# Problems of Poor Vision in Children and Adults: With Special Reference to Saudi Arabia

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## Abstracts

Vision loss or total blindness is a curse for any given human being is very closely related to the conditions of depression, low quality of life, social un-acceptance and even low social participation. Considering Saudi Arabia as a developing country, the respective cases of vision loss in children above the age of 11 years, youngsters up to the people of age 45 is more as compared to developed nations. Then the ratio is somewhere between 1:4 i.e. 1 for developed countries and 4 for Saudi Arabia. This present study will try to evaluate the scenario of low vision and total blindness in the Qassim region of the country and throw some light on the reasons, cures, etc. for the people suffering from such ailments. This will be a primary data-based study and uses descriptive statistics for the analysis of data.

Key words: Saudi Arabia, poor vision, blindness, reasons of blindness.

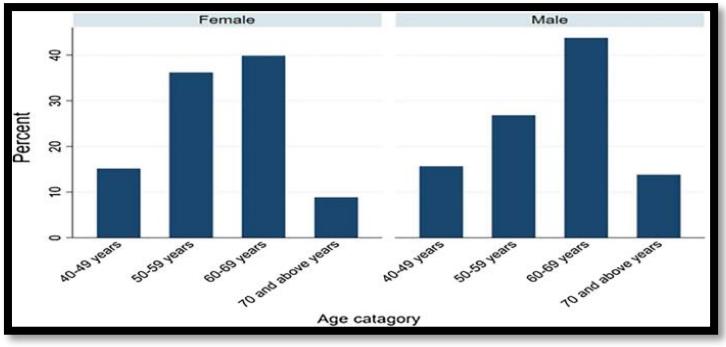
## 1. Introduction

The loss of vision for any given human being is very closely related to the conditions of depression, low quality of life, social un-acceptance and even low social participation. All these conditions are not good for the health of individual suffering from the loss of vision and even for the society at large, because in such a scenario the working hands are lost and along with the same economic revenue is also lost. Here it is important to mention that only 4-5% of people suffering from the loss of vision are engaged in economic activities and remaining are dependent on other for their routine life, the situation becomes even worse for the children who are suffering

from the loss of vision impairment. Shah (2021) Then on the other hand, the mortality rate of people suffering from vision loss is 1.3 times higher than the average mortality rate, this is because of the reason that risk to life increases with low vision and no vision. In some of the previous reports it has been mentioned that total productivity lost, due to vision impairment is around USD 32 billion and this is around 0.4% of the Gross domestic product, in middle east. Ray (2020)

Then again, a report published by Bourne et al (2021) stated that considering the world average 7.0 per 1000, from the age group of 11 to 45, in Middle east the point prevalence is around 5.3 per 1000 people. With the social and economic development this number has decreased and the percentage delusion is around 27% alone in 2022. These number are the result of high growth in medical advances, reach of medical services in all the urban and rural areas, and even by the increase in literacy rate of people in the country. In the same report it was also mentioned that in the next 20 to 25 years the vision loss deaths are supposed to increase more due to age related issues and growing population. Although, out of the above-mentioned percentage of people who are visually impaired, most of the effected people are under treatable limit, the percentage of such patients is more than 70%.

Considering Saudi Arabia as a developing country, the respective cases of vision loss in children above the age of 11 years, youngsters up to the people of age 45 is more as compared to developed nations. Then the ratio is somewhere between 1:4 i.e. 1 for developed countries and 4 for Saudi Arabia. As a matter of fact, patients of vision loss are less in urban areas of Saudi Arabia as compared to rural areas, moreover the medical services are not as good as in urban areas. Considering the overall Middle East, the respective countries are known as low and middle income countries. The loss of vision may be attributed to a number of related deficiencies of Vitamin A, etc. and related diseases like diabetes, glaucoma, refraction disorder, cataract and many other related causes. The researcher has observed that there are minimum studies in the world that are conducted specifically on vision loss and even less in the middle eastern region or may be in Saudi Arabia. Somewhat studies that are conducted are related to overall patient care of related ENT as one component, hence this study is one of its kind in various terms.




Source: Deme et al (2022)

Figure 1: visual impairment among adults aged 40 and above

As can be seen in the above given figure 1, the maximum age limit that is affected by the vision impairment is 60-69 years for both male and females and minimum is 70 years and above. The age group considered in this present study is 45 years and above and the percentage given in the figure is somewhere between 10 to 20%. This is not much high but then again it can be considered as most productive age group of a developing country like Saudi Arabia.

Table 1. Prevalence of blindness and visual impairment in Saudi Arabia 2015-2021.

| Parameters | National survey | Eastern province | South Western (Bisha) | TAIF region | JIZAN region | AHSA region [npbc] |
|---|---|---|---|---|---|---|
| Age Group<br>Sample size | 0–>60<br>14,577 | – | 0–>60<br>2882 | 50 andAbove 3052 | 50 and Above 3659 | 50 and Above 2842 |
| Response rate (%) | 90 | – | 97.3% | 92.5 | 96.3 | 94.7 |
| Prevalence of blindness % (Age and sex adjusted) | 1.5 | – | 0.7 | 2.0 | 3.3 | 6.2 |
| Prevalence of blindness % (sample) | 1.5 | 1.5 | 0.7 | 2.6 | 5.7 | 6.4 |
| Prevalence of blindness % (adults >60 y) | 20 | – | 9.3 | 2.6 | 5.7 | 6.4 |
| Prevalence of Severe Visual Impairment % | – | – | – | 1.5 | 2.3 | 3.8 |

Source: Al-Ghamdi (2021)

Visual impairment and blindness are a global health problem, as they are associated with increased morbidity and decreased quality of life, leading to significant economic losses in pressure and production. Visual impairment and blindness are the sixth leading cause of health problems in the world. Visual impairment has financial consequences for individuals, families, communities and countries.

Visual loss occurs three times every decade after the age of 40. Disability. Its causes and consequences are also different at different ages, but most cases can be prevented if diagnosed early, we need reliable information about its occurrence, consequences, severity and visual impairment This is important for planning the management of healthy use and for measuring the results of prevention and assistance Treatment. To our knowledge, very few articles have been published on blindness in schools for the blind in Saudi Arabia. In this context, we decided to conduct this research on the prevalence and significance of visual impairment and blindness in Qasim District School for the Blind.

This present study is based on the assessment of vision loss in the people from the age of 11 to 45 years. The reason for choosing this age group is that the people of this age are most productive, fast learners, economically efficient and are just like assets, if these people are suffering from vision loss or facing blindness then such a situation can be considered as social and economic loss for the country.

## 2. Review of Literature:

Fintz et al al (2021) conducted a 9-month study on patients seeking visual intervention in hospitals in colmar and strasbourg to report on the impact of visual intervention on the quality of life of blind adults the outcome goes beyond serious psychological counseling the impairment of the bodys visual development and the difficulties required to maintain self-control in daily life al 2021 conducted a study to evaluate the impact of non-visual aids on the quality of life the interview consisted of a modified version of the national eye institute visual function questionnaire a total of 88 patients were interviewed before blinding of whom 50 had a follow up interview most of the sample reported major depression 30 or anxiety 30 there were no differences between participants and dropouts the magnitude of change was modest there were no significant changes in hospital anxiety and depression disorders state complaint assessments and clinical indicators treatment of visual impairment appears to have a broader impact than simply improving visual performance as it may have a positive impact on social functioning.

Shekh et al (2019) conducted a study to understand the effectiveness of visual inspection and visual aids in improving the quality of life of patients with low back pain in India low vision aids lvas are provided at the discretion of an eye specialist one month later the same survey was administered by telephone approximately 44 out of 55 blind patients completed baseline and lvqol assessments including blind subjects matched for age gender and education mean score 11734 it was concluded that non-visual services and visual services may improve the quality of life of rural people in south India irrespective of age gender and education therefore all patients with visual impairment who meet the criteria should be referred for assessment.

Rotez et al (2020) conducted a study to determine the long-term effects of specific coping strategies on vision related quality of life in patients with visual impairment patients recruited from blind care services experienced individual telephone interviews at baseline and at 3 and 6 months the coping strategies index csi assesses three specific strategies related to vision problems avoidant coping problem-solving coping and seeking social support vision-related quality of life was assessed using the impact of visual impairment ivi questionnaire which includes two components functional impairment and mental health-related visual impairment the findings suggest that avoidance may affect vrqol over time blind professionals should be aware of patients coping strategies and encourage them to adopt coping strategies rather than avoidance to cope with the effects of blindness reviewing the above literature it is clear that many studies have been conducted worldwide on the effects of lvd on blind patients but very little research has been conducted in the Indian subcontinent in fact there is no one in the north of the country therefore this study aims to understand the impact of vision programs on the quality of life of visually impaired patients.

Objective:

The main objective of the study is the assessment of vision loss in the people from the age of 11 to 45 years in Saudi Arabia.

Research Process:

- The researcher has considered Qassim region of Saudi Arabia for conducting this study.
- The total population of the region is around 12 Lakhs and it is the 7th most populated province of Saudi Arabia.
- The researcher has focused on the blind schools of the region for collecting data.
- The total population of the study was around 2780 as this much of students are there in the blind schools of the region.
- Approximately 10% of the same were selected as sample and this reaches to around 250 respondents.
- The period of this study was 2 months.
- The researcher has considered the WHO criteria (ICD-9-CM, 1996) to assess and classify Vision impairment and blindness.

Tools used for the study:

The researcher has mainly used descriptive statistics to evaluate the collected data i.e. standard deviation, mean, etc. and presented the data in graphs and charts.

Statistical platform used:

SPSS Version 22.0.

**3. Data Analysis and Interpretation:**

Results from Descriptive statistics

- The researcher has observed that the average age of the respondents was 28 years considering the range of 11 years to 45 years.
- Out of the total 250 respondents there were 29 females and 221 males.
- Less vision and total blindness was considered as the parameters of vision impairment.
- The prevalence of low vision and blindness was more in males as compared to females.
- The children with low vision were from the age of 6 years to 15 years, here the total blindness cases were more and less cases of low vision.
- In case of females from the age group of 20-45 most of the cases were for low vision and only 12 cases of total blindness were found.
- For males, out of 221 cases 89 were for total blindness and rest were for total blindness.
- The treated and cured patients were 27 from the total sample, it is almost 10%.

Considering all the age groups and gender of the respondents it was found that range of low vision respondents was 14 to 30 years with a standard deviation of 11.7%, which can be rounded off to 12%.

- Then considering the blindness, the standard deviation was found to be 20% approximately by considering the WHO criteria (ICD-9-CM, 1996).

- The variation of the respondents from the age group of total blindness and low vision was around 19% depending on the above said criteria.

- It was found that only 13% of the total respondents were working as government employees, 7% as private employee and 10% were found to be self-employed. All the other respondents were unemployed and dependent on other for their routine life.

Data Presentation:

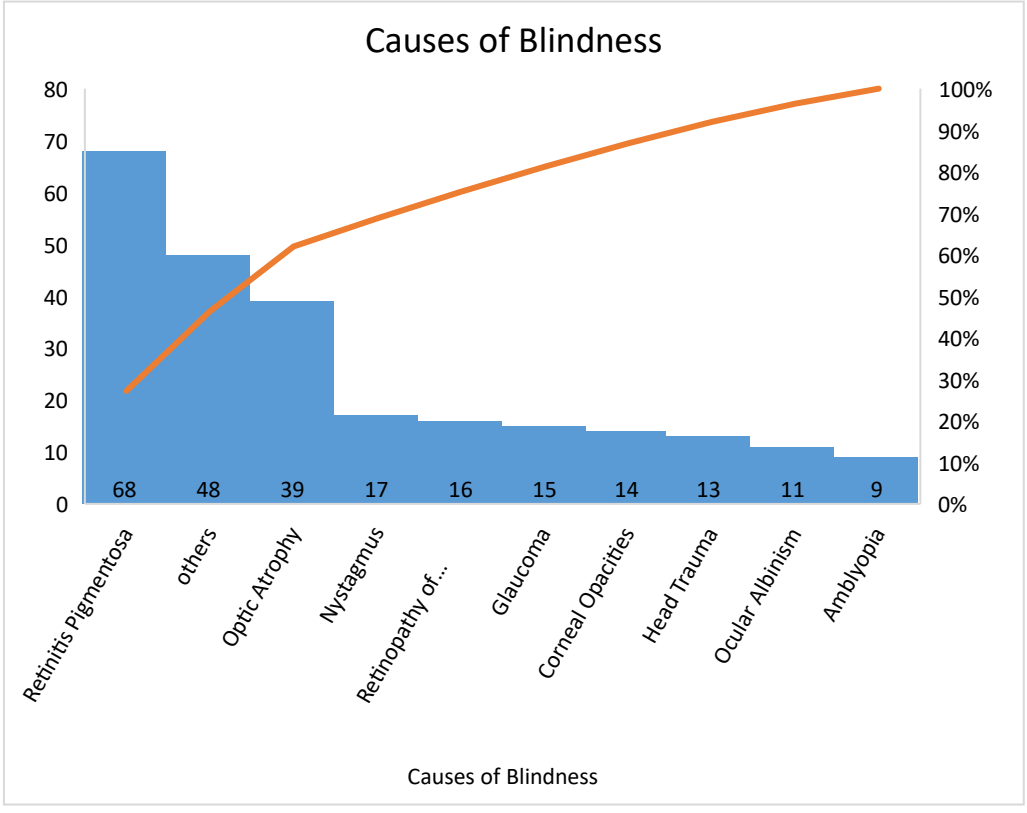



Figure 2: Causes of Blindness among the respondents

- The most common cause of the low vision and blindness was found to be Retinitis Pigmentosa followed by optic Atrophy.

- As a matter of fact, blindness from work related reasons, accidents, etc. were found to be less and most of the patients were suffering from blindness because of some deficiency or diseases that were not cured in time.

- This scenario was most common for the children and females.

- However, the least possible cause of blindness was Amblyopia.

- The researcher has also observed that if an early care of the disease symptoms can be cured then the cases of low vision or complete blind ness can be cured in time.

- For many of the cases literacy and basic knowledge about eye care was the reason for blindness and low vision, as that can be cure in time with the help of physicians and related medicines.

## 4. Conclusion:

As the results of the study show that in most of the cases males were the victims of low vision or total blindness and the number of children and women is less, this difference can be on the basis of the fact that from males are considered the head of the family and preference is given to him for cure, for sending to blind school, or any other such reason. Then on the other hand less knowledge about the vision impairment, reasons, cure, first aids incase of head injuries, etc. were found to be some reasons of vision loss. Reach of medical facilities in the rural areas and other deprived sections of the society can be other reasons because of which cases are not registered. Then some credit can be given to literacy and education i.e. high rate of literacy can be considered as the basic knowledge of the people about reasons, first aid, patient care, importance of medical attention, etc. which can certainly save many eyes and even life.
The results of this study can be used by the affected groups to design and develop methods to create rehabilitation centers for all the affected groups. The study was conducted only in one blind school of the region and this can be counted one of the limitations of the study. The beneficiaries were fewer and the study was stronger in other parts of the country could hel p us see more.

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