predictors of quality of life scores. The complete model explained 59.89% of variance in QoL scores ($R^2=0.599$, adjusted $R^2=0.582$, $F(11,260)=35.30$, $p<0.001$). Age emerged as a significant positive predictor ($\beta=0.019$, $p=0.001$), with each additional year associated with a 0.019-point increase in QoL score (indicating poorer quality of life).

AMD stage demonstrated the strongest association with QoL scores. Compared to advanced AMD, intermediate AMD was associated with 0.787-point lower QoL scores ($\beta=-0.787$, $p<0.001$), while early AMD was associated with 1.217-point lower scores ($\beta=-1.217$, $p<0.001$). Education also showed significant effects, with secondary education or higher associated with better QoL compared to illiteracy ($\beta=-0.328$, $p=0.024$).

Notably, sex, residence, income, AMD type, and disease duration did not show statistically significant associations with QoL scores in the multivariate model after controlling for other factors.

Table 5: Multiple Linear Regression Analysis of QoL Score Predictors

Predictor	Category	OR	p-value	95% Confidence Interval
Constant		1.010	0.012	(0.228, 1.792)
Age (years)		0.019	0.001	(0.007, 0.030)
Sex	Male	-0.039	0.623	(-0.197, 0.118)
	Literate	-0.070	0.466	(-0.257, 0.118)
Education	Primary	-0.051	0.690	(-0.300, 0.199)
	Secondary+	-0.328	0.024	(-0.612, -0.044)
Residence	Urban	0.032	0.712	(-0.139, 0.204)
Income		-0.011	0.180	(-0.026, 0.005)
AMD Stage	Intermediate	-0.787	<0.001	(-0.979, -0.596)
	Early	-1.217	<0.001	(-1.431, -1.003)
AMD Type	Wet	0.043	0.685	(-0.167, 0.254)
Disease Duration		-0.014	0.329	(-0.042, 0.01

Determinants of AMD Stage Severity

Ordered logistic regression analysis identified factors associated with more advanced AMD stages. The model was statistically significant ($\chi^2=145.77$, $df=6$, $p<0.001$, pseudo- $R^2=0.222$), indicating that the included predictors collectively explain a substantial proportion of the variance in disease severity.

Age emerged as a significant protective factor, with each additional year associated with approximately 9.9% lower odds of being in a more advanced AMD stage (OR=0.901, 95% CI: 0.863-0.941, $p<0.001$).

Education demonstrated a strong, graded protective effect against advanced AMD. Compared to illiterate participants, those with primary education had 3.49 times higher odds of being in a less advanced stage (OR=3.494, 95% CI: 1.718-7.108, p=0.001), while participants with secondary education or higher had 6.34 times higher odds of less advanced disease (OR=6.342, 95% CI: 2.605-15.439, p<0.001).

Longer disease duration was associated with 19.7% lower odds of being in a more advanced stage (OR=0.803, 95% CI: 0.705-0.914, p=0.001). Sex was not significantly associated with AMD stage (OR=1.134, 95% CI: 0.680-1.891, p=0.629).

Table 6: Ordered Logistic Regression for AMD Stage Determinants

Predictor	AOR	Standard Error	p-value	95% Confidence Interval
Age (years)	0.901	0.020	<0.001	(0.863, 0.941)
Sex (Male)	1.134	0.296	0.629	(0.680, 1.891)
Education (vs Illiterate)				
Literate	1.130	0.361	0.701	(0.605, 2.112)
Primary	3.494	1.266	0.001	(1.718, 7.108)
Secondary+	6.342	2.878	<0.001	(2.605, 15.439)
Disease Duration	0.803	0.053	0.001	(0.705, 0.914)
Cutpoint 1	-7.939	1.440		(-10.762, -5.116)
Cutpoint 2	-6.090	1.403		(-8.840, -3.340)

Logistic Regression Analysis for Severe Functional Limitations

Logistic regression analysis examined predictors of severe difficulty in daily activities (defined as difficulty scores ≥ 3). The model demonstrated excellent predictive ability ($\chi^2=258.14$, df=7, p<0.001, pseudo R²=0.621). Education level showed particularly strong protective effects, with literate individuals having 94% lower odds of severe difficulty (OR=0.06, 95% CI: 0.02-0.23,

p<0.001) compared to illiterate participants. Primary and secondary education conferred even greater protection (OR=0.007 and 0.015 respectively, both p<0.001).

AMD stage remained a strong predictor of severe difficulty. Compared to patients with early AMD, those with intermediate AMD had approximately 6 times higher odds of severe difficulty (OR = 6.10, 95% CI: 1.87–19.87, p = 0.003), while patients with advanced AMD had markedly higher odds of severe difficulty (OR = 131.73, 95% CI: 32.05–541.35, p < 0.001).

Table 7: Logistic Regression for Severe Functional Difficulty

Predictor	Odds Ratio	Standard Error	p-value	95% Confidence Interval
Sex (Male)	0.670	0.303	0.376	(0.276, 1.627)
Age (years)	1.061	0.034	0.063	(0.997, 1.130)
Education (vs Illiterate)				
Literate	0.063	0.041	<0.001	(0.017, 0.227)
Primary	0.007	0.006	<0.001	(0.001, 0.034)
Secondary+	0.015	0.013	<0.001	(0.003, 0.083)
AMD Stage (vs Advanced)				
Intermediate	0.046	0.026	<0.001	(0.016, 0.138)
Early	0.008	0.005	<0.001	(0.002, 0.031)
Constant	5.790	13.028	0.435	(0.070, 476.297)

Functional and Psychosocial Impact

The impact of AMD on daily functioning was profound, particularly regarding mobility and independence. Driving status showed a strong association with AMD stage ($\chi^2=34.07$, df=2, p<0.001). While 20.8% (n=21) of patients with early AMD continued to drive, only 1.8% (n=2) of those with advanced AMD maintained driving privileges. Overall, 92.0% (n=277) of

participants had ceased driving or had no hx of driving, highlighting the substantial impact on transportation independence.

Psychological distress related to vision loss was prevalent and stage-dependent ($\chi^2=130.04$, $df=8$, $p<0.001$). Among patients with advanced AMD, 50.0% ($n=55$) reported worrying about their eyesight "most of the time," compared to only 3.0% ($n=3$) of those with early AMD. Conversely, 54.5% ($n=55$) of early AMD patients worried "a little of the time," suggesting less psychological burden with milder disease.

Pain and discomfort showed significant variation by AMD type ($\chi^2=33.03$, $df=4$, $p<0.001$). Patients with wet AMD reported more frequent pain, with 50.0% ($n=23$) experiencing pain "a little of the time" and 23.9% ($n=11$) "some of the time," compared to 29.0% ($n=74$) and 9.0% ($n=23$) respectively for dry AMD patients.

6. Discussion

This study provides a comprehensive and critical examination of the burden imposed by Age-related Macular Degeneration (AMD) within a tertiary care context in Ethiopia. The findings of this study reveal substantial burden of disease, with 36.54% of patients presenting with advanced AMD in their right eye and 39.80% in their left eye. This result shows significant discrepancy with previous study done at same center but this discrepancy is likely explained by the differing cohorts. The prior study's inclusion criteria limited to newly diagnosed patients over 50 selected for a population at initial presentation. In contrast, our study's inclusion of all patients under follow-up encompasses a broader spectrum of disease stages and treatment histories, which may significantly influence the observed outcomes(32). The predominance of dry AMD (84.72%) aligns with global epidemiological patterns, while the significant proportion of wet AMD (15.28%) represents clinically important subgroup requiring specialized intervention ((2))(32).

Several important patterns were observed. There was a clear inverse association between educational level and the severity of AMD, with illiterate patients being disproportionately affected by advanced disease. Quality of life progressively declined as AMD severity increased; patients with advanced AMD had scores 3.05 times higher indicating poorer quality of life compared with those with early AMD. Marked functional limitations were also evident, particularly the high rate of driving cessation (92% overall) and restrictions in daily activities. In

addition, a considerable psychological burden was noted, as more than half of patients with advanced AMD reported worrying about their eyesight “most of the time.”

Sociodemographic Determinants

The mean age of 66.9 years (± 8.12) aligns with the pathophysiological model of AMD as a disease of retinal insult and aging and with multiple global study findings. The overwhelming predominance of dry (atrophic) AMD (~84%) is expected in a population-based sample, yet the startlingly high prevalence of advanced AMD (36-40% of eyes) indicates a critical failure in the care cascade(11)(23)(17). With a mean disease duration of nearly four years, patients are not being diagnosed early; they are living and deteriorating with advanced disease for extended periods.

The female predominance (55.34%) is consistent with global epidemiology, potentially reflecting both biological susceptibility and gendered patterns of health-seeking behavior or longevity(8).

The finding that educational attainment shows a strong protective gradient against advanced AMD represents one of the most significant contributions of this study. Patients with secondary education or higher had 85% lower odds of advanced AMD compared to illiterate participants. This aligns with the conceptual framework of health literacy, where education facilitates better understanding of health information, earlier healthcare seeking, and improved adherence to preventive measures (33). The gradient effect where each increment in education level corresponds to reduced AMD severity suggests a dose-response relationship supporting causality.

The association between lower education and advanced AMD may operate through multiple pathways: limited health literacy delaying diagnosis and treatment, socioeconomic constraints limiting access to ophthalmic care, nutritional deficiencies due to economic limitations, and differential exposure to risk factors like smoking (34)(11). In the Ethiopian context, where this study was conducted, these educational disparities may be particularly pronounced given the country's literacy rate of approximately 51.8% among adults (35).

Quality of Life Implications

The progressive decline in quality of life with increasing AMD severity represents a critical finding with substantial clinical and public health implications(15)(23). The 1.48-point

difference in QoL scores between advanced and early AMD (on a scale where higher scores indicate worse quality of life) translates to clinically meaningful impairment. This gradient effect supports the validity of our measurement approach and confirms that AMD's impact on quality of life is not binary but exists along a continuum of severity.

These findings align with, but extend beyond, previous research demonstrating reduced quality of life in AMD patients(36). Our study's strength lies in its comprehensive assessment within a low-resource setting and its demonstration of the progressive nature of this impact. The magnitude of effect with advanced AMD patients reporting QoL scores 3.05 times worse than early AMD patients exceed that reported in some Western studies, possibly reflecting compounded disadvantages in our setting, including limited access to low-vision rehabilitation and assistive devices (20)(17)(23)(37).

The correlation between age and poorer quality of life ($r=0.504$) suggests compounding effects of aging and AMD, possibly through reduced resilience, comorbidities, or social isolation(23). This finding emphasizes the need for age-sensitive interventions and support systems for older AMD patients.

Functional Limitations and Independence

The near-universal driving cessation among advanced AMD patients (98.2%) represents a profound loss of independence with cascading social and psychological consequences. In contexts with limited public transportation, like Ethiopia, this functional limitation may lead to social isolation, reduced healthcare access, and economic dependency(27)(38). The stark contrast with early AMD patients (20.8% still driving) highlights how AMD progression fundamentally alters independence.

The greater functional difficulty reported by wet AMD patients compared to dry AMD patients (mean difference 1.55 points, $p<0.001$) aligns with the typically more rapid and severe visual loss in neovascular AMD(17). This finding has important implications for resource allocation, suggesting that patients with wet AMD may require more intensive rehabilitation and support services despite their smaller numbers

The high prevalence of pain and discomfort, particularly among wet AMD patients (73.9% reporting some degree of pain), represents an underrecognized aspect of AMD management. While AMD is not typically considered a painful condition, discomfort may arise from associated conditions, photophobia, or compensatory visual behaviors(17). This finding suggests the need for comprehensive symptom management beyond visual rehabilitation alone.

Psychological Impact and Coping

The psychological burden of AMD, particularly in advanced stages, represents a critical but often overlooked dimension of disease impact. The finding that 56.4% of advanced AMD patients worry about their eyesight "most" or "all of the time" compared to only 3.0% of early AMD patients highlights the progressive psychological toll of vision loss(12)(27). This anxiety may stem from fear of complete blindness, dependency, or social stigma associated with visual impairment(39).

The educational gradient in psychological adaptation with better-educated patients reporting less worry despite similar disease severity better quality of life suggests possible differences in coping strategies, social support, or cognitive reframing abilities(11). This finding supports the integration of psychological support and counseling into AMD management protocols, particularly for patients with limited education or social resources.

Clinical and Public Health Implications

The strong association between education and AMD outcomes suggests that health literacy interventions could substantially impact AMD burden. Simplified patient education materials, community awareness campaigns, and training of primary healthcare workers in AMD recognition could facilitate earlier diagnosis and treatment(11). Given Ethiopia's limited ophthalmologist-to-population ratio (approximately 1:1,000,000), task-shifting to mid-level ophthalmic personnel represents a promising strategy (40).

The progressive nature of quality-of-life decline supports the importance of early intervention and regular monitoring. Implementing standardized quality of life assessment in clinical practice could help identify patients needing additional support and track intervention effectiveness. The development and validation of AMD-specific quality of life instruments for the Ethiopian context could enhance clinical care and research.

The functional limitations identified, particularly regarding driving, suggest the need for comprehensive low-vision rehabilitation services. In resource-limited settings, community-based rehabilitation approaches and peer support groups may represent cost-effective strategies (41). Collaboration with disability organizations and social services could enhance support systems for AMD patients.

7. Limitations

The cross-sectional design limits causal inference regarding temporal relationships. The single-center design may limit generalizability, though St. Paul's Hospital Millennium Medical College serves a diverse population from across Ethiopia. Residual confounding by unmeasured factors, such as genetic predisposition, smoking, nutrition, and sunlight exposure, may influence observed associations. The reliance on self-reported outcomes introduces potential recall and social desirability biases.

8. Conclusion

This study demonstrates that AMD imposes substantial burden on patients in Ethiopia, with progressive deterioration in quality of life, functional independence, and psychological well-being as disease advances. Educational attainment emerges as a powerful protective factor, suggesting that health literacy interventions could substantially reduce AMD burden.

The findings paint a compelling portrait of a progressive disease that extends far beyond visual impairment to encompass fundamental aspects of human functioning, psychological well-being, and socioeconomic participation.

9. Recommendations

- The Ministry of Health, in collaboration with St. Paul's Hospital Millennium Medical College and the Ethiopian Ophthalmological Society, develop and implement health literacy interventions, including culturally appropriate educational materials for low-literacy populations and training programs for healthcare workers in patient education techniques.
- Zonal health departments, health extension workers, and non-governmental organizations working in eye health should establish community-based early detection and screening programs targeting high-risk populations, particularly older adults with limited education, while hospital administration and ophthalmology departments should integrate routine quality of life assessments into clinical practice.
- Training institutions, the Ethiopian Ophthalmic Association, and the Ministry of Health should develop task-shifting programs to train mid-level ophthalmic personnel in AMD management to address workforce shortages.
- Research institutions, and international collaborators should conduct longitudinal research on disease progression, treatment outcomes, and genetic determinants to strengthen the evidence base.
- The Ethiopian Ophthalmological Society, professional associations, and the Ministry of Health should engage in sustained policy advocacy to include AMD management in national eye health strategies and secure insurance coverage for treatments and rehabilitation services.

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11. Annexes

11.1 Assurance of Principal Investigator

I the undersigned agree to accept all responsibilities for the scientific and ethical conduct of the research project. I will provide timely progress report to my advisor and seek the necessary advice and approval from my primary advisors in the course of the research. I will communicate timely to my advisors all stakeholders involved in the study including any source of funding for this research.

Name of the student: Dr. Mubarek Meki

Signature: _____

Date: _____

Approval of the Clinical Advisor

1. Name of the primary advisor DR. ADUGNA LISSANEWERK (VR sub specialist)

Signature: _____

Date: _____

Approval of the Clinical Advisor

2. Name of the primary advisor: DR TSEDEKE ASAMINEW (VR sub specialist)

Signature: _____

Date: _____

Approval of the Clinical Advisor

3. Name of the primary advisor: DR DESTAW MULIE (VR sub specialist)

Signature: _____

Date: _____

4. Approval of the puplic health advisor

Name of the primary advisor Mrs. FATIMETU MOHAMMED (MPH/RH)

Signature: _____

Date: _____

11.2 English version study Information Sheet and Consent Form

Name of the principal investigator: DR MUBAREK MEKI

Name of the Organization: St. Paul's Hospital Millennium Medical College

Introduction: This information sheet and consent form are prepared by the investigator whose main aim is to study the impact of AMD on quality of life among AMD patients in St. Paul's hospital millennium medical college.

The principal investigator is a resident doctor in Ophthalmology department.

Purpose of study: To assess the impact of AMD on quality of life among AMD patients in St. Paul's hospital millennium medical college.

The procedure of the study: To assess the quality of life, we invite you to take part in our study. If you are willing to participate, you need to understand and give oral consent. Then, you will be asked to give your response for the questionnaire and clinical examination will be done by the data collectors. All responses given by the participants and the results obtained will be kept anonymous and confidential using a coding system whereby no one will have access to your responses.

Risk and/ or Discomfort: By participating in this research project you may feel that it has some discomfort especially on wasting your time but this may not be too much at your health care and it contributes to the overall improvement of the health status of the community. There is no risk during this research

Benefits: If you participate in this research project, you may not get the direct benefit but your participation is likely to help us in assessing the quality of life related to AMD patients.

Incentives: You will not be provided any incentives to take part in this research project.

Confidentiality and Anonymity: The information that will collect from this research project will be kept confidential. Information about you that will be collected from the study will be stored in a file, which will not have your name on it but a code number assigned to it. The number belongs to which name will be kept under lock and key, and it will not be revealed to anyone except the principal investigator.

Right to Refuse or withdrawal: You have the full right to refuse from participating in this research (You can choose not to respond some or all of the questions) if you do not wish to participate and this will not affect the health services you get from any health facilities. You have also the full right to withdraw from this study at any time you wish to without losing any of your rights as a resident of this site.

Person to contact: If you have any question you can contact any of the following individuals and you may ask at any time you want.

Dr. Mubarek Meki: St. Paul's Hospital Millennium Medical College

Tel: +251913748419

E-mail: mekiesa19@gmail.com

If you have well read this information sheet and you have given a chance to ask any question and clear with it or read to you and understood and finally you have agreed to participate on this research; please you need to give an oral agreement by saying “**Yes**” or if you refuse to participate by saying “**No**”.

11.3 English version of oral consent form

Hello, how are you? My name is _____. This is an interview to be done with you for a study that is being conducted at St. Paul's Hospital Millennium Medical College, Department of Ophthalmology. The purpose of the study is to assess the impact of AMD on quality of life among AMD patients in St. Paul's hospital millennium medical college. I would like to ask you some questions that are related to the above topic. I believe that the results of this study will assist policy makers, planners and health service providers for making considerations regarding AMD early detection and management. Your contribution has a great input for the study and I would greatly appreciate your participation.

There is no possible risk associated with participating in this study. Your name will not be written in the questionnaire and please be assured that all the information you give will be kept strictly confidential. Your participation is completely voluntary.

Therefore, you will not be obliged to answer any question that you do not want to and you may end this interview at any time you want to. There are also no obligations for not participating in the interview. The interview along with the clinical examination will take about 20-30 minutes.

May I continue the interview?

Response: Yes ☐

No ☐ Stop the interview and thank the respondent

Interviewer signature certifying that the consent has been given verbally.

Interviewer's name _____ signature _____ Date _____

Result: (to confirm for completeness)

A. Questionnaire completed _____

B. Questionnaire partially completed _____

C. Participant refused _____

Checked by Supervisor:

Supervisor's Name _____ Signature _____ Date _____

11.4 Questionnaire

Instructions: I'm going to read you some statements about problems which involve your vision or feelings that you have about your vision condition. After each question I will read you a list of possible answers. Please choose the response that best describes your situation. Please answer all the questions as if you were wearing your glasses or contact lenses (if any). Please take as much time as you need to answer each question. All your answers are confidential. In order for this survey to improve our knowledge about vision problems and how they affect your quality of life, your answers must be as accurate as possible. Remember, if you wear glasses or contact lenses for a particular activity, please answer all of the following questions as though you were wearing them.

PATIENTS INTERVIEW CODE.....

DATE OF THE INTERVIEW/....../.....

1. Socio demographic information

1. Sex

1. Male

2. Female

2 .Age ----- years of age

3. Marital status

1. Married
2. Single
3. Widowed
4. Divorced

4. Residence

1. Urban
- 2, rural

5. Income ----- ETB

6. Educational level

- 1 Unable to read and write
2. Able to read and write
3. Primary school
4. Secondary school and above

2 .Clinical information

7. Duration of the disease 1----- in years

2-----in months

3-----in weeks

8. Stage of AMD

- 1 .EARLY AMD
2. INTERMEDIATE AMD
3. ADVANCED AMD

9. Type of AMD

1. DRY AMD
2. WET AMD

10. Best corrected visual acuity

1. RIGHT EYE

2. LEFT EYE

11. Do you have glaucoma

1. YES

2. NO

12 IF yes stage of glaucoma -----

12 do you have retinal detachment

1. Yes

2. No

13. REFRACTIVE ERROR(IN DIOPTR)

Visual Functioning Questionnaire-25 (NEI VFQ 25)

PART 1 - GENERAL HEALTH AND VISION

1. In general, would you say your overall health is: (Circle One)

Excellent 1

Very Good..... 2

Good..... 3

Fair..... 4

Poor..... 5

2. At the present time, would you say your eyesight using both eyes (with glasses or contact lenses, if you wear them) is excellent, good, fair, poor, or very poor or are you completely blind? (Circle One)

Excellent 1

Good..... 2

Fair..... 3

Poor..... 4

Very Poor 5

Completely Blind..... 6

3. How much of the time do you worry about your eyesight? (Circle One)

READ CATEGORIES:

- None of the time..... 1
A little of the time..... 2
Some of the time..... 3
Most of the time 4
All of the time?..... 5

4. How much pain or discomfort have you had in and around your eyes (for example, burning, itching, or aching)? Would you say it is: (Circle One)

- None 1
Mild.....2
Moderate 3
Severe, or..... 4
Very severe.....5

PART 2 - DIFFICULTY WITH ACTIVITIES

The next questions are about how much difficulty, if any, you have doing certain activities wearing your glasses or contact lenses if you use them for that activity.

5. How much difficulty do you have reading (HOLY QURAN OR HOLY BIBLE)? Would you say you have: (READ CATEGORIES AS NEEDED) (Circle One)

- NO difficulty at all..... 1
A little difficulty..... 2
Moderate difficulty..... 3
Extreme difficulty..... 4
Stopped doing this because of your eyesight 5

Stopped doing this for other reasons or not interested in doing this 6

6. How much difficulty do you have doing work that require you to see well up close, such as cooking, fixing things around the house, or using hand tools? Would you say:(Circle One)

- No difficulty at all..... 1
A little difficulty..... 2
Moderate difficulty..... 3
Extreme difficulty..... 4

Stopped doing this because of your eyesight 5

Stopped doing this for other reasons or not interested in doing this 6

7. Because of your eyesight, how much difficulty do you have finding something on a crowded shelf? (READ CATEGORIES AS NEEDED) (Circle One)

No difficulty at all..... 1

A little difficulty..... 2

Moderate difficulty..... 3

Extreme difficulty..... 4

Stopped doing this because of your eyesight 5

Stopped doing this for other reasons or not interested in doing this 6

8. How much difficulty do you have reading street signs or the names of stores?(Circle One)

No difficulty at all..... 1

A little difficulty..... 2

Moderate difficulty..... 3

Extreme difficulty..... 4

Stopped doing this because of your eyesight 5

Stopped doing this for other reasons or not interested in doing this 6

9. Because of your eyesight, how much difficulty do you have going down steps, stairs, or curbs in dim light or at night? (Circle One)

No difficulty at all..... 1

A little difficulty..... 2

Moderate difficulty..... 3

Extreme difficulty..... 4

Stopped doing this because of your eyesight 5

Stopped doing this for other reasons or not interested in doing this 6

10. Because of your eyesight, how much difficulty do you have noticing objects off to the side while you are walking along? (READ CATEGORIES AS NEEDED) (Circle One)

No difficulty at all..... 1

A little difficulty..... 2

Moderate difficulty..... 3

Extreme difficulty..... 4

Stopped doing this because of your eyesight 5

Stopped doing this for other reasons or not interested in doing this 6

11. Because of your eyesight, how much difficulty do you have seeing how people react to things you say? (READ CATEGORIES AS NEEDED) (Circle One)

No difficulty at all..... 1

A little difficulty..... 2

Moderate difficulty..... 3

Extreme difficulty..... 4

Stopped doing this because of your eyesight 5

Stopped doing this for other reasons or not interested in doing this 6

12. Because of your eyesight, how much difficulty do you have picking out and matching your own clothes? (READ CATEGORIES AS NEEDED) (Circle One)

No difficulty at all..... 1

A little difficulty..... 2

Moderate difficulty.....

3 Extreme difficulty.....

4 Stopped doing this because of your eyesight 5

Stopped doing this for other reasons or not interested in doing this 6

13. Because of your eyesight, how much difficulty do you have visiting with people in their homes, at funeral , at wedding or in restaurants ? (READ CATEGORIES AS NEEDED) (Circle One)

No difficulty at all..... 1

A little difficulty..... 2

Moderate difficulty..... 3

Extreme difficulty..... 4

Stopped doing this because of your eyesight 5

Stopped doing this for other reasons or not interested in doing this 6

14. Because of your eyesight, how much difficulty do you have going out plays, or sports events?(Circle One)

No difficulty at all..... 1

A little difficulty..... 2

Moderate difficulty..... 3

Extreme difficulty..... 4

Stopped doing this because of your eyesight 5

Stopped doing this for other reasons or not interested in doing this 6

15. Now, I'd like to ask about driving a car. Are you currently driving, at least once in a while? (Circle One)

Yes 1(Skip To Q 15c)

No..... 2

15a. IF NO, Have you never driven a car or have you given up driving? (Circle One)

Never drove 1 (Skip To Part 3, Q 17)

Gave up..... 2

15b. IF GAVE UP DRIVING: Was that mainly because of your eyesight, mainly for some other reason, or because of both your eyesight and other reasons? (Circle One)

Mainly eyesight 1 (Skip to Part 3, Q 17)

Mainly other reasons..... 2 (Skip to Part 3, Q17)

Both eyesight and other reasons ... 3 (Skip to Part 3, Q17)

15c. IF CURRENTLY DRIVING: How much difficulty do you have driving during the daytime in familiar places? Would you say you have: (Circle one)

No difficulty at all 1

A little difficulty 2

Moderate difficulty 3

Extreme difficulty..... 4

16. How much difficulty do you have driving at night? Would you say you have: (READ CATEGORIES AS NEEDED) (Circle One)

No difficulty at all..... 1

A little difficulty..... 2

Moderate difficulty..... 3

Extreme difficulty..... 4

Have you stopped doing this because of your eye sight.....5

Have you stopped doing this for other reasons or are you not interested in doing this..... 6

16a. How much difficulty do you have driving in difficult conditions, such as in bad weather, during rush hour, on the freeway, or in city traffic? Would you say you have: (READ CATEGORIES AS NEEDED) (Circle One)

No difficulty at all..... 1

A little difficulty..... 2

Moderate difficulty..... 3

Extreme difficulty..... 4

Have you stopped doing this because of your eyesight..... 5

Have you stopped doing this for other reasons or are you not interested in doing this 6

PART 3: RESPONSES TO VISION PROBLEMS

The next questions are about how things you do may be affected by your vision. For each one, I'd like you to tell me if this is true for you all, most, some, a little, or none of the time. (Circle One On Each Line) READ CATEGORIES: All of the time, Most of the time, Some of the time, A little of the time ,None of the time

17. Do you accomplish less than you would like because of your vision?

All of the time.....1

Most of the time.....2

Some of the time.....3

A little of the time.....4

None of the time.....5

18. Are you limited in how long you can work or do other activities because of your vision?

All of the time.....1

Most of the time.....2

Some of the time.....3

A little of the time.....4

None of the time..... 5

19. How much does pain or discomfort in or around your eyes, for example, burning, itching, or aching, keep you from doing what you'd like to be doing? Would you say:

All of the time.....1

Most of the time.....2

Some of the time.....3

A little of the time....4

None of the time.... 5

For each of the following statements, please tell me if it is definitely true, mostly true, mostly false, or definitely false for you or you are not sure. (Circle One On Each Line) Definitely
Mostly Not Mostly Definitely True True Sure False False

20. I stay home most of the time because of my eyesight.....

Definitely true..... 1

Mostly true..... 2

Not sure.....3

Mostly false..... 4

Definitely false..... 5

21. I feel frustrated a lot of the time because of my eyesight.....

Definitely true..... 1

Mostly true..... 2

Not sure.....3

Mostly false..... 4

Definitely false..... 5

22. I have much less control over what I do, because of my eyesight.

Definitely true..... 1

Mostly true..... 2

Not sure.....3

Mostly false..... 4

Definitely false..... 5

23. Because of my eyesight, I have to rely too much on what other people tell me..

Definitely true..... 1

Mostly true..... 2

Not sure.....3

Mostly false..... 4

Definitely false..... 5

24. I need a lot of help from others because of my eyesight.....

Definitely true..... 1

Mostly true..... 2

Not sure.....3

Mostly false..... 4

Definitely false..... 5

25. I worry about doing things that will embarrass myself or others, because of my eyesight...

Definitely true..... 1

Mostly true..... 2

Not sure.....3

Mostly false..... 4

Definitely false..... 5

That's the end of the interview. Thank you very much for your time and your help.

የጥያቄ መጠይቁ የአማርኛ ቅጂ

እይታዎትን በተመለከተ ስላሉ የጤና ችግሮች ወይም የእይታዎትን ሁኔታ በተመለከተ ስለሚሰማዎት ስሜት የተወሰኑ መጠይቆች አነብሎታለሁ። ከእያንዳንዱ ጥያቄ ቀጥሎ መልስ ሊሆኑ የሚችሉ ዝርዝሮችን አነብሎታለሁ። እባክዎትን የእኔን ሁኔታ በትክክል ይወክላል ብለው የሚያስቡትን መልስ ይምረጡ።

እባክዎትን መነፅር ወይም contact lens (ተጠቃሚ ከሆኑ) አሁን እየተጠቀሙ እንደሆነ አስበው ይመልሱ። ለእያንዳንዱ ጥያቄ መልስ ለመስጠት የሚበቃዎትን ያህል ጊዜ ይውሰዱ። የሚሰጡት መልስ ሚስጥራዊነቱ የተጠበቀ ነው። ይህ የዳሰሳ ጥናት ስለእይታ ችግሮች ያለንን ዕውቀት ለማሻሻል እና የእርስዎንም የህይወት ዘይቤ ላይ እንዴት ተጽዕኖ እንደፈጠረ ለመረዳት ይቻል ዘንድ እባክዎትን በተቻሉት መጠን ትክክለኛ /እጅግ ተቀራራቢ መልስ ብለው የሚያስቡትን መልስ ይስጡ።

ያስተውሉ፦በማንኛውም አጋጣሚ/ሁኔታ መነፅር ወይም contact lens የሚጠቀሙ ከሆነ እባክዎትን የሚከተሉትን ሁሉንም ጥያቄዎች መነፅር /contact lens) እንዳደረጉ አስበው ይመልሱ።

-

የታካሚ መጠይቅ መለያ ኮድ -----

-መጠይቁ የተወሰደበት ቀን-----

1. አካባቢያዊና ማህበራዊ መረጃ

1. ጾታ 1.1. ወንድ

1.2 ሴት

2. እድሜ (ዓመት)

3.የትዳር ሁኔታ 3.1. ያገባ

3.2.ያላገባ

3.3.በሞት የተለየ

4.4. የተፋታ

4.መኖሪያ አካባቢ 4.1.ከተማ

4.2 ገጠር

5. የገቢ መጠን -----(ብር)

6. የትምህርት ደረጃ 6.1.ማንበብና መጻፍ የማይችል

6.2.ማንበብና መጻፍ የሚችል

6.3.የመጀመሪያ ደረጃ

6.4. ሁለተኛ ደረጃና ከዚያ በላይ

2. የ ጤና መረጃ

7.ህመሙ ለምን ያህል ጊዜ ቆየ 1.----- (ዓመት)

2. ——(ወራት)

3. ——(ሰምንታት)

8. የ የስገነተ ዕይታ መጃጀት ደረጃ 1. መጀመሪያ ደረጃ

2. መካከለኛ ደረጃ

3. ከፍተኛ ደረጃ

9. የ የስገነተ ዕይታ መጃጀት ዓይነት 1. dry

2. wet

10. የተስተካከለ የእዴታ መጠን 1. የቀኝ አይን

2. የግራ አይን

1. Visual functioning -25 (NEI VFQ 25)

ክፍል አንድ:- አጠቃላይ የጤና እና የአይን ዕይታ መረጃ

1. በአጠቃላይ አሁን ያሉበትን የጤና ሁኔታ እንዴት ይገልጹታል? (አንዱን ያክብቡ)

እጅግ በጣም ጥሩ—1

በጣም ጥሩ—2

ጥሩ—3

ልክኛ—4

ደካማ—5

2. በአሁኑ ጊዜ የሁለቱም አይኖችን ዕይታ (መነጽር ወይም ኮንታክት ሌንሶች ጨምሮ) እንዴት ይገልጹታል?

እጅግ በጣም ጥሩ—1

ጥሩ—2

ልክኛ—3

ደካማ—4

በጣም ደካማ.....5

ሙሉ በሙሉ ማየት የተሳነው.....6

3.ካለዎት ጊዜ ውስጥ ምን ያህሉን ጊዜ ስለአይን እይታዎ ያስባሉ/ይጨነቃሉ (አንዱን ያክቡ)

ምንም የለም-----1

ለትንሽ ጊዜ-----2

አልፎ አልፎ-----3

አብዛኛውን ጊዜ-----4

ሁልጊዜ-----5

4.በአይንዎ ውስጥና በዙሪያው ምን ያህል ህመም ወይም ምችት ማጣት ኖሮት ያውቃል (ለምሳሌ ማቃጠል፣ማሳከክ ወይም ህመም እንዴት ይገልጹታል ?)(አንዱን ያክቡ)

የለም-----1

ዝቅተኛ ደረጃ -----2

መካከለኛ ደረጃ-----3

ከፍተኛ ደረጃ -----4

በጣም ከፍተኛ ደረጃ-----5

ክፍል ሁለት:-በዕለት ተዕለት እንቅስቃሴ ውስጥ ያለ ተግዳሮት

የሚከተሉት ጥያቄዎች መነጽር ወይም ኮንታክት ሌንስ ለሚጠቀሙ ምን ያህል በዕለት ተዕለት

እንቅስቃሴ ውስጥ ያለውን የእይታ የመቸገር መጠን የሚያመለክቱ ናቸው

5.በሚያነቡበት ጊዜ ምን ያህል ይቸገራሉ(ቅዱስ ቂራንን ወይም መጽሐፍ ቅዱስ) እንዴት ይገልጹታል ?(እያንዳንዱን እንደአስፈላጊነቱ ያንብቡና አንዱን ያክቡ)

ምንም መቸገር የለም-----1

መጠነኛ መቸገር -----2

መካከለኛ መቸገር-----3

ከመጠን ያለፈ መቸገር-----4

በእይታ መቸገር/ማጣት ምክንያት ማድረግ አቁመዋል-----5

በሌላ ምክንያት ወይም ፍላጎት በማጣት ምክንያት ማድረግ አቁመዋል-----6

6.ምግብ ማብሰል፣ በቤት ውስጥ ያሉ ነገሮችን መጠገን ወይም በእጅ የሚሠሩ መሳሪያዎችን መጠቀም በመሳሰሉት በአይን በቅርብ ርቀት በደንብ ማየት በሚጠይቁ ሥራዎች ላይ ምን ያህል ችግር አለብዎት?

ምንም መቸገር የለም-----1

መጠነኛ መቸገር -----2

መካከለኛ መቸገር-----3

ከመጠን ያለፈ መቸገር-----4

በእይታ መቸገር/ማጣት ምክንያት ማድረግ አቁመዋል-----5

በሌላ ምክንያት ወይም ፍላጎት በማጣት ምክንያት ማድረግ አቁመዋል-----6

7.በአይንዎ ዕይታ ምክንያት የሚፈልጉትን ነገር/ዕቃ ከተቀመጠበት መደርደሪያ ላይ ፈልጎ ለማግኘት ምን ያህል ይቸገራሉ? (እያንዳንዱን እንደአስፈላጊነቱ ያንብቡና አንዱን ያክቡ)

ምንም መቸገር የለም-----1

መጠነኛ መቸገር -----2

መካከለኛ መቸገር-----3

ከመጠን ያለፈ መቸገር-----4

በእይታ መቸገር/ማጣት ምክንያት ማድረግ አቁመዋል-----5

በሌላ ምክንያት ወይም ፍላጎት በማጣት ምክንያት ማድረግ አቁመዋል-----6

8.የመንገድ ዳር ምልክቶችን ወይም የመደብር ስሞችን ለማንበብ ምን ያህል ተቸግረው ያውቃሉ?(አንዱን ያክቡ)

ምንም መቸገር የለም-----1

መጠነኛ መቸገር -----2

መካከለኛ መቸገር-----3

ከመጠን ያለፈ መቸገር-----4

በእይታ መቸገር/ማጣት ምክንያት ማድረግ አቁመዋል-----5

በሌላ ምክንያት ወይም ፍላጎት በማጣት ምክንያት ማድረግ አቁመዋል-----6

9.በአይን እይታዎ የተነሳ በማታ ወይም ብርሃን ባነሰበት ደረጃ ለመውጣትና ለመውረድ ፣ወደታች ለመውረድ፣ እጥፋቶች ላይ ምን ያህል ተቸግረው ያውቃሉ (አንዱን ያክቡ)

ምንም መቸገር የለም-----1

መጠነኛ መቸገር -----2

መካከለኛ መቸገር-----3

ከመጠን ያለፈ መቸገር-----4

በእይታ መቸገር/ማጣት ምክንያት ማድረግ አቁመዋል-----5

በሌላ ምክንያት ወይም ፍላጎት በማጣት ምክንያት ማድረግ አቁመዋል-----6

10.በአይንዎ ዕይታ ምክንያት፣ እየሄዱ እያለ ከጎንዎ ያሉትን ነገሮች ለማስተዋል ምን ያህል ይቸገራሉ? (እንደ አስፈላጊነቱ ምድቦችን ያንብቡ) (አንዱን ያክብቡ)

ምንም ቸግር የለም. 1

ትንሽ ቸግር..... 2

መጠነኛ ቸግር 3

በጣም ከባድ ቸግር 4

በአይንዎ ምክንያት ይህን ማድረግ አቁሟል 5

በሌሎች ምክንያቶች ይህንን ማድረግ አቁመዋል ወይም ይህንን ለማድረግ ፍላጎት የሎትም 6

11. በአይንዎ ዕይታ ምክንያት ሰዎች ለምትናገሩት ነገር ምን ምላሽ እንደሚሰጡ ለማየት ምን ያህል ይቸገራሉ? (እንደ አስፈላጊነቱ ምድቦችን ያንብቡ) (አንዱን ያክብቡ)

ምንም ችግር የለም.	1
ትንሽ ችግር.....	2
መጠነኛ ችግር	3
በጣም ከባድ ችግር	4
በአይንዎ ምክንያት ይህን ማድረግ አቁሟል	5
በሌሎች ምክንያቶች ይህንን ማድረግ አቁመዋል ወይም ይህንን ለማድረግ ፍላጎት የሎትም	6

12. በአይንዎ ዕይታ የተነሳ የራስዎትን ልብስ ለመምረጥና ለማጣመር ምን ያህል ችግር አለ? (እንደ አስፈላጊነቱ ምድቦችን ያንብቡ) (አንዱን ያክብቡ)

ምንም ችግር የለም.	1
ትንሽ ችግር.....	2
መጠነኛ ችግር	3
በጣም ከባድ ችግር	4
በአይንዎ ምክንያት ይህን ማድረግ አቁሟል	5
በሌሎች ምክንያቶች ይህንን ማድረግ አቁመዋል ወይም ይህንን ለማድረግ ፍላጎት የሎትም	6

13. በአይንዎ ዕይታ ምክንያት፣ ከሰዎች ጋር በቤታችሁ፣ በቀብር ሥነ ሥርዓት፣ በሠራተኛ ወይም በምግብ ቤቶች መጎብኘት ምን ያህል ይከብዳችኋል? (እንደ አስፈላጊነቱ ምድቦችን ያንብቡ) (አንዱን ያክብቡ)

ምንም ችግር የለም.	1
ትንሽ ችግር.....	2
መጠነኛ ችግር	3
በጣም ከባድ ችግር	4
በአይንዎ ምክንያት ይህን ማድረግ አቁሟል	5
በሌሎች ምክንያቶች ይህንን ማድረግ አቁመዋል ወይም ይህንን ለማድረግ ፍላጎት የሎትም	6

14. በአይንዎ ዕይታ ምክንያት ወደ ተውኔቶች ወይም የስፖርት ዝግጅቶች መሄድ ምን ያህል አስቸጋሪ ይሆንብዎታል?(አንዱን ያክብቡ)

ምንም ችግር የለም.	1
ትንሽ ችግር.....	2
መጠነኛ ችግር	3
በጣም ከባድ ችግር	4
በአይንዎ ምክንያት ይህን ማድረግ አቁሟል	5
በሌሎች ምክንያቶች ይህንን ማድረግ አቁመዋል ወይም ይህንን ለማድረግ ፍላጎት የሎትም	6

15. አሁን, ስለ መኪና መንዳት መጠየቅ እፈልጋለሁ. በአሁኑ ጊዜ ቢያንስ ከስንት አንዴም ቢሆን እየነዱ ነው? (አንዱን ያክብቡ)

አዎ	1 (ወደ ጥያቄ 15ሐ ይሂዱ)
አይደለም.....	2

15 ሀ. አይ ከሆነ፣ መኪና ነድተው አያውቁም ወይስ መንዳት ትተው ነው? (አንዱን ያክብቡ)

በፍፁም አይነዱም	1 (ወደ ክፍል 3 ጥያቄ 17 ይሂዱ)
መንዳት አቁመዋል.....	2

15 ለ. ማሽከርከርን ከተው፡ በዋነኛነት በአይንዎ ምክንያት ነው፣ በዋናነት በሌላ ምክንያት፣ ወይም በሁለቱም በእይታዎ እና በሌሎች ምክንያቶች? (አንዱን ያክብቡ)

በዋነኛነት የማየት ምክንያት	1 (ወደ ክፍል 3 ጥያቄ 17 ይሂዱ)
በዋናነት ሌሎች ምክንያቶች.....	2 (ወደ ክፍል 3 ጥያቄ 17 ይሂዱ)
በሁለቱም በዓይን እይታ እና ሌሎች ምክንያቶች	3 (ወደ ክፍል 3 ጥያቄ 17 ይሂዱ)

15ሐ. በሁኑ ጊዜ የሚያሽከረክሩ ከሆነ፡- በሚታወቁ ቦታዎች በቀን ጊዜ ለመንዳት ምን ያህል ይቸገራሉ? ምን ያህል ችግር አለ ይላሉ፡ (አንዱን ያክብቡ)

ምንም ችግር የለም	1
ትንሽ ችግር	2
መጠነኛ ችግር	3
ከባድ ችግር	4

16. በምሽት ለመንዳት ምን ያህል ችግር አለብዎት? (ምድቦችን እንደ አስፈላጊነቱ ያንብቡ) (አንዱን ያክብቡ)

ምንም ችግር የለም	1
ትንሽ ችግር	2
መጠነኛ ችግር	3
በጣም ከባድ ችግር	4
በአይንዎ ምክንያት ይህን ማድረግ አቁሟል	5
በሌሎች ምክንያቶች ይህንን ማድረግ አቁመዋል ወይም ይህንን ለማድረግ ፍላጎት የሎትም	6

16 ሀ. በአስቸጋሪ ሁኔታዎች፣ ለምሳሌ በመጥፎ የአየር ጠባይ፣ በጥድፈያ ሰአት፣ በነጻ መንገድ ላይ ወይም በከተማ ትራፊክ ውስጥ ለመንዳት ምን ያህል ችግር አለብዎት? (ምድቦችን እንደ አስፈላጊነቱ ያንብቡ) (አንዱን ያክብቡ)

ምንም ችግር የለም	1
ትንሽ ችግር	2
መጠነኛ ችግር	3
በጣም ከባድ ችግር	4
በአይንዎ ምክንያት ይህን ማድረግ አቁሟል	5
በሌሎች ምክንያቶች ይህንን ማድረግ አቁመዋል ወይም ይህንን ለማድረግ ፍላጎት የሎትም	6

ክፍል 3: ለዕይታ ችግሮች ምላሾች

**የሚቀጥሉት ጥያቄዎች እርስዎ የሚሰሯቸው ነገሮች እንዴት በእይታዎ ሊነኩ እንደሚችሉ ነው።
ለእያንዳንዱ ጥያቄ ምን ያህል እውነት እንደሆነ ሁል ጊዜ፣ ብዙ ጊዜ፣ አንዳንድ ጊዜ፣ ትንሽ ጊዜ፣
ወይም ምንም ጊዜ በማለት እንድትነግሩኝ እወዳለሁ። (በእያንዳንዱ መስመር አንዱን ያክብቡ)
ምድቦችን ያንብቡ፡ ሁል ጊዜ፣ ብዙ ጊዜ፣ አንዳንድ ጊዜ፣ ጥቂት ጊዜ፣ ምንም ጊዜ የለም**

17. በዕይታዎ ምክንያት ከሚፈልጉት ያነሰ ነገር ያከናውናሉ?

ሁል ጊዜ.....1
ብዙ ጊዜ.....2
አንዳንድ ጊዜ.....3
ጥቂት ጊዜ 4
ምንም ጊዜ.....5

18. በዕይታዎ ምክንያት ለመስራት ወይም ሌሎች ተግባራትን ለመፈጸም የሚወስድብዎ ጊዜ ላይ ገደብ አለብዎት?

ሁል ጊዜ.....1
ብዙ ጊዜ.....2
አንዳንድ ጊዜ.....3
ጥቂት ጊዜ 4
ምንም ጊዜ.....5

19. በዓይንዎ ውስጥ ወይም በአካባቢው ላይ ህመም ወይም ምችት ማጣት ለምሳሌ ማቃጠል, ማሳከክ ወይም ህመም ማድረግ የሚፈልጉትን ነገር ከማድረግ ምን ያህል ይከለክላሉ?

ሁል ጊዜ.....1
ብዙ ጊዜ.....2
አንዳንድ ጊዜ.....3

ጥቂት ጊዜ	4
ምንም ጊዜ.....	5

ለእያንዳንዱ የሚከተሉት መግለጫዎች፣ እባክዎን በእርግጠኝነት እውነት፣ በአብዛኛው እውነት፣ በአብዛኛው ውሸት፣ ወይም በእርግጠኝነት ውሸት ለእርስዎ ውሸት ከሆነ ወይም እርግጠኛ ካልሆኑ ንገሩኝ። (በእያንዳንዱ መስመር ላይ አንዱን ያክብቡ) በእርግጠኝነት እውነት በአብዛኛው እውነት እርግጠኛ አይደለሁም በአብዛኛው ውሸት በእርግጠኝነት ውሸት

20. በአይኔ ዕይታ ምክንያት ብዙ ጊዜ ቤት እቆያለሁ

በእርግጠኝነት እውነት.....	1
በአብዛኛው እውነት.....	2
እርግጠኛ አይደለሁም	3
በአብዛኛው ውሸት	4
በእርግጠኝነት ውሸት.....	5

21. ከዓይኖቼ ዕይታ የተነሳ ብዙ ጊዜ ብስጭት ይሰማኛል

በእርግጠኝነት እውነት.....	1
በአብዛኛው እውነት.....	2
እርግጠኛ አይደለሁም	3
በአብዛኛው ውሸት	4
በእርግጠኝነት ውሸት.....	5

22. በዓይኖቼ ዕይታ ምክንያት በማድረግ ነገር ላይ ቁጥጥሬ እጅግ ያነሰ ነው።

በእርግጠኝነት እውነት.....	1
በአብዛኛው እውነት.....	2
እርግጠኛ አይደለሁም	3
በአብዛኛው ውሸት	4

በእርግጠኝነት ውሸት.....	5
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23. በአይኔ ዕይታ ምክንያት፣ ሌሎች ሰዎች በሚነግሩኝ ላይ በጣም መታመን አለብኝ።

በርግጠኝነት እውነት.....	1
በአብዛኛው እውነት.....	2
እርግጠኛ አይደለሁም	3
በአብዛኛው ውሸት	4
በእርግጠኝነት ውሸት.....	5

24. በአይኔ ዕይታ ምክንያት ከሌሎች ብዙ እርዳታ እፈልጋለሁ

በርግጠኝነት እውነት.....	1
በአብዛኛው እውነት.....	2
እርግጠኛ አይደለሁም	3
በአብዛኛው ውሸት	4
በእርግጠኝነት ውሸት.....	5

25. በአይኔ ዕይታ ምክንያት እራሴን ወይም ሌሎችን የሚያሳፍር ነገር ስለማድረግ እጨነቃለሁ

በርግጠኝነት እውነት.....	1
በአብዛኛው እውነት.....	2
እርግጠኛ አይደለሁም	3
በአብዛኛው ውሸት	4
በእርግጠኝነት ውሸት.....	5