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Spectacle Compliance in Slum Population of Mumbai: Pilot

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Abstract

Background

Mumbai Eye Care campaign was a mega refractive error project implemented for the slum population of Mumbai from 2009-15. The project was supported by Standard Chartered Bank's CSR activity Seeing is Believing through Sightsavers. The project design and service delivery was implemented by Lotus College of Optometry. During the first 3 years of the project, spectacles were distributed free of cost to adults by only collecting case paper charge of Rs.10/-/ Hence a questionnaire based study was conducted to assess the spectacle compliance among this population.

Methodology

Spectacle Compliance questionnaire was designed, validated by Optometry faculty and the same was administered by an Optometry intern. The spectacle compliance and reasons for non compliance was analysed for 200 respondents.

Results: Spectacle compliance was found to be 73.48%. Conclusion: Spectacle compliance was found to be high in this study and was single vision near spectacle design showed better compliance.

Keywords: Spectacle Compliance, refractive errors for adults, urban slum population

1. AIM

To determine the spectacle compliance among urban slum population of Mumbai and reasons for non compliance.

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2. METHOD AND METHODS

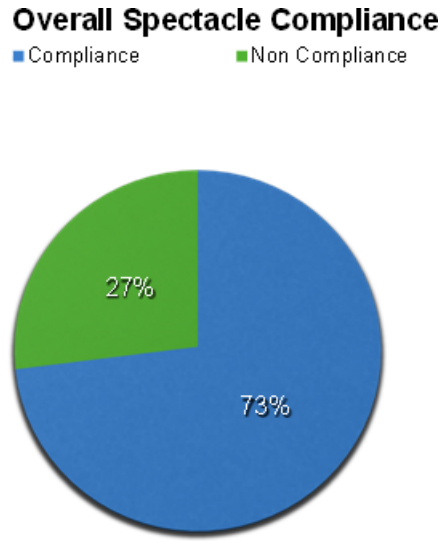
A 12 item Spectacle Compliance questionnaire was developed following focused group discussions among the slum dwellers. The questionnaire was then validated before it was administered.

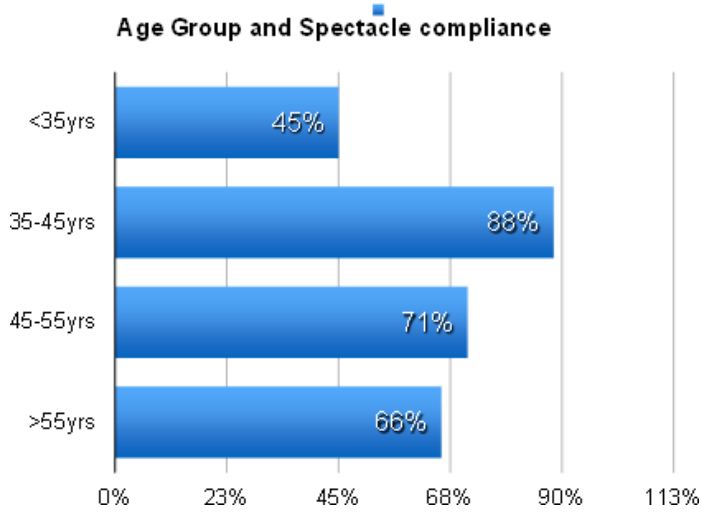
A study sample of 200 adults who were chosen randomly from slums of Dharavi, Mumbai, from period of February to August, 2010.Uninformed visit to the subjects who had received free spectacle through MECC minimum 3 months prior the questionnaire administration was done. Spectacle compliance questionnaire (SCQ) was applied by trained optometry intern. Potential determinants of spectacle wear including age, gender, spectacle lens design and perceived quality of spectacle lenses were assessed. Also adults who were not currently wearing their spectacles were asked to select the reason from the given list. The questionnaires were scrutinized for further analysis.

3. RESULTS

Among this sample, the mean age was found to be 45.67 ± 12.18 years, 71.82% were females. The overall spectacle compliance was found to be 73.48%.

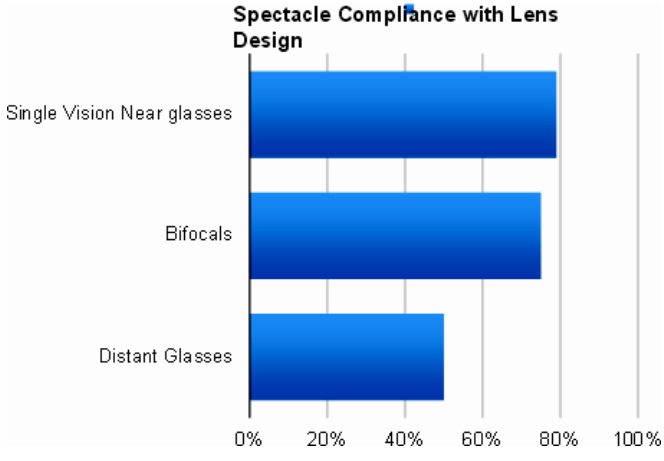
The compliance was highest in 35-45 years age group (88.31%) followed by 46-55 years (71%) and > 55 years (65.71%). The relation between spectacle compliance and gender was analyzed by using chi square test. There was no statistically significant relation (CI of 95%, chi square < 3.841).

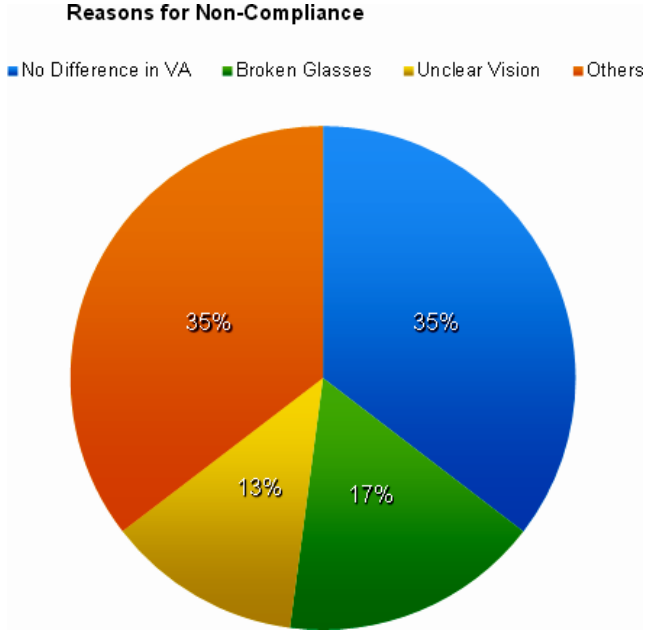




The relation between spectacle compliance and spectacle lens design was analyzed by using univariant (ANOVA) model, which showed statistical significant difference between spectacle compliance and spectacle lens design(P = 0.0005). The compliance for only single vision near glasses was highest (79%) followed by bifocal (75%) and single vision distance glasses (50%).

The reasons for spectacle non-compliance were; spectacles do not make any difference in vision (35.42%) followed by glasses are broken (16.67%), vision is not clear with glasses (12.5%).





DISCUSSION

Current study suggests higher spectacle compliance as compare to the previous studies such as the Castannon Holguin et al in Mexican school children (2006) found the compliance was 13.9% [1].

When compared Patel I et ali among the rural Tanzania(2010), the study showed a compliance of 92%. The reason could be as only near vision glasses were distributed and studied. Where as for this study all designs were included [6].

L Keay & Gandhi M et al (2010) [7] in India studied the compliance with ready made spectacle (RMS) verses custom spectacles (CS) in adults. They found no difference in usage of both. Reasons could be elimination of astigmatism (≥2D) and anisometropia (≥1D) .

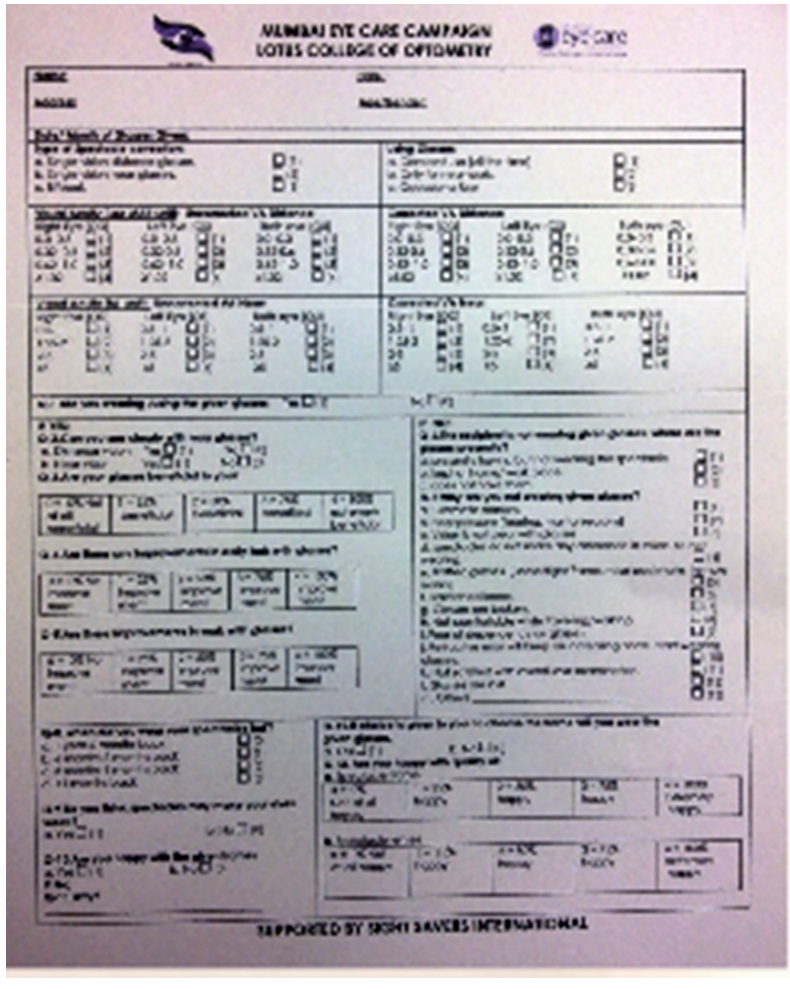
In the current study of randomly chosen sample, higher number of single vision near corrections were present as the over all numbers of distance vision glasses prescribed were less as compared to bifocal and single vision near correction.

The limitation of the study was the correlation between spectacle compliance and amount & type of refractive error was not evaluated. Correlation between spectacle compliance and Presenting visual acuity and best corrected visual

acuity was not assessed. However, cut offs for prescription of the glasses were predetermined.

CONCLUSION

Compliance with spectacle was high as compared to other studies. Near vision spectacles and 35-45 years age group showed the highest compliance rate. Compliance varied according to age, spectacle lens design and functional needs.



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