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USE OF GADGETS IN MYOPIA SUFFERERS

Elisa Oktaviana[1]
[1] *Program Study Bacehelor's Nursing, INKES Yarsi Mataram*
Corresponding: oktavianaelisa419@gmail.com (08192292201)

Abstract

Background*: Myopia or nearsightedness is known to be the biggest problem because it involves a high number of people suffering from refractive errors and causes disruption to daily life and work, To reduce the risk of myopia, gadget users should pay attention to the duration of gadget use and taking regular breaks is very useful for breaking the chain of fatigue so that it will greatly increase comfort for device users. The aim of this research is to determine the description of gadget use among myopia sufferers at the West Nusa Tenggara Province Eye Hospital.* ***Objective****: This research is quantitative descriptive. The population of this study was 68 myopia sufferers at the Eye Hospital of West Nusa Tenggara Province. The sampling technique in this research was purposive sampling which was in accordance with the inclusion criteria.* ***Results****: The measuring tool in this research uses a questionnaire sheet. Research shows that most respondents use gadgets for >3 hours a day, namely with high category gadget use, namely 52 respondents (76.5%), this shows that the use of gadgets in the productive age is quite intense.* ***Conclusion****: Excessive use of gadgets, especially staring at digital screens for more than 2-3 hours per day, has an impact on vision problems, so it is best not to use gadgets for too long by adjusting the lighting conditions according to the circumstances.*

Keywords: *Myopia Sufferers; Use of Gadget.*

INTRODUCTION

Symptoms of nearsightedness are usually characterized by dizziness, headaches, frequent squinting, eyes feeling tired, the appearance of flashes of light in one or both eyes, the appearance of curtain-like shadows in the vision, dizziness in the eyes, seeing spots or objects. floating objects and blurred vision when looking at distant objects (Bosworth, et al., 2007).

Improper and excessive use of gadgets has many negative impacts, both on social relationships and health (Colby, et al., 1999). Social development impacts that can be found in the form of people becoming closed individuals, liking to be alone, limiting relationships with the outside world, behavioral disorders. Meanwhile, in the health sector, the impacts that can arise include sleep disorders, sexual behavior deviations, eye health problems, one of which is myopia (WHO, 2003).

Myopia or nearsightedness is known to be the biggest problem because it involves a high number of people suffering from refractive errors and causes disruption to daily life and work. Myopia is also a vision disorder that has a high prevalence in the world. The prevalence of myopia in Europe is 30-40%, America 10-20% and in Asia 70-90%. Specifically in Indonesia, the prevalence reaches 22.1% (Putri, 2014).

In Indonesia, the incidence of myopia often occurs in people of productive age (17-60 years) whose families are in the middle and upper economic groups, the incidence of myopia is increasing, a large influence on the development of myopia is close viewing activities (Putri, 2014).

Based on the incidence of myopia in the Eye Hospital of West Nusa Tenggara Province, it is increasing from year to year. The myopia population in 2020 was 1,170 people, in 2021 there was an increase of 1,376 people and in 2022 it was 1,796 people.

The results of a preliminary study conducted by researchers on January 3 2023 regarding the incidence of myopia in productive age (18-45 years) at the Eye Hospital of West Nusa Tenggara Province were obtained from 10 samples who used gadgets excessively, namely 10 samples and the average of 10 This sample has symptoms of nearsightedness.

Therefore, prevention efforts that can be taken are to maintain activity patterns, use gadgets with sufficient lighting, use them in the correct position and frequency, in this way prevention efforts can improve visual acuity even better. Carry out regular checks once every 6 months to an eye doctor or other health worker to prevent and reduce complaints of decreased visual acuity (Galbraith, 2013).

Based on the background above, the researcher aims to identify the use of gadgets among myopia sufferers at the West Nusa Tenggara Province Eye Hospital.[1]

MATERIALS AND METHODS

MATERIALS

The population in this study was 82 myopia patients at the West Nusa Tenggara Province Eye Hospital of productive age (18 – 45 years), who were then included in the Slovin formula with a significance level of 0.05, resulting in 68 people as respondents. The sampling technique in this research was purposive sampling which was in accordance with the inclusion criteria.

TOOLS

The measuring tool in this research uses a questionnaire sheet.

METHODS

Title (only the first letter is capitalized)

This research is quantitative research with analytical descriptive research type. This research was conducted in April 2023. Data processing includes editing, coding, tabulating and cleaning. The data that has been collected is analyzed using percentages.[3]

RESULTS AND DISCUSSION

Data analysis presents univariate analysis which presents the percentage results of the variables studied. Table 1. Presents the Frequency Distribution of Respondent Characteristics Based on Gender, Occupation, Age, Knowledge, and Prevention.

Variabel	Kategori	F	%
Gender	Male	30	44,1
	Female	38	55,9
Age Teens	18-25 year	17	25,0
Young Adult	26-35 year	39	57,4
Adulthoods	36-45 year	12	17,6
Use of Gadgets	Currently < 3 hour	16	23,5
	Hight ≥ 3 hour	52	76,5
Total		68	100,0

Table 1. Frequency Distribution of Respondent Characteristics Based on Gender, Occupation, Age, Knowledge, and Prevention

Based on table 1, it was found that the majority of respondents were female, namely 38 respondents (55.9%), the largest number of respondents were in the early adulthood age group (26-35 years), namely 39 respondents (57.4%), and the duration of gadget use at the West Nusa Tenggara Province Eye Hospital was in the high category for 52 respondents (76.5%).

The research results show that the most respondents use gadgets for ≥3 hours a day, namely the High Category Gadget Use, namely 52 respondents (76.5%), this shows that the use of gadgets in the productive age is quite intense. Excessive use of gadgets, especially staring at digital screens for more than 2-3 hours per day, has an impact on visual impairment.

The factors causing myopia are very complex (Yeyen et al., 2019). It is possible that genetic/hereditary and environmental factors play a role in the development of myopia (Basri, 2014). To see an object clearly, the eyes need to accommodate. Accommodation applies when we look at objects at a distance or too close, otherwise it will result in eye fatigue which results in fatigue in the eye muscles (Amin, 2019). This event is the result of ineffective accommodation resulting from weak and unstable eye muscles (Pratiwi et al., 2018). In myopic eyes, the eyeball is fixed in an elongated position making it difficult to see distant objects (Zulfiani, 2018). The environmental factors that play the most role in myopia sufferers are continuous work activities, one of which is the use of laptops/computers and the use of smartphones/gadgets with long-term intensity (Wea et al., 2016).

The use of gadgets in the productive age group, especially in the long term, has been associated with several negative impacts on eye health (Laoli, 2022) The theory supporting this relationship is that long-term exposure to gadget screens can cause eye stress, increase dry eye syndrome, and can contribute to the development of refractive problems such as myopia (Kaur et al., 2022).[3]

CONCLUSION

Based on the research results above, it can be concluded that the majority of respondents were female, namely 38 respondents (55.9%), the largest number of respondents were in the early adulthood age group (26-35 years), namely 39 respondents (57.4%) , and the duration of gadget use at the Eye Hospital of West Nusa Tenggara Province was in the high category as many as 52 respondents (76.5%). This shows that the use of gadgets in the productive age is quite intense. Health workers should provide education to increase knowledge about the limits of gadget use to reduce the increase in the incidence of myopia in the productive age group. Excessive use of gadgets, especially staring at digital screens for more than 2-3 hours per day, has an impact on visual impairment.

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