Jurnal Ilmu dan Teknologi Kesehatan, Vol. 16 No. 2 Juli 2025 Hal 117-119
ISSN 2086-8510 (Print), ISSN 2655-5875 (Online)
https://doi.org/10.33666/jitk.v16i2.653 https://journal.uwhs.ac.id/index.php/jitk/article/view/653

Stages Of Subjective Refraction Examination Of Myopia Presbyopia Patients

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Submitted: July 24th 2024 | Reviewed: Okt 24th 2024 | Accepted: July 10th 2025 | Published: July 18th 2025

ABSTRACT

A person's inability to see distant objects clearly can occur for several reasons, including myopia. Based on the static concept, myopia is a disorder where the rays entering the eyeball are refracted by the refractive medium in front of the retina. One rehabilitation for myopia sufferers is using glasses as a vision aid. The aim of this study is to find out how the subjective refraction examination procedure is in Presbyopia sufferers with Myopia. This research was carried out using descriptive methods through a case study approach. The population in this study was subjective refraction examinations recorded in the period 2 - 31 December 2023 at optic pro Semarang. The sample from this study was one of the sufferers who was quite communicative and could represent the random sample. Some sources say that this occurs due to degeneration of the crystalline lens function and is called Presbyopia. Therefore giving bifocal or progressive glasses is highly recommended. The research results showed that in the period 2 - 31 December 2023, there were presbyopia sufferers with myopic refraction status 42.3% of 91 people the total sufferers who received refraction services at optic pro Semarang. In this case, the patient must wear bifocal glasses so that the patient can see far and near clearly. When determining the size of reading glasses, patients should pay attention to a comfortable reading distance. If the sufferer wants to correct far and near vision with one pair of glasses, it is recommended to use bifocal glasses.

Key words: Subjective refraction, Presbyopia, Myopia

BACKGROUND

The eyes are one of the most vital senses for humans. Through the eyes, humans can see the world, learn, and carry out daily activities. For this reason, it is very important to maintain eye health, and if vision problems occur, it will really disrupt activities. Meanwhile, vision problems can occur for several reasons, one of which is myopia. Rabbetts, R. B, *Clinical Visual Optics,* Myopia is a condition where parallel rays entering the eyeball are refracted by the refractive medium in front of the retina. As a result, objects that are located far in front of the eyeball will not appear clearly in front of the sufferer. One rehabilitation for myopia sufferers is using glasses as a vision aid.

Borish, I. M, *Clinical Refraction*,(Chicago 2021) Giving minus glasses to young myopia sufferers generally does not cause problems. When parallel rays enter the eyeball, the glasses with minus lenses will provide compensation so that the parallel rays can be refracted precisely on the retina. On the other hand, if what enters the eyeball spreads, the accommodation reflex will take over to provide compensation. So, one pair of glasses is enough for two functions, to see distant objects and also to see close objects. Giving glasses to older people with myopia will generally create a very dilemmatic problem. Before wearing glasses, the sufferer stated that his vision was blurry while his vision was bright up close. When corrected for distance vision, his near vision becomes blurry. Some sources say that this occurs due to degeneration of the crystalline lens function and is called Presbyopia. Therefore giving bifocal or progressive glasses is highly recommended

and used as a solution so that these glasses can be used as a distance and near vision aid. However, before giving bifocal or progressive glasses to presbyopia sufferers with myopic refraction status,(Ilyas, S 2020). Kelainan Refraksi a subjective refraction examination must first be carried out. Subjective Refraction Examination is a refraction examination method that requires good cooperation and communication between the examiner and the patient. Assessment of examination results is based on the patient's response which is very subjective in nature to obtain good refraction examination results. This is intended so that the size of the eyeglass lenses that will be given corresponds to the degree of refractive error of the prospective wearer.

Based on the above background, researchers want to know the subjective refraction examination procedure and at the same time determine the size of glasses for Presbyopia sufferers with Myopia Refraction status. Meanwhile, the optic pro provides services for examining refractive abnormalities in Presbyopia sufferers with Myopia Refraction status, and can also provide services for making bifocal glasses as a vision aid. Therefore, the research will be carried out at optic pro Semarang, so that in writing this scientific paper the researcher took the title " Stages Of Subjective

Refraction Examination Of Myopia Presbyopia Patients At Optik Pro Semarang."

METHOD

The type of research is This research was conducted using quantitative research methods with the sampling technique "systematic random sampling" by Sasiroasmoro, S. Type of research Descriptive Approach Case study Objective To determine the procedure for examining subjective refraction in patients with Presbyopia with MyopiaThe independent variable in this research is close reading habits. Documentary Study Collecting data from medical records or other documents related to subjective refraction examination. Observation Observing the subjective refraction examination procedure in patients with Presbyopia with Myopia.The dependent variable in this research is reading in adolescence. Descriptive Analysis Analyze data to determine the characteristics and procedures for subjective refraction examination in patients with Presbyopia with Myopia. Frequency Analysis Analyze the frequency of patients with Presbyopia with Myopia who receive refraction services at Optik Pro Semarang. The study population here is all patients with refractive errors who come to optic pro Semarang 91 people. This research was carried out using descriptive methods through a case study approach. The research sample here is the number of optic pro Semarang sufferers. The research instruments used in this research include: check list, examination card.

RESULT AND DISCUSSION

NO	Status Refraction	Male		Female		Amount	
		∑	%	∑	%	∑	%
1	Emmetropia	3	3,3	7	7,7	10	11,0
2	Myopia	17	18,6	21	23,7	38	42,3
3	Hipermetropia	7	7,5	11	12,0	18	19,5
4	Astigmatisme	9	9,7	16	17,5	25	27,2
	Amount	36	39,1	55	60,9	91	100

Source: optic pro Semarang Documents for the Period 2 - 31 December 2023

The results of research conducted at optic pro Semarang in April 2023, it was found that the number of myopia refractive errors was in the highest percentage, namely 42,3%, for teenagers it was higher. Of the entire myopia population who visited the Semarang Community Sensory Health Center on 2 - 31 December 2023. Meanwhile, the percentage of myopia Hypermetropia was 19,5%, the percentage of myopia Astigamtism was 27,2. the patient must wear bifocal glasses so that the patient can see far and near clearly. The aim of this study is to find out how the subjective refraction examination procedure is in Presbyopia sufferers with Myopia refraction status. Meaning of Research Findings This study found that of the entire myopia population visiting Optik Pro Semarang, 42.3% experienced myopia refractive errors, with a higher percentage in adolescents. Meanwhile, the percentage of hypermetropia myopia was 19.5%, and astigmatism myopia was 27.2%. Presbyopia sufferers with myopia refractive status are advised to use bifocal glasses to improve distance and near vision. Previous research conducted also found that subjective refraction examination in presbyopia sufferers with myopia refraction status can be done using a descriptive method through a case study approach. The study also found that the size of reading glasses for presbyopia sufferers with myopia refraction status is the sum of the size of the distance glasses and the addition. This study provides scientific progress in the field of optometry, especially in understanding the procedure for examining subjective refraction in presbyopia patients with myopia refractive status. This study also emphasizes the importance of using bifocal glasses to improve distance and near vision in presbyopia patients with myopia refractive status. Thus, this study can help increase understanding and awareness of the importance of examining subjective refraction in presbyopia patients with myopia refractive status, and can help optometrists in determining the appropriate eyeglass size for patients.

CONCLUSION AND SUGGESTION

The number of people with visual impairment who receive subjective refraction examination services at optic pro Semarang, on gajah raya 111c Semarang, during the period 2 - 31 December 2023 there were 91 people. Of this number, 17.5% were presbyopia sufferers with myopia refraction status. The stages of subjective refraction examination in presbyopia sufferers with myopic refraction status at optic pro Semarang begin with anamnesis, inspection/observation of the eyelids and front segment of the eyeball, cover test, lensmetry, bichromatic test, monocular vision test, monocular vision correction, binocular vision correction, Maddox rod test , determining the refractive status/diagnosis and ending with writing a glasses prescription. Determining the size of glasses for distance

vision for presbyopia sufferers with myopic refraction status at optic pro Semarang based on the results of the best binocular vision correction. Meanwhile, the size of glasses for near vision is the accumulation of lens sizes for distance vision and additions.

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