

1cm margin on all sides  
for the whole manuscript

Cambria, Bold face, Title  
case, Font size 20 for the  
manuscript Title

# **A COMPARATIVE STUDY OF IQ LEVELS IN MYOPIC CHILDREN WITH NON-MYOPIC CHILDREN BETWEEN THE AGE GROUP OF 8-15 YEARS**

**\*Mrs.AshaLatha P<sup>1</sup>,Dr.B.Kusuma Kumari<sup>2</sup>,Dr.Harika Priyadarshini<sup>3</sup>,Dr.Parveen shaik<sup>4</sup>,**

Asterisk (\*) for the  
corresponding author

Superscripts for authors  
and coauthors

<sup>1,3,4</sup>Assistant professor, Department of physiology,Mallareddy Institute of Medical  
Sciences,Hyderabad.

<sup>2</sup>Head of the Department, Department of physiology,Mallareddy Institute of Medical  
Sciences, Hyderabad.

Superscripts for indicating affiliations  
of authors and co authors

asterisk (\*) for the corresponding  
author

**\*Corresponding Author: P. Asha Latha. email:ashalathaphysiology@gmail.com**

Bold, upper case and  
font size 10pt for all  
main subheadings

Abstract should be not  
more than 250 words  
and 1.5 spacing with 9 pt  
font size and Cambria

## ABSTRACT:

**Introduction:** In Andrapradesh state the prevalence of myopia is elevated with increasing age and it is more in the urban area.<sup>1</sup> Myopia is increased in highly intelligent population as compared to the general population.<sup>2</sup> **Materials & Methods:** This is a comparative study of Intelligent Quotient levels in myopic students in the age group of 08-15 years. The study was conducted in (n=300) aged between 08-15 years. Case group involves 50 students, those were already diagnosed as myopic were selected and 50 students of same age group were considered as control. **Results:** Intelligent Quotient levels of myopic students were statistically significantly higher than the non-myopic students.

Keywords limit 4-5

**Key words:** IQ levels, myopia, school children, 8-15 years

## INTRODUCTION

In Andrapradesh state the prevalence of myopia is elevated with increasing age and it is more in the urban area.[1] The prevalence of myopia is increased in highly intelligent population as compared to the general population. [2] Myopia has been shown to exist. People having higher IQ (neocortical size) have been shown to have higher myopia. A possible relationship could arise because a single gene could affect both eye size.<sup>3</sup> A previous study done by Mutti et al. [3] A longitudinal study showed that myopic children were more likely to have higher Iowa Tests of Basic Skills (ITBS). [4] Seang-Mei Saw study on school grades and myopia also concluded that school grades a possible indicator of either cumulative engagement in near work activity or

References to the literature cited  
for the manuscript should be  
numbered in order of appearance  
in the manuscript and cited in the  
text with Brackets

intelligence, were positively associated with myopia in Singapore children.[5]CzepitaD review of the literature suggested that the relationship between IQ and myopia is most probably determined by genetic and environmental factors.[6] Therefore we consider this study to examine the IQ levels of myopic students between the age group of 08-15 years and compare it with age matched students who are not suffering from myopia.

## MATERIALS AND METHODS

This is a comparative study of IQ levels in myopic students in the age group of 08-15 years who are studying in MB Grammar high school in Suraram village, Hyderabad. The study was conducted in myopic students of both the sex group (n=300)aged between 08-15 years. The criteria for selection of myopia were diagnosed as myopics 2-3 years prior to the study and 150 non myopic students those were randomly selected in the same school with same age group. comparison between myopic and non-myopic students were to investigate IQ levels in 50 myopic students between the age group of 08-10 years, 50 myopic students between age group of 11-12 years, 50 myopic students between the age group of 12-15years were compared with the same age group non myopics as control group. Prior to the study, permission has been taken from the school Principal to carry the research work and each subject has been informed in detail of the objectives and aim of the research protocol and methods to be used. Verbal consentis obtained by the students. Ethical Clearance is obtained from the Institutional Ethical Clearance Committee. IQ level in all the participants was assessed by Raven's Progressive Matrices version is colored Progressive Matrices which is based on multiple choice questionnaires. Statisticalanalysis in silico was done using the online tool available at [in.silico.net/tools/statistics](http://in.silico.net/tools/statistics) and z test done by

The table/Fig heading may have 8 pt

## RESULT:

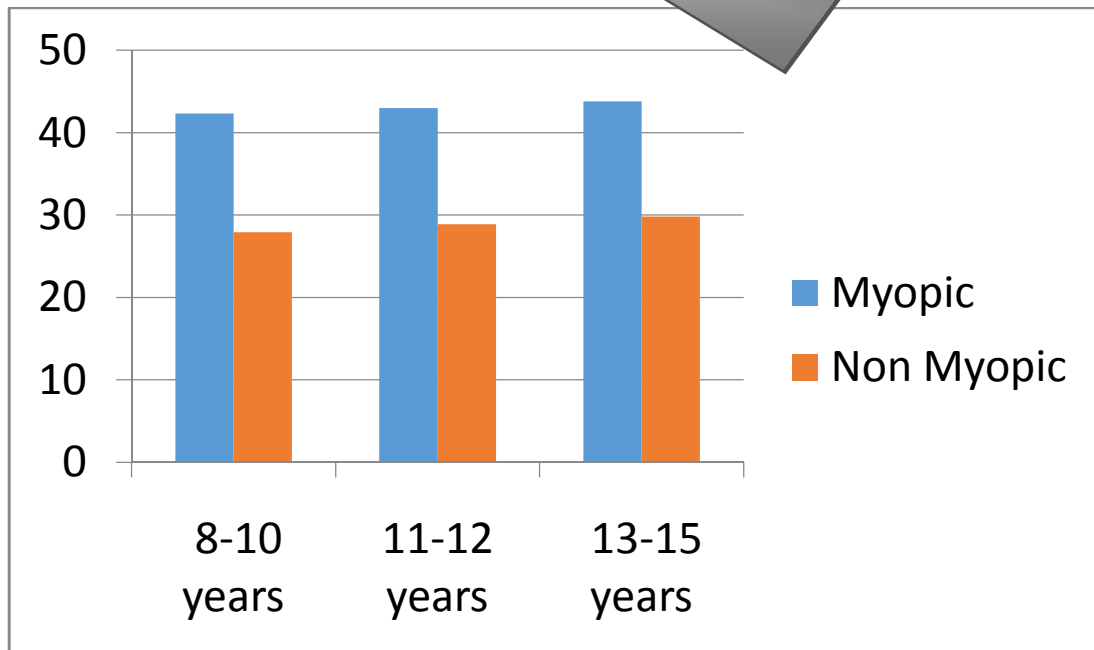
**Table 1: Comparison of Intelligent quotient of myopic and non-myopic among case and control group**

Age (years)	IQ values		P-Value
	Myopic	Non-myopic	
08 - 10	42.3 ± 4.016	27.9 ± 4.51	> 0.0001

11-12	42.98 ± 3.74	28.9 ± 4.45	> 0.0001
13-15	43.8 ± 4.02	29.8 ± 4.58	> 0.0001

\*P values comparison with myopics and non-myopics showing highly

s The graph/Fig heading, MUST be in the text form and should not form part of the image



Photographs must be clear and sharp and should follow the following guidelines  
 1) 300dpi or higher sized to fit journal page,  
 2) JPEG, GIF, TIFF are preferred

## DISCUSSION

This study is taken up to analyze if any difference exist in IQ levels in myopic and non-myopic children and thereby assess the verbal grasping power of the myopic children. This may help in

assessing the intelligence of the myopic group and based on this we intend to suggest some reformative measures in the pattern of their examination assessment.

## CONCLUSION

Our study demonstrated that intelligent quotient levels are greater comparative non myopic controls and Intelligent quotient levels are positively correlated with the myopia.

## ACKNOWLEDGEMENT

Authors would like to thanks to Management, Department of Physiology, Mallareddy Institute of Medical Sciences & Hospital, Suraram, Hyderabad, for their support throughout the study. We would also like to thank to the principal, Staff and students of MB Grammer school Suraram for their extensive cooperation.

**Conflict of Interest:** Nill.

## REFERENCES

1. Dandona R, Dandona L, ~~Shrivastava M~~  
based assessment of refractive error in India:  
Experiment Ophthalmol. 2002 30(2):84-93.
2. StorferM. Myopia, Intelligence, and the Expanding Human Neocortex: Behavioral Influences and Evolutionary Implications. 1999;98(3-4):153-276.
3. Miller EM, On the correlation of myopia and intelligence. Genet Soc Gen Psychol Monogr. 1992;118(4):361-83.
4. Mutti DO, Mitchell GL, Moeschberger ML, Jones LA, Zadnik K. Parental myopia, near work, school achievement, and children's refractive error. Invest Ophthalmol Vis Sci. 2002;43(12):3633-40.
5. Saw SM, Cheng A, Fong A, Gazzard G, Tan D.T.H, Morgan I, School grades and myopia, Ophthal. Physiol. Opt. 2007 27: 126-129.
6. Czepita D, Lodygowska E, Czepita M. Are children with myopia more intelligent? A literaturereview, Ann Acad Med Stetin. 2008;54(1):13-6.

References should be in the order  
Author names, title, journal name,  
Year; vol/issue: page no.