



STUDY OF THE KNOWLEDGE, ATTITUDE AND PRACTICES OF REFRACTIVE ERROR WITH EMPHASIS ON SPECTACLE USAGES IN STUDENTS OF RURAL CENTRAL INDIA.

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ABSTRACT

Aim: To Study the knowledge, attitude and practices of refractive errors with emphasis on spectacle usages in students of rural central India.

Background: Refractive error is the most common cause of blindness which can be corrected easily by using simple modality like spectacles but because of ignorance, stigmas and cost related issues it is underutilized. This study was conducted in order to evaluate the knowledge, attitude and practices of refractive errors with the emphasis on spectacle usages amongst students of rural central India.

Material and method: This was a prospective cross sectional study conducted amongst high school going students of rural central India.

Result: Amongst 255 respondents, 165 males and 90 females. Most of the respondents believed that most common reasons for low vision were nutritional deficiency(68%) followed by bad eye care(56%), hereditary(47%) and trauma to eyes(18%). Most of the participants were aware about spectacles (92%) as a modality to correct low vision. Very few knew about surgery (14%) and contact lenses (54%). The respondents refused to use spectacles at all if needed because of likely teasing from colleagues as well as problem with handling of glass (71%), fear of rejection from opposite sex (65%) and for fear of being labeled as blind (48%).

Conclusion: Stigmas regarding refractive errors and modalities to correct it is prevalent amongst high school students of rural central India.

KEY WORDS: Refractive error, stigma, Knowledge, attitude, practice.

INTRODUCTION:

Refractive error is one of the most common causes of visual impairment around the World and is the second leading cause of treatable blindness. Studies from urban India suggest that 49.3 million of those aged 15 years may have refractive errors.¹ It is well known fact that refractive error can affect not only social life and economic prospect of an individual but has tremendous impact on psychological development^{1, 2}. Though, refractive error can be corrected easily using simple modality like spectacles because of ignorance, stigmas and cost related issues it is underutilized³.

There are a large number of articles on childhood refractive error in the literature, reporting a broad, worldwide variation in the prevalence of myopia and hyperopia.⁴ Most of these studies have been conducted on the prevalence and causes of refractive error but there are limited studies available in literature regarding psychosocial impact, attitude and practices related to refractive errors, the corrective modalities and underutilization of spectacles a cheaper modality in

reference to developing country specially in rural literate population.^{5, 6}

This study was conducted in order to investigate knowledge, attitude and care seeking behavior about refractive error and methods to correct it with a special emphasis on spectacle usage.

MATERIAL AND METHOD:

This was a prospective cross sectional study conducted in students of rural population in outer skirts of Bhopal (central India) between January 2011 to December 2011. The study was conducted in full accordance with ethical principles. Total 260 high school students (class 8th, 9th and 10th) of both sexes were included in the study. After obtaining informed written consent, asked to fill the semi structured questionnaire. The questionnaire contained social demographic profile, questions regarding knowledge about refractive error, their attitude towards people suffering from refractive error and practice of methods to correct it. Questionnaires were distributed among students with the help of their teachers and

research team. Questions in questionnaires have multiple options and students are allowed to opt more than one option. We did not encounter major refusal from subjects regarding participation in the study. The data was analyzed using SPSS 15.0.

RESULTS:

A questionnaire was responded satisfactorily by 255 students, which includes 165 males and 90 females. Five proformas were rejected on the basis that either it was not returned by respondents or it was filled unsatisfactorily which was not significant.

Figure 1: male to female ratio of participants:

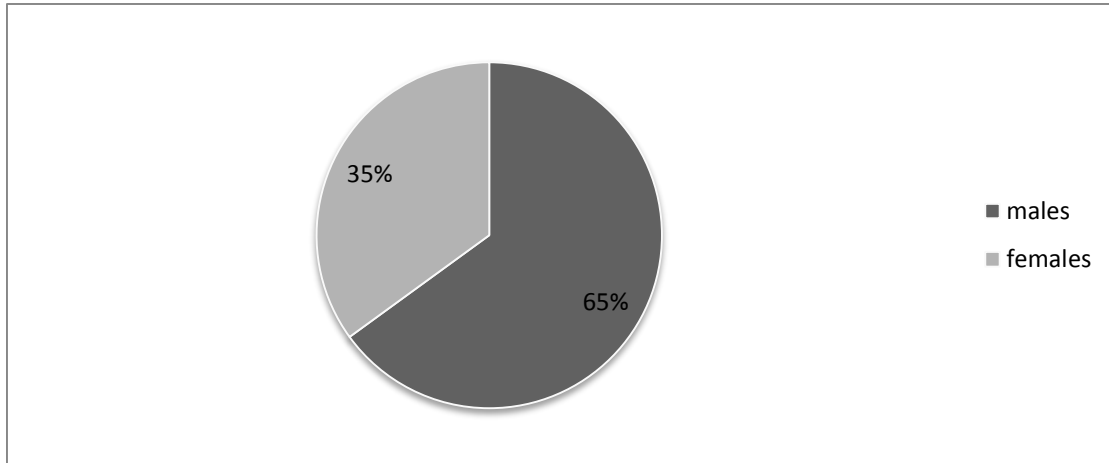
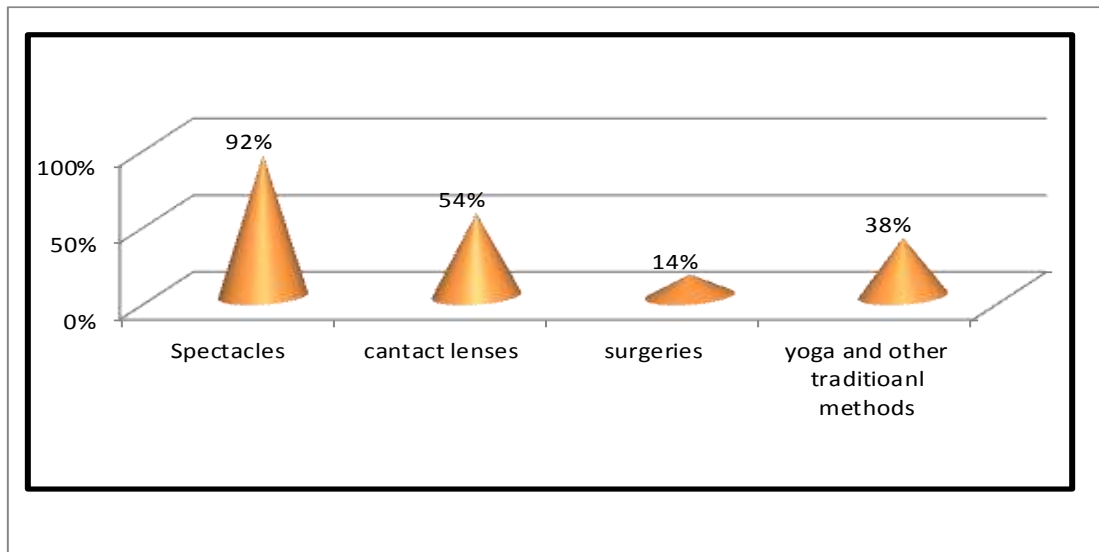


Figure 2: knowledge about methods for correction of low vision:



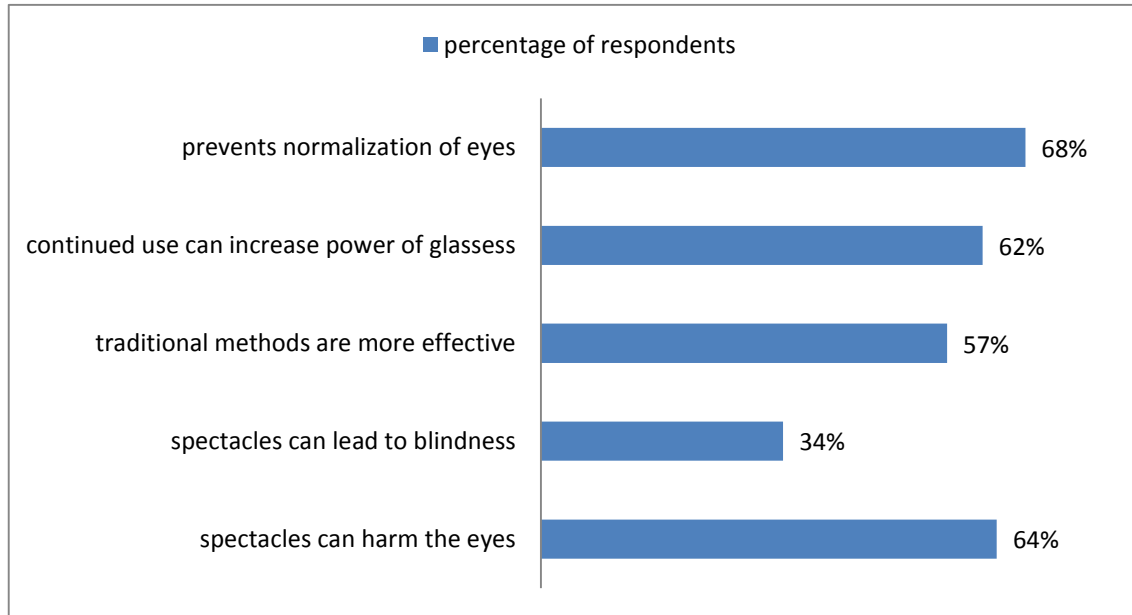
Out of 255 respondents about 32 participants were using some kind of visual aid mostly spectacles (n=30) and 2 participants using contact lens.. Respondents believed that most common reasons for low vision were nutritional deficiency (68%) followed by bad eye care (56%), hereditary (47%) and trauma to eyes (18%). Significant number of participants believed that witchcraft (16%) and excessive reading (22%) can lead to low vision.

Most of the participants were aware about spectacles (92%) as a modality to correct low vision. Very few know about surgery (14%) and contact lenses (54%).

According to respondents, other than low vision, spectacles can be used for treatment for headache (56%), to look intelligent (22%), to hide deformity (16%), etc.

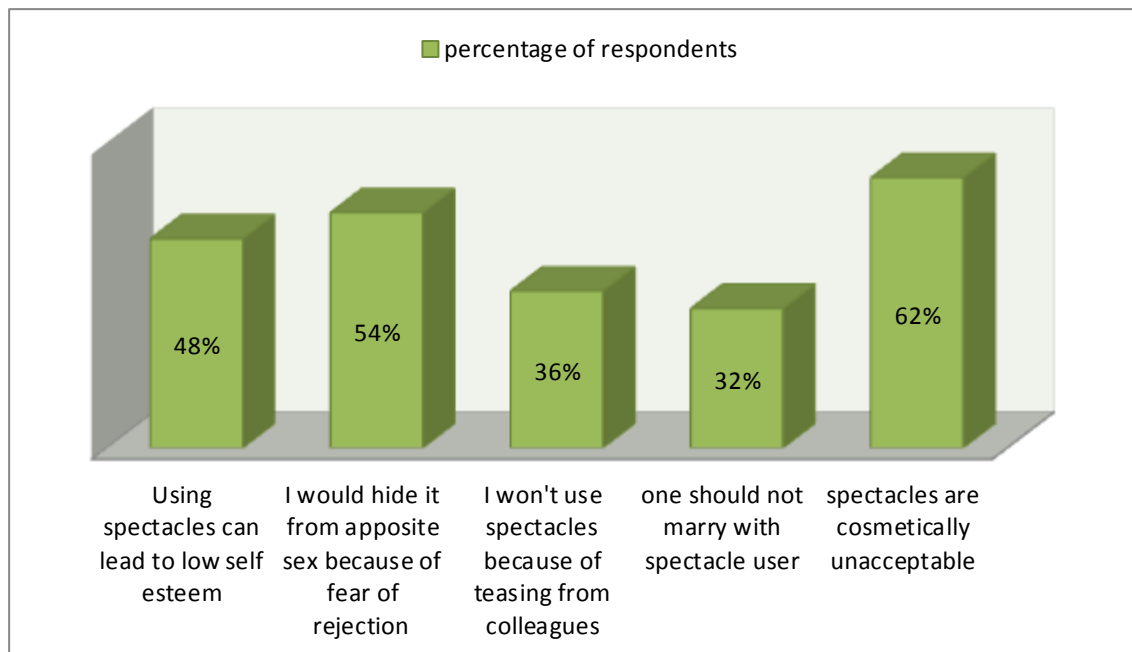
32% of the respondents feel that spectacles were cosmetically unacceptable and embarrassing in public, most of them were females (85%). 60% believed that one should not marry with a spectacle user. Only 22 % respondents believed that spectacles were a sign of intelligence.

Figure 3: Practice and knowledge about Spectacle use



The respondents refused to use spectacles at all if needed eyes and even it can lead to blindness (34%). Another finding was that continued use of spectacle can increase the power of glasses (62%) and it prevents normalization of eyes (68%). Traditional methods like yoga, ayurveda and homeopathy were more useful for correction of low vision in comparison to allopath according to 57% of participants. 64% respondents believed that long term use of spectacles can harm the eyes and even it can lead to blindness (34%). Another finding was that continued use of spectacle can increase the power of glasses (62%) and it prevents normalization of eyes (68%). Traditional methods like yoga, ayurveda and homeopathy were more useful for correction of low vision in comparison to allopath according to 57% of participants. 64% respondents believed that long term use of spectacles can harm the

Figure 4: Attitude and care seeking behavior towards spectacle usage



DISCUSSION:

Refractive errors are leading cause of blindness as they are early in onset compared to cataract. It can be corrected easily using visual aids but because of poor

knowledge about refractive errors and stigma attached with it, large part of population is deprived of this basic need.³Prevalence of refractive error varies from study to study but in a major study conducted in south India, 13.8%

had a refractive error of a spherical equivalent of 3.00 diopter or worse⁷

Spectacle are used mainly for correction of refractive error but other usage of spectacle could be eye protection from bright sun light ,dust, flames, water etc, to conceal defective eye, as a fashion and to look intelligent.

In our study, most of the respondents were aware about spectacles as a method to correct low vision, other modalities like contact lenses (54%), refractive surgeries (14%) were less known. Contrary to that 57 % of respondent believed traditional methods like Yoga, Ayurveda etc can be used to correct low vision. This could be due to rural background of the respondents where knowledge about modern and costly methods is unavailable. Respondent were aware that spectacles can be used for correction of low vision but significant number believed that it can be used to look intelligent, for treatment of headache etc.

Despite increasing knowledge about different modalities to correct visual impairment, spectacles remains well known and most practiced means, which was confirmed in our study. Recent studies have shown the use of contact lenses for refractive error correction to be higher and more common among the younger strata of the population^{8, 9, 10}. But respondents in our study were less aware about contact lenses and surgeries probably due to rural background.

Our study demonstrated well known fact about stigmas attached with spectacles uses. Among various obstacles in the use of spectacles for refractive error, important ones were the belief that continuous use of glasses would progressively increase severity of refractive error, spectacles use can harm the eyes, difficulty in doing manual work and it prevents normalization of eyes. Similar results were obtained in others, Indian and international studies. In south India study conducted by Sheetal Savor et al highlighted similar stigmas¹¹. Contrary to our study, respondents in that study had good knowledge about methods correct refractive error. This disparity could be because of rural background of respondents in our study. In study among secondary school students in Tanzania parental concern about the safety of spectacles use was evaluated¹². The spectacle damaging the eye was a significant obstacle to spectacle use in the Nigerian study.⁶ In a study which was conducted in Pakistan, 69 per cent of the people thought that using spectacles would cause their vision to deteriorate, they therefore tried to avoid it.^{13, 14} In studies on Chinese children, a common reason for not wearing spectacles was the belief that spectacles weakened the eyes¹⁵

CONCLUSION:

Our study has highlighted that merely prescribing spectacles to a person with low vision will not help much as stigmas related to spectacle use is widespread particularly amongst rural population. During routine checkups some time has to be spent to address the knowledge about refractive error and various modalities to correct it, emphasizing positive attitude and practice. It will help eliminating stigmas, unfounded fear, rejection of spectacles use and it would help them to be accepted in a positive way. Same can be done through counseling, mass media, colleges, schools, textbooks and community based self-help groups. For this purpose the help of psychiatrists, psychologists, and psychiatric social worker can be taken to address the issues of low self-esteem, stigmas, etc.

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