

Visual impairment and quality of life, a cross-sectional study

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Abstract--Objective: Visual impairment and blindness has been a problem for social behavior and public health in the developing countries. Data regarding the influence of visual impairment and blindness in Albania are missing. The aim of our study is to investigate the influence of visual impairment and blindness in quality of their life in Albania. **Methods:** This is a cross-sectional study, conducted in Albania from September 2019 till December 2019. All the patients with eye disease and visual loss were included in this study. The patients have self-completed a questionnaire organized in 3 parts with 18 questions. Gender, age, socio-economic data, eye diseases, level of stress, anxiety and depression were collected in this study and analyzed with SPSS. **Results:** 871 questionnaires were included in this study according to the criteria. The mean age of the participants in this study was 47.4 years (with a range from 7 years to 78 years). 40.5% of the participant reported to have anterior segment and refractive disorders followed by diabetic retinopathy and other vascular disorders in 14.3%. 61.3% responded that the quality of vision was with mild visual impairment. Most of the participant reported mild level of anxiety (34%) and depression (30%) and 31% severe stress. **Conclusion:** the results of our study indicate that visual impairment and blindness have a mild to moderate influence in quality of life and we recommend the start of a rehabilitation program for patients with blindness and visual impairment.

Keywords-- Visual impairment, blindness, quality of life, cross-sectional study.

I INTRODUCTION

In the developing countries the visual impairment and blindness has been a problem for social behavior and public health (Rapaport, Clary, Fayyad, & Endicott, 2005). The impairment of visual acuity knows different risk factor like age, diabetic retinopathy, ocular trauma, cataract etc. (Abner et al., 2002), (Lord, 2006), (Organization, 2014). World Health Organization has declared that visual impairment affect million of people worldwide (Organization, 2014).

Different studies have evidenced that visual impairment affect the health quality of life by causing limitation in social interaction (Li et al., 2011), (Nyman, Gosney, & Victor, 2010) and other studies had find a relationship between visual impairment, socio-economic conditions and mental health (Frick, Gower, Kempen, & Wolff, 2007).

In Albania the studies regarding the quality of life in patients with visual impairment and blindness are missing. There are some studies, which shows how different diseases influence in quality of life (Burnette, Duci, &

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Dhembo, 2017), (Xhaja, Shkodrani, Frangaj, Kuneshka, & Vasili, 2014) but not how the visual loss and blindness influence in quality of life.

The aim of our study is to investigate the influence of visual impairment or blindness in quality of their life in Albania. The results of this survey can be used as start for a rehabilitation program for patients with blindness and visual impairment.

II METHODS

This is a cross-sectional study, conducted in Albania from September 2019 till December 2019. All the patients with eye disease and visual loss were included in this study. In total 1403 patients have self-completed a questionnaire which was send by email.

The questionnaire was organized with 18 questions and was design in 3 parts:

- The first part of the questionnaire had question about socio-demographic data. Data as gender, age, area of living, monthly incoming, social status and education level were collected in this part.
- In the second part of the questionnaire collect data regarding eye diseases and the status of the visual acuity based on patient evaluation. In this part patients was asked even about other chronic diseases.
- The third part of the questionnaire was oriented in question about the influence of visual loos in their life.

In this study all the patients with severe systemic diseases, degenerative diseases of the brain and psychological diseases were excluded. In this study we included patients with systemic disease, like diabetes mellitus, hypertension, arthritis which has an influence in visual loss.

All the data collected from the questionnaire were analyzed by SPSS.

III RESULTS

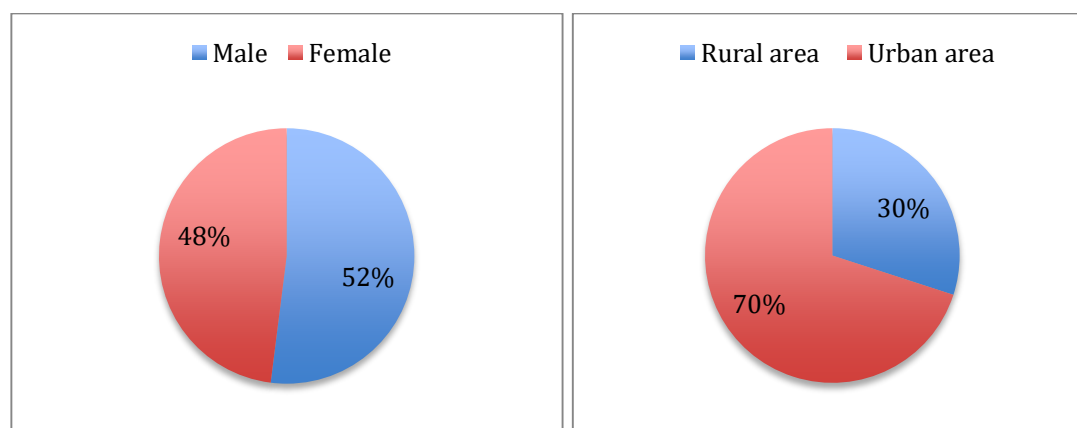
Only 871 questionnaires were accordin the criteria we set and were included in the study. The mean age of the participants in this study was 47.4 years (with a rage from 7 years to 78 years). People between 25-35 years old and 45 -54 years old have the higher prevalence of participation in this study (table 1).

| Age | Total | |
|---------|-------|-----|
| | % | Nr |
| <18 | 10.6 | 92 |
| 18 - 24 | 15.7 | 137 |
| 25 - 34 | 10.8 | 94 |
| 35 - 44 | 21.9 | 191 |
| 45 - 54 | 23.5 | 205 |
| 55 - 65 | 8.9 | 78 |

| | | |
|-------|-----|-----|
| > 65 | 8.5 | 74 |
| Total | 100 | 871 |

Table 1. Distribution of patients by gender

From 871 people completed the questionnaire, 51.5% (449 patients) were males and 48.5% (422 patients) were females. 608 of them (70%) reported that lives in urban area (graphic 1).



Graphic 1. Prevalence of gender and distribution of people regarding the living area.

Most of the participant had a bachelor degree 49.1% (428 participant) and 15.5% (135 participant) has not completed the school. Student's participation was 19.2 % and retired in 9.4%. The majority of the participant was employed 42.1%.

| Education status | | |
|-------------------------|--------|-----|
| No school completed | 15.5 % | 135 |
| High school diploma | 16.5 % | 144 |
| Technical training | 10.7 % | 93 |
| Bachelor degree | 49.1 % | 428 |
| Doctorate degree | 7.3 % | 64 |
| Other | 0.8 % | 7 |
| Work | | |
| Employed | 42.1 % | 367 |
| Not employed | 22.6 % | 197 |
| Student | 19.2 % | 168 |
| Retired | 9.4 % | 82 |
| Unable to work | 6.5 % | 57 |
| Monthly income | | |

| | | |
|-----------------------|--------|-----|
| < 250 \$ | 45.1 % | 392 |
| 250 - 499 \$ | 40.6 % | 354 |
| 500 - 1000 \$ | 13.5 % | 118 |
| > 1000 \$ | 0.8 % | 7 |
| Married status | | |
| Single | 25.7 % | 224 |
| Married | 61.9 % | 539 |
| Widowed | 8.7 % | 76 |
| Divorced | 3.7 % | 32 |

Table 2. Distribution of socio-demographic data

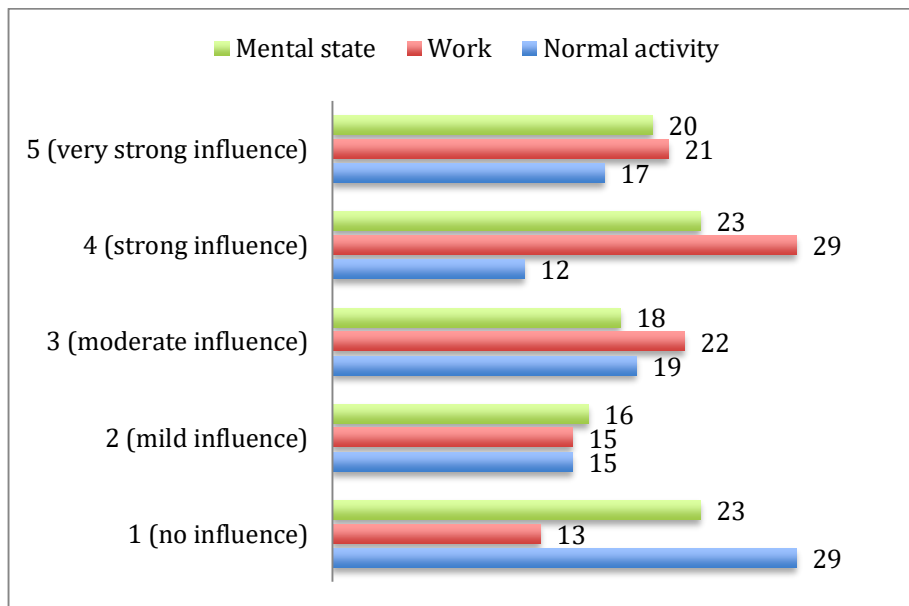
Regarding the monthly income 45.1% reported incomes less than 250\$ and only 0.8% more than 1000\$ per month. 61.9% of the participants were married and only 3.7% were divorced (table 2).

| Eye disease | % | Nr |
|---|----------|-----------|
| Macular degeneration or other macular disorders | 6.6 | 61 |
| Diabetic retinopathy or other vascular diseases | 14.3 | 132 |
| Other retinal disorders | 4.9 | 45 |
| Anterior segment or other refractive disorders | 40.5 | 372 |
| Glaucoma or other optic neuropathy | 8.4 | 77 |
| Cerebro-vascular accident or brain injury | 4.2 | 39 |
| Ocular trauma | 9.7 | 89 |
| Other | 11.3 | 104 |
| Visual acuity | | |
| Normal | 24.3 | 212 |
| Not normal, mild visual impairment | 61.3 | 534 |
| Not normal, severe visual impairment | 11.9 | 104 |
| I am in the category of blindness | 2.4 | 21 |

Table 3. Prevalence of eye disease and visual impairment

In table 3 it is shown the prevalence of eye diseases among the participant. One participant reported more than one disease. 40.5% of them reported to have anterior segment and refractive disorders follow by diabetic retinopathy and other vascular disorders in 14.3%.

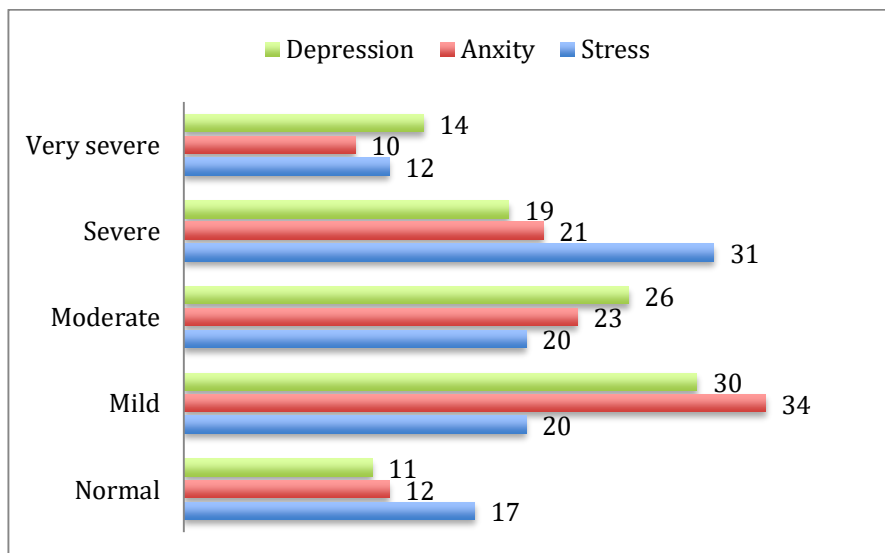
Regarding the question “How do you feel the quality of your vision after your eye problem”, 24.3% responded normal, 61.3% responded with mild visual impairment and 2.4 % responded that is in the category of blindness. Glaucoma, diabetic retinopathy and ocular trauma were found the causes of the blindness in our study.



Graphic 2. Measurement of eye disease in quality of life

To the question “Does your eye problem influence in your normal activity, work or menthal status” most of participants responde that eye problem had a strong influence in the work 12.7% which influenced directly in their mental state. But 28.8% of them answerd that in the normal activity of their day the eye problem has no influence (graphic 2).

To the question “Do you feel stress, anxiety and depression about your eye problem and the influence of that in your activities” mostly of the participant reported mild level of anxiety (34%) and depression (30%). 31% of participant answered that they had sever stress (31%), especially during work (graphic 3).



Graphic 3. Prevalence of stress, anxiety and depression

IV DISCUSSION

Our study is the first investigation of the effect of low vision and blindness in the quality of life. The quality of life is influenced from socio-economic factor (Stafford, Soljak, Pledge, & Mindell, 2012) but in our sample most of the participant was employed and with a normal monthly income.

Our results indicate that people with visual impairment has a mild influence in the quality of life. Other studies have reported that other systemic diseases has significant effects in the life quality (Tóthová et al., 2014)

In this study visual impairment was seen to have a strong influence in mental health especially in people that were employed, which was associated with a strong level of stress. Depression and anxiety were from mild to moderate. In other studies stress has been reported as a factor caused by visual impairment (Sabel, Wang, Cárdenas-Morales, Faiq, & Heim, 2018).

Regarding the influence of the visual impairment in normal activity, most of the participants report “no influence”. In difference of other studies (Barrett, 2009) our study shows no influence, this because different countries has different outdoors physical activity, opportunities, or cultural and social factors that influence in normal activity.

This study has some limitations. As we enroll different visual impairment patients this sample might not represent the Albania population. The questionnaire was done by email and by reading, this can be influenced in the blindness patients, who can't self-administer the questionnaire and were helped by others or did not complete the questionnaire. All of this may have cause a bias that affects the results.

V CONCLUSION

As a conclusion, based on the results this study study, we can say that visual impairment and blindness have a mild to moderate influence in quality of life. We recommend the health education and the start of a rehabilitation program for patients with blindness and visual impairment.

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