

UNIVERSITI TEKNOLOGI MARA

**VARIATION OF CHOROIDAL THICKNESS WITH
REFRACTIVE ERROR AS MEASURED BY OPTICAL
COHERENCE TOMOGRAPHY**

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Project submitted in fulfillment of the requirements

for the degree of

Bachelor (Hons.) of Optometry

Faculty of Health Sciences

JULY 2015

AUTHOR'S DECLARATION

I declare that the work in this dissertation was carried out in accordance with the regulation of Universiti Teknologi MARA. It is original and is the results of my own work, unless otherwise indicated or acknowledge as reference work. This topic has not been submitted to any academic institution or non-academic institution for any degree or qualification. In the event that my dissertation be found to violate the conditions mentioned above, I voluntarily waive the right of the conferment of my degree and agree be subjected to the disciplinary rules and regulations of Universiti Teknologi MARA.

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ABSTRACT

The primary objective of this study was to examine the differences in choroidal thickness with refractive error as measured with optical coherence tomography by conducting a systematic review of the literature which included published research conducted from 2009 to 2014. The first step of the review was developing an answerable question to address the problem. In this review the question was formulated using the PICO framework, which defines population (P), intervention (I), comparison (C) and outcome (O) respectively. The population (P) in this study was adult or children, the intervention (I) was studies that used optical coherence tomography in the measurement while the outcome (O) was choroidal thickness. There was no comparison (C) done in this review as it was not necessary. Previous studies on myopic eyes showed reduced in choroidal thickness. Meanwhile, previous studies performed in the hyperopic anisometropic amblyopic eyes found increment in the choroidal thickness as compared to the fellow eyes and the control eyes. Based on previous researches, there were consistent reports with the correlation between thickness of the choroid and refractive error. In addition, highly myopic eyeballs correlated with choroidal thinning. Studies agreed that thinning of choroid is observed in the more myopic eyes compared to the non-myopic eyes. Studies also supported the association between choroidal thickness changes with refractive error. In conclusion, there was association between choroidal thickness changes with refractive error.

Keywords: choroidal thickness, refractive error, Optical Coherence Tomography, amblyopia, myopia and hyperopia.