

ORIGINAL ARTICLE

Reasons for the Refusal of Spectacle Usage among Medical Students of Rawalpindi and Islamabad

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ABSTRACT

Objective: To identify reasons for the refusal of spectacle usage among medical students of Rawalpindi and Islamabad.

Study Design: Cross sectional study.

Place and Duration of Study: Different medical colleges of Rawalpindi and Islamabad from 15th April to 18th September 2018.

Materials and Methods: A total of 254 medical students who were prescribed constant use of spectacles were selected through simple random sampling technique. A structured close ended questionnaire was administered and collected data was analyzed through SPSS version 22.

Results: Mean age of the participants was 22.5 ± 1.4 years, female students were 60.7% and 39.3% were male. It was found that majority of female participants do not use spectacles due to cosmetic reason (64.5%). Unwillingness to use spectacles was the next most common reason for not using spectacles i.e., 57.2%. The students who reported that they face inconvenience and difficulty in managing the glasses were 47.9%. 31.8% of students were not using spectacles due to social stigma. Many students either lost their spectacle or not using spectacles due to breakage of glasses (23.1%). The gender differences among various reasons were found to be statistically significant.

Conclusion: The current study concludes that various reasons leading to refusal and inadequate usage of spectacles among medical students are cosmetic unacceptability, unwillingness, social stigma and inconvenience. Targeted health education measures are imperative to formulate comprehensive corrective strategies.

Key Words: Medical Students, Reasons, Refusal, Spectacle Usage.

Introduction

The global enormity of visual impairment that can be ascribed to uncorrected refractive errors is on rise. Refractive errors are the most frequent cause of visual disorders and blindness among young adults following cataract globally.¹ The uncorrected refractive errors (URE) pose a considerable consequence on daily life impairment, education and future economic anticipation of a student, particularly medical students.²

Worldwide, about 27.1 million in age group 16-39 years develop visual impairment due to refractive

errors, prevalence being 1.11%. The prevalence of URE varies widely around the globe, showing higher among East Asian countries.³ The prevalence of uncorrected refractive errors in Pakistan has been found as 23.9% in males and 20% in females.⁴ In Pakistan, 3% of blindness can be attributed to uncorrected refractive errors.⁵ The high prevalence rate of uncorrected refractive errors among medical students has led to a mounting concern for this problem.⁶

The dilemma of continuously escalating burden of disease due to refractive errors is growing, regardless of the availability of a reasonably simple and cost-effective interventions.^{7,8} Spectacles are mainly used method for correcting vision in developing as well as in developed countries.⁹ In spite of the fact that spectacles are the easiest preference for vision correction, however, several factors determine compliance with prescribed glasses and for the reason that ignorance, stigmas, taboos, cultural beliefs and cost related issues, it is underutilized.¹⁰ At

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present knowledge about various causes leading to influence compliance with spectacle usage is very trivial particularly in our setting, therefore this study was carried out to highlight the importance of these issues and embark upon the problem.

The literature search has revealed that many studies have been focused on primary and secondary school children neglecting the university students such as medical students. Although numerous studies had been carried out to determine the prevalence of refractive errors, there is comparatively insufficient data available on the causes and associated factors acting as barriers to spectacle wear. The current study has been conducted to identify reasons of refusal and issues related to low usage of spectacles among medical students for effective interventions to prevent vision deterioration in future.

Materials and Methods

A cross-sectional study was conducted in different medical colleges of Rawalpindi and Islamabad from 15th April to 18th September 2018. Sample size was calculated by WHO sample size calculator, keeping confidence interval at 95%, and prevalence of uncorrected refractive errors to be 21% (found in literature review), the calculated sample size was 254 selected through simple random sampling technique from these institutions. Ethical approval was taken from ethical review board of Yusra Medical & Dental College. Permission was taken from administration of the medical colleges; the response rate of students was 100%. Informed consent was taken from the respondents explaining them the purpose of this study and confidentiality of data was ensured. In this study, the medical students who had already been diagnosed with REs were included, out of these who were strictly compliant were excluded from the study and a total of 254 non-compliant students who had been prescribed spectacles for constant use, were included in this study. The contact lens users and those with refractive surgery were also excluded, the reason being they have already left spectacle use and opted for an alternative choice, focusing on the students whose main modality of treatment was spectacles. The non-compliance with spectacle usage was defined as refusal to the use of spectacles prescribed for refractive errors, assessed either by observation or by interviewing the student. Structured closed

ended questionnaire was self-administered and the data was analyzed using SPSS version 22. Frequency distributions were calculated using descriptive statistics. Chi-square test was employed to establish the association between qualitative variables and a p-value less than 0.05 was considered as significant.

Results

There were a total of 254 participants with a mean age of 22.5 ± 1.4 years. Female students were 60.7% (n=155) and males were 39.3% (n=99). It was found that out of 254 individuals, 16.2% participated from 1st year, 13.4% from 2nd year, 19.2% from 3rd year, 40.7% from 4th year and 10.5% from 5th year. Out of 254 respondents, 18% were from high socioeconomic status while 74.8% from upper middle, 1.9% from middle and 4.7% belonged to low socioeconomic status.

The time duration of spectacle wear by respondents shown in figure 1.

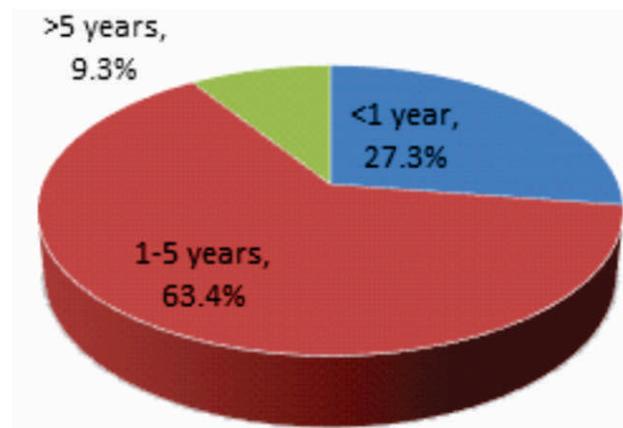


Fig. 1: Time Duration for Participants Who Were Prescribed Spectacle Usage

The various reasons of refusal as shown in figure 2, it was found that majority of participants (64.5%) perceived that wearing spectacles was unacceptable aesthetically and awkward to use in social gatherings. 57.2% of the respondents showed unwillingness and they refrained from using spectacles even if they are in need of using them. The students who faced inconvenience while wearing spectacles along with issues related to managing the glasses were 47.9%. Various students did not wear spectacles due to social stigma and unacceptability, many students lost their spectacle or not using due to breakage of glasses and some students forgot spectacles at home.

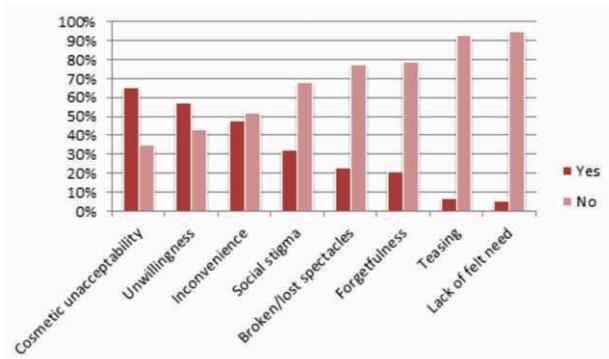


Fig 2: Frequency of Various Reasons of Spectacle Usage Refusal

Cosmetic unacceptability, social stigma and unwillingness were recognized as the foremost reasons of refusal in female students and broken/lost glasses and forgetfulness were the most important causes of refusal to spectacle usage among male students, found to be statistically significant (Table I).

Table I: Gender Differences among Various Reasons

Gender	Refusal Reasons		p-value
	Yes n (%)	No n (%)	
Cosmetic Unacceptability			
Female	106(68.3%)	49(31.7%)	0.000
Male	12(12.1%)	87(87.9%)	
Social Stigma			
Female	87(56.2%)	68(43.8%)	0.002
Male	5(5.1%)	89(94.9%)	
Unwillingness			
Female	91(58.7%)	64(41.3%)	0.017
Male	56(56.5%)	43(43.5%)	
Forgetfulness			
Female	29(18.7%)	126(81.3%)	0.000
Male	65(65.6%)	34(34.4%)	
Broken/Lost Spectacles			
Female	43(27.7%)	112(72.3%)	0.007
Male	68(68.6%)	31(31.4%)	

Discussion

This study was conducted to address the issue of refusal of spectacle wear and its various causes and associated factors among medical students. The consistently high prevalence rates among medical students are attributable to extensive and intensive study duration and lengthened use of near vision.^{2,4} The focal problem causing refusal and low usage among the participants found to be cosmetic factors i.e., frames leaving impressions/indentations on face

by nose pad and distort the overall image and appearance. The participants think that their use may lead to low self-esteem and decreased confidence level, more evident in female students, hence, have a propensity to incline towards supplementary alternatives accessible to them. This finding is similar to the study done in Pakistan.⁵ The second reason showed by this study is unwillingness or intolerance towards spectacle use. 57.2% of respondents were not willing just for the reason that they simply just did not like to wear glasses. This result is quite higher as compared to other studies.⁶⁻⁸ The others reasons mentioned for not using was the stigma attached to the use of spectacles especially for females in a social set up like ours where there is cultural as well as social unacceptability of spectacle use tends to be higher than other societies and therefore the problem is aggravated, similar with the study results reported from other countries.^{9,10}

A proportion of students did not feel spectacles use convenient or at ease while using these. They consider use of spectacles as hindrance in daily routine activities and vigilance in handling, placing and maintenance, similar with the findings of other studies.^{11,12,13} Some students stopped using due to breakage or they lost their glasses and had difficulty in picking a new one. Some showed the habit of forgetting spectacles at home, a behavior found more common in males as compared to the females, a finding consistent with other studies.^{14,15}

A small proportion felt that they do not require spectacles and they have no issue of vision without spectacles, a finding in contrast to other studies.^{16,17} Only a small percentage did not use spectacles due to being teased by their colleagues, this finding is inconsistent with other studies.¹⁸ The measures taken to tackle with this situation should be broad based like health education intervention to promote spectacle use like done in other countries.^{19,20}

The main limitation of our study was that information about certain potential confounders such as severity of refractive errors could not be collected as most of the students did not know their present refractive status, needs to be considered while interpreting findings of this study. In the current study only quantitative approach was adopted but in future a mixed method approach with qualitative element including open ended questions

as well as focus group discussions will give an in-depth analysis in identifying reasons for refusal of spectacle use.

Conclusion

The current study concludes that several socio-cultural reasons leading to refusal and inadequate use of spectacles among medical students include cosmetic unacceptability, unwillingness, social stigma and inconvenience. These factors tend to contribute towards raising the burden of visual impairment owing to refractive errors.

Targeted health education measures directing to cultural beliefs and social barriers pertaining to spectacle wear, early screenings and community ophthalmology involvement are imperative to formulate effective and comprehensive corrective strategies.

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