

## Prevalence of Cataracts in Adults in Kawiley Village, Kauditan District North Sulawesi

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### Abstract

### Original Research Article

The sense of sight or eyes is an important part of the human body system so that people can carry out daily life activities optimally. Disturbances in the sense of sight will reduce a person's quality of life. One of the eye disorders is clouding of the eye lens which is called cataract. Cataract is a degenerative disease that is influenced by intrinsic and extrinsic factors. Intrinsic factors include age, gender and genetic factors, while extrinsic factors that influence include education, work and environmental factors in relation to exposure to ultraviolet light. The prevalence of cataracts is quite high in the elderly population and is one of the most common causes of blindness in Indonesia. Cataracts cause the highest rate of blindness at around 81%. A survey in 15 provinces, namely in West Sumatra, North Sumatra, South Sumatra, DKI Jakarta, West Java, Central Java, East Java, South Kalimantan, Bali, NTT, NTB, North Sulawesi, South Sulawesi, Maluku and Papua with a target population over the age of 50 years, it is known that the blindness rate reaches 3 percent. This research aims to determine the prevalence of cataracts in adults in Kawiley village. The research method is to examine the respondents' eyes using ophthalmoscope without using midriatic agents. The data currently obtained consists of 21 men and 28 women, with an average age of 66.7 years. Left ocular examination (OS) revealed 21 cataracts and 11 post cataracts with an intra-ocular lens (IOL). In the dextra oculi (OD) there were 20 respondents have cataracts, 11 post cataracts with IOL. Respondents with eyes that did not have cataracts were 17 in OS and 18 in OD, so that the total number of respondents with eyes that had cataracts was 32 (65%) respondents for OS and 31 (64%) respondents for OD. Based on gender, there were 14 (44%) men and 18 (56%) women with cataracts.

**Keywords:** eyes, cataracts, adults.

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## INTRODUCTION

The sense of sight or eyes is an important part of the human body system so that it can carry out daily life activities optimally. If there is a disturbance in the sense of sight, it will greatly hinder a person from carrying out tasks and activities and will reduce a person's quality of life. One of the eye disorders that is almost unavoidable is the clouding of the eye lens called cataracts. Cataract is a degenerative disease that is influenced by intrinsic and extrinsic factors. Intrinsic factors that influence include age, gender and genetic factors, while extrinsic factors that influence include education, work and environmental factors in relation to exposure to ultraviolet light. Education and work have a direct impact on a person's socio-economic status and health status (Irawan, 2008). The prevalence of cataracts

is quite high in the elderly population, but not all data is available.

Cataracts are one of the most common causes of blindness in Indonesia. The Director General of Disease Prevention and Control said that cataracts are the highest cause of blindness at around 81%. Results of the Rapid Assessment of Avoidable Blindness (RAAB) survey by the Association of Indonesian Ophthalmologists (Perdami) and Balitbangkes in 15 provinces, namely in West Sumatra, North Sumatra, South Sumatra, DKI Jakarta, West Java, Central Java, East Java, South Kalimantan, Bali, NTT, NTB, North Sulawesi, South Sulawesi, Maluku and Papua with a target population aged over 50 years are known to have a blindness rate of up to 3 percent. From this figure, cataracts are the highest

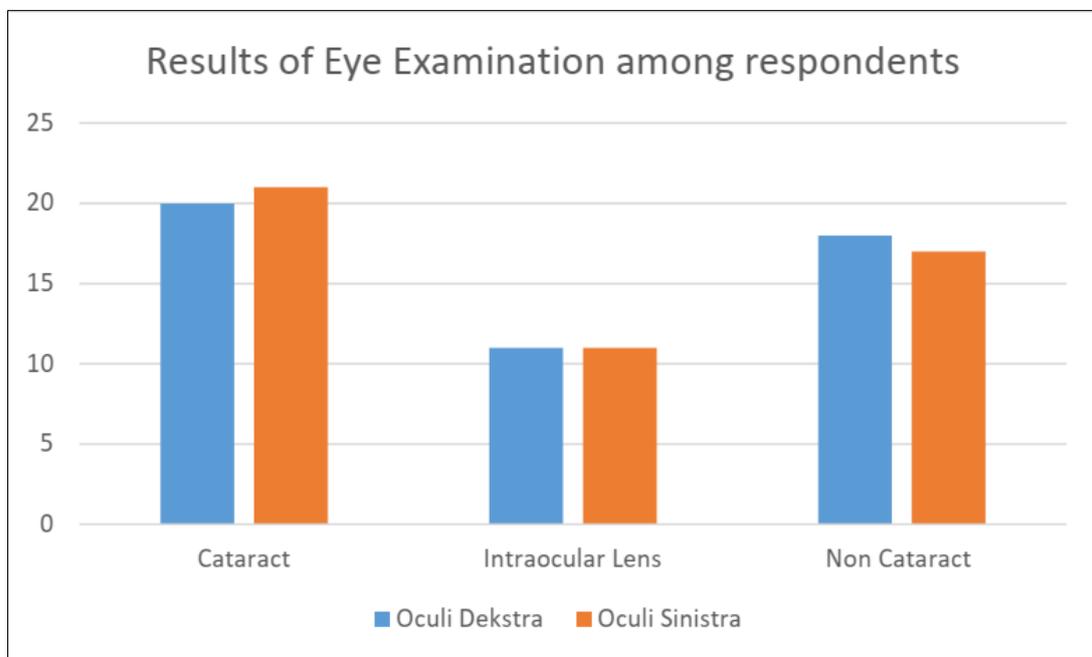
cause of blindness, namely around 81 percent (Ismandari, 2018). It is important to know the prevalence of a disease so that it can be used as supporting data in planning appropriate action and treatment. This study aims to determine the prevalence of cataracts among adult people at Kawiley.

## METHOD

This research is a descriptive survey with a cross-sectional approach on respondents in Kawiley village, especially the GMIM Kyrios Kawiley congregation who attended the elderly meeting, categorical Fathers and Mothers. Respondents filled out a questionnaire for demographic data and then had their right and left eye vision checked using a Snellen card with standard procedures. After that, a fundoscopic examination of both the left and right eyes was carried out.

## RESULTS

There were 49 people examined with an average age of 64 years, 21 men and 28 women. The occupations of the respondents varied, with the highest being housewives, 16 respondents, followed by retired civil servants, 11 respondents and private employees, 8 respondents, and then farmers, drivers, motorbike taxi drivers, teachers, craftsmen, 1 to 2 respondents each. Left ocular examination (OS) revealed 21 cataracts and 11 postcataracts with an intraocular lens (IOL). In the dextra oculi (OD) there were 20 cataracts, 11 post cataracts with IOL. Respondents with eyes that did not have cataracts were 18 in OS and 17 in OD, so that the total number of respondents with eyes that had cataracts was 32 (65%) respondents for OS and 31 (64%) respondents for OD. Based on gender, there were 14 (44%) men and 18 (56%) women with cataracts.



## DISCUSSION

Cataracts are the result of the degeneration process of the lens which turns cloudy, so that light entering the eye does not reach the retina to form a clear image. The degeneration process that occurs is closely related to age, where the cloudiness that occurs in the lens of the eye can be the result of hydration (addition of lens fluid), denaturation of lens proteins or both (Awopi *et al.*, 2016). The World Health Organization (WHO) reports that cataracts occur more frequently in people over 50 years of age (Salsabila, 2021).

Many other factors influence the occurrence of cataracts, including diabetes mellitus, long-term use of steroids, inherited metabolic disorders, chronic exposure to ultra violet rays (sunlight), family history of cataracts, myopia, alcohol, nutrition, smoking, social status economics, educational status, and multivitamins (Tana,

2007). Sudrajat 2021 added several factors that can accelerate the occurrence of cataracts, namely age, gender, nutrition, environment, metabolic disorders and the environment.

This research was conducted in Kawiley village on 49 adults, visual examination and funduscopy without mydriatics were carried out. The average age of respondents was 64 years. The age of respondents with cataracts, both OS and OD, was more than 50 years.

The prevalence of cataracts in this study in women was 56%, higher than men. Controversy over reports of cataract prevalence based on gender is still found. Lumunon reported that there was no relationship between gender and the incidence of cataracts (Lumonon, 2020) However, several studies still reported the same results as this study. Based on gender, women have a higher prevalence of cataracts. The results of the

bivariate analysis of the gender variable showed that female respondents were 1.89 times more at risk (95% CI: 1.42-2.52) of cataracts than male respondents (Asriani, 2020). Wimalasundera (2008) also reported similar results showing that female gender in general was associated with an increased risk of cataracts after adjusting for age. The higher life expectancy of women as well as varying hormonal changes during breastfeeding, pregnancy, menopause are mentioned as reasons for the higher prevalence of cataracts in women (Green, 2022).

## CONCLUSION

As a conclusion, the prevalence of cataract in those respondents reached 65 % for OS and 64% for OD. Women have higher percentage of cataract compared to men. More attention should be given to older generation to prevent eye loss by this degenerative eye disorder, whether for prevention and cure.

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