

OPTIC PHYSICS REGARDING SPECTACLES IN MEDICINE: SUMMARIZATION OF IMPORTANT REPORTS

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ABSTRACTS

Medical optics is a specific medical kinds dealing with optical issue in medicine. In ophthalmology, the medical optic is very important concept. A main interesting issue in optics is the medical spectacles for management of eye disorder. The principles of medical optic physics can be well used for researching and development on spectacles in medicine. In the present short article, the author summarizes and discusses on important reports on optic physics regarding spectacles in medicine.

KEY WORDS: Medical, Optics Physics.

INTRODUCTION

Optics is a specific science relating to light and vision. This is a useful science in the present day. The optics can be applied in several filed including to medicine. Medical optics is a specific medical kinds dealing with optical issue in medicine. In ophthalmology, the medical optic is very important concept. A main interesting issue in optics is the medical spectacles for management of eye disorder. The principles of medical optic physics can be well used for researching and development on spectacles in medicine. In the present short article, the author summarizes and discusses on important reports on optic physics regarding spectacles in medicine.

SOME IMPORTANT REPORTS ON OPTIC PHYSICS REGARDING SPECTACLES IN MEDICINE

Researches in optics are very interesting. At present, the optic researches are available from many research groups on optic from several countries around the world. There are some important reports on optic physics regarding spectacles in medicine. The important reports are hereby summarized and presented in Table 1.

CONCLUSION

There ar many important reports on optic physics regarding spectacles in medicine. The concept of optic physics can be well used for researching on spectacles in medicine.

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Table 1. Some important reports on optic physics regarding spectacles in medicine

Authors	Details
Barbero et al. [1]	Barbero et al. discussed on foveal vision power errors induced by spectacle lenses designed to correct peripheral refractive errors [1].
Pomeda et al. [2]	Pomeda et al. performed a comparative study of vision-related quality-of-life, easures between MiSight contact lenses and single-vision spectacles [2].
Harris et al. [3]	Harris et al. reported on quantitative analysis of eyes and other optical systems in linear optics [3].
Radhakrishnan and Charman [4]	Radhakrishnan and Charman discussed on optical characteristics of Alvarez variable-power spectacles [4].
Barbero and Portilla [5]	Barbero and Portilla reported on the relationship between dioptric power and magnification in progressive addition lenses [5].
Schroth et al. [6]	Schroth et al. reported on effects of prism eyeglasses on objective and subjective fixation disparity [6].
Doroslovački and Guyton [7]	Doroslovački and Guyton reported on photographic simulation of off-axis blurring due to chromatic aberration in spectacle lenses [7].
Atchison and Charman [8]	Atchison and Charman reported on influence of stop position on spectacle magnification [8].
Qin et al. [9]	Qin et al. reported on simulation method for evaluating progressive addition lenses [9].
Petelczyc et al. [10]	Petelczyc et al. reported on Strehl ratios characterizing optical elements designed for presbyopia compensation [10].

CONFLICT OF INTEREST: None

REFERENCES

- [1]. Barbero S, Faria-Ribeiro M. Foveal vision power errors induced by spectacle lenses designed to correct peripheral refractive errors. *Ophthalmic Physiol Opt.* 2018 May; 38(3): 317-325.
- [2]. Pomeda AR, Pérez-Sánchez B, Cañadas Suárez MDP, Prieto Garrido FL, Gutiérrez-Ortega R, Villa-Collar C. MiSight Assessment Study Spain: A Comparison of Vision-Related Quality-of-Life Measures Between MiSight Contact Lenses and Single-Vision Spectacles. *Eye Contact Lens.* 2018 Nov; 44(Suppl 2):S99-S104.
- [3]. Harris WF, Evans T, van Gool RD. Quantitative analysis of eyes and other optical systems in linear optics. *Ophthalmic Physiol Opt.* 2017 May; 37(3):347-352.
- [4]. Radhakrishnan H, Charman WN. Optical characteristics of Alvarez variable-power spectacles. *Ophthalmic Physiol Opt.* 2017 May; 37(3):284-296.
- [5]. Barbero S, Portilla J. The relationship between dioptric power and magnification in progressive addition lenses. *Ophthalmic Physiol Opt.* 2016 Jul; 36(4):421-7.
- [6]. Schroth V, Joos R, Jaschinski W. Effects of Prism Eyeglasses on Objective and Subjective Fixation Disparity. *PLoS One.* 2015 Oct 2; 10(10):e0138871.
- [7]. Doroslovački P, Guyton DL. Photographic simulation of off-axis blurring due to chromatic aberration in spectacle lenses. *J AAPOS.* 2015 Feb; 19(1):91-3.
- [8]. Atchison DA, Charman WN. Influence of stop position on spectacle magnification. *Optom Vis Sci.* 2014 Jan; 91(1):97-102.

- [9]. Qin L, Qian L, Yu J. Simulation method for evaluating progressive addition lenses. *Appl Opt.* 2013 Jun 20; 52(18):4273-8.
- [10]. Petelczyc K, García JA, Bará S, Jaroszewicz Z, Kakarenko K, Kolodziejczyk A, Sypek M. Strehl ratios characterizing optical elements designed for presbyopia compensation. *Opt Express.* 2011 Apr 25; 19(9): 8693-9.