

Statistical analysis of ophthalmic examination data

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ABSTRACT. *Objective: To understand the specific data of ophthalmic examination in the physical examination of modern population and analyze the health status of the population. Methods: this study randomly chose 2019 in our hospital during January to December 2019, slit lamp examination of twenty thousand people and ten thousand people of non-contact intraocular pressure tests as the main object of study, the medical personnel's eye test data were retrospectively analyzed, through the statistics of the medical staff of the age, sex, occupation and eye diseases, understanding whether the eye health of modern people in the sub-health state. Results: the results show that the eye disease and the relationship between the gender perspective, male patients with eye disease is not obvious difference with the number of female patients with eye disease, confirmed that the eye disease of modern people and not very close connection between gender, whether male or female are likely eye disease; In terms of the relationship between ophthalmic disease and patient age, the number of patients aged between 18 and 50 was the largest, reaching 53.0% in this study, accounting for more than half of the total number of cases. In addition, the number of patients aged above 50 and below 18 was relatively low. The data show that people aged 18-50 are the people who use their eyes most frequently in contemporary society and have a high probability of developing eye diseases, followed by some elderly people and students. From the point of eye disease and professional distribution, teachers and cadres generally higher on the incidence of eye disease, from the professional characteristics may be because the daily work need to use a computer or electronic devices more frequently, in addition, workers and other professional eye disease distribution data was only slightly lower, analysis and there is a connection between work environment. Conclusion: To sum up, in the process of physical examination of modern population, the results of eye examination are not optimistic, and many people's eye health problems are severely challenged. Therefore, we should attach great importance to the eye health problems of different people in the follow-up work. In the future work, we can consider the establishment of a comprehensive eye health management system, and make the data content highly consistent with the physiological state of the eyes of modern people and the characteristics of the onset of eye diseases, grasp the modern people's eye health status.*

KEYWORDS: Health examination; Eye examination; Data statistics

1. Introduction

With the rapid development of the society, people's material level has also been effectively improved, and the attention of the broad masses to physical health has been significantly different. Especially with the rapid development of modern information technology, the society has officially entered the network era. The frequency of using computers, computers or other mobile devices in all walks of life and in many fields of the society has significantly increased, and the situation of using eyes of modern people has significantly changed, so that people's visual health problems have been widely concerned by the society. Under normal circumstances, the routine items of health examination are mainly systemic disease indicators such as blood sugar and blood pressure, and most people will ignore the importance of eye examination. Therefore, this study also analyzed and discussed the treatment of 30,000 people who had physical examination in the one years from 2019.1 to 2019.12, so as to learn about the eye health status of the examinees and enable modern people to pay more attention to eye health problems.

2. Materials and methods

2.1 The general information

In this study, 20,000 people who underwent scleroscope examination in our hospital from January 2019 to December 2019 and 10,000 people who underwent non-contact iOP examination were randomly selected as the main subjects, and the ocular examination data of these physical examiners were retrospectively analyzed. Of the 30,000 people, 11,880 developed eye diseases, accounting for 39.60 per cent of all people examined. From this data, we can learn that the number of people with eye diseases is very large, which is close to 40 percent of the population of this physical examination, indicating that the possibility of modern people with eye diseases is getting higher and higher.

Of the 11,880 people with eye diseases, 6,613 were males, accounting for 55.7%; There were 5,267 women, accounting for 44.3 percent.

Among all the examination groups, 26,626 person-times were examined by sessle lamp, 12,505 person-times by non-contact IOPH, 16,293 person-times by visual acuity and color discrimination, and 2,573 person-times by fundus photography without dilatation (personnel examination items are overlapping).The main ophthalmic problems were: refractive error (about 78.97%); Abnormal color vision (3.01%); Cataract (9.7%); Pterygium (5.4%); Suspected glaucoma (6.1%); Retinal arteriosclerosis (14.6%); Macular lesion (4.1%); Diabetic retinopathy (4.65%).

2.2 Methods

The main content of this eye examination includes the examinee's lens examination, pupil examination, iris examination, sclera examination, eyelid examination and so on.

2.3 Observed index

The occurrence of eye diseases and the relationship between age and occupation factors were analyzed, and the data results were comprehensively studied and analyzed.

2.4 Statistical method

All the data in this study were used to establish a database using Excel software, and then SPSS20.0 statistical software was selected for comprehensive analysis of the research results.

3. Results.

3.1 Relationship between eye disease and gender

From eye disease, according to the results of this study and the relationship between the gender perspective, male patients with eye disease is not obvious difference with the number of female patients with eye disease, confirmed that the eye disease of modern people and not very close connection between gender, whether men or women have an eye disease that may occur. The specific data are shown in Table 1 below.

Table 1 Eye examination and gender data (N, %)

Check the result	Male cases	Female cases	Total number
Normal	9951(54.9)	8169(45.1)	18120
Have an eye disease	6613(55.7)	5267(44.3)	11880(39.6)

3.2 Association between eye disease and patient age

In terms of the relationship between ophthalmic disease and patient age, the number of patients aged between 18 and 50 was the largest, reaching 53.0% in this study, accounting for more than half of the total number of cases. In addition, the number of patients aged above 50 and below 18 was relatively low. The data show that people aged between 18 and 50 are the people who use their eyes most frequently in contemporary society and have a high probability of developing eye

diseases, followed by some elderly people and students.

Table 2 Relationship between eye examination and age (N, %)

Age	Numbers	The proportion
Under the age of 18	2692	22.7
18-50	6299	53.0
50 years of age or older	2889	24.3

3.3 Association between eye disease and occupation

From the point of eye disease and professional distribution, teachers and cadres generally higher on the incidence of eye disease, from the professional characteristics may be because the daily work need to use a computer or electronic devices more frequently, in addition, workers and other professional eye disease distribution data was only slightly lower, analysis and there is a connection between work environment.

Table 3 Data of eye examination and occupational factors (N, %)

Job career	Numbers	The proportion
Cadres	3386	28.5
Teachers	4113	34.6
Workes	2230	18.8
Other professions	2151	18.1

4. Discuss

Changes in the social background during the 13th Five-Year Plan period have led to changes in the prevalence of eye diseases among Chinese people, and the main causes of many acquired blind people have evolved into some metabolic eye diseases or age-related eye diseases [1]. In the "13th Five-Year" National Eye Health Plan (2016-2020), it is also clearly mentioned that we should actively promote the rehabilitation service for patients with low vision, develop towards the direction of scientific management of eye health work and early prevention of eye diseases, and realize all-round and efficient work control [2].

In fact, the number of blind and visual impairment patients in China is still in the first place in the world. In addition, China is facing the development situation of aging population and increase of average life expectancy, and the middle-aged and elderly population has been the main component of blindness and visual impairment. But in fact, with the rapid popularization and development of information technology, modern young people have gradually replaced elderly patients as the main distribution population of all kinds of eye diseases. Eye diseases represented by myopia are widely distributed in young people, such as the prevalence rate of myopia among school-age teenagers is very surprising. Due to the huge population

base in China, many people do not pay enough attention to eye health problems. In various physical examinations, they often only pay attention to the examination and intervention of other systemic diseases, and there is still a long way to go for eye health and ophthalmic disease control [3].

According to the data results of this study, there is no significant difference in the number of male and female ophthalmic disease patients, which proves that there is no very close relationship between modern population and gender in ophthalmic disease, and that both males and females are likely to have ophthalmic disease. From the perspective of the relationship between eye diseases and patient age, the number of patients between 18 and 50 years old is the largest. The data show that people between 18 and 50 years old are the people who use their eyes most frequently in modern society and have a high probability of developing eye diseases, followed by some elderly people and students. From the point of eye disease and professional distribution, teachers and cadres generally higher on the incidence of eye disease, from the professional characteristics may be because the daily work need to use a computer or electronic devices more frequently, in addition, workers and other professional eye disease distribution data was only slightly lower, analysis and there is a connection between work environment. For people with eye diseases, myopia, crystal opacity or abnormal color vision will affect their daily life and work, leaving them in a state of "sub-health" [4]. Although the study of thirty thousand check-up crowd, the number of eye disease is close to 4, but there are still 6 or more into the eye is in good condition, with the development of the society and the progress of The Times, people have begun to change the traditional ideas, in living standards under the premise of good attention to eye health care consciousness [5]. In particular, some jobs have certain requirements for eyes, such as pilots and police, etc., and the physical examination of eye diseases has a high detection rate. Such examinees are allowed to enter after strict physical examination and screening before employment, so they have good eye health. Therefore, in the future prevention and treatment of blindness, blindness and other eye diseases, we can take the health examination results of modern population as the main reference [6].

At present, China's eye health management work still needs to be promoted in a large area, and for some special patients, more perfect ophthalmic health records need to be developed. Nationwide eye health examination and filing can not only meet the eye health needs of people of different ages, but also provide reference basis for eye health assessment in the context of big data, so as to realize early prevention, early detection, early diagnosis and early intervention of eye diseases. To sum up, in the process of physical examination of modern people, the results of eye examination are not optimistic, and many people's eye health problems are severely challenged. Therefore, we should attach great importance to the eye health problems of different people in the follow-up work. In the future work, we can consider the establishment of a comprehensive eye health management system, and make the data content highly consistent with the physiological state of the eyes of modern people and the characteristics of the onset of eye diseases, grasp the modern people's eye health status.

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