

ASSOCIATION BETWEEN REFRACTIVE ERROR AND IRIS COLOUR

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Purpose: To evaluate the association between the iris colour and refractive error. **Materials and methods:** One thousand two hundred and thirty-eight eyes of 619 patients were included in the study. Eyes were classified into two groups; light-coloured irides and dark-coloured irides. In fully automated mode, at least five autorefractions were performed with autorefractometer ((RK-F1 Full Autorefractometer; Canon, Tokyo, Japan) and a standardized value obtained. Spherical refractive error, cylindrical refractive error and anisometropia rates compared in between two groups. **Results:** One thousand two hundred and thirty-eight eyes of 619 participants were evaluated; 620 (50.1%) were light-coloured irides, 618 (49.9%) were dark-coloured irides. Spherical and cylindrical refractive error prevalence of the group with light-coloured irides were more than the dark-coloured group, and the difference were statistically significant ($p=0.000$, $\chi^2=17.032$), ($p=0.001$, $\chi^2=15.554$). The difference between spherical and cylindrical refractive error mean values were not statistically significant ($p>0.05$). Anisometropia rates in between two groups was not statistically significant ($p>0.05$). **Conclusion:** Spherical and cylindrical refractive errors were found to be more prevalent among the participants with light-coloured irides. The study of iris colour may also contribute to the understanding of the refractive error mechanism and provide good suggestive evidence for studies on other eye diseases.