

UNIVERSITI TEKNOLOGI MARA

**REVIEW OF GUIDELINES IN GENERAL EYE
SCREENING PROGRAM**

AKMAL KAMALIAH BT BADRULHISHAM

**Project submitted in fulfillment of the requirement for the
Bachelor of Optometry (Hons)
Faculty of Health Science**

July 2015

DECLARATION

I hereby declare that the thesis is based on my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at UITM or other institutions.

AKMAL KAMALIAH BINTI BADRULHISHAM

July 2015

REVIEW OF GUIDELINES IN GENERAL EYE SCREENING PROGRAM

ABSTRACT

The standard guidelines of general eye screening program in countries are still questionable due to the presence of contradiction in the factors influencing eye screening program such as target age, appropriate test included and referral criteria for comprehensive eye examination. The objective of this study is to review the pattern of the eye screening programs in Malaysia and other countries based on the factors mentioned previously. This is a systematic review type of research based on the study about eye screening program in Malaysia and other countries that have been released to the public. This research was conducted by reviewing the eye screening program published in reliable journal. These three factors were analysed and presented in the table respectively to each country as a guideline to identify the suitability of particular procedure to be implemented. Most countries have initiated eye screening program at preschool and middle childhood whereas half of the countries performed screening at younger years (infants). Moreover, there were also limited numbers of eye screening conducted at age 19 and above. In optometric screening tests this study has suggested that parental questionnaire, gross eye examination and red reflex are the common preliminary tests for the eye screening of 5 year-old subject and below while the strabismus detection is included in all group of age as binocular assessment. Fixate-following test were done on children younger than 3 years or any illiterate child whereas the visual acuity test is recommended for children of 3 years and above who are either able to read or illiterate. Most referral criteria in preliminary test and binocular assessment are similar in all stage of age excluding vision assessment. In conclusion this review might be helpful and important in constructing the guidelines for optometrists or examiner as an effort to serve the best chances of early detection of visual problems even though there are different kinds of approach in eye screening program.

Keywords: vision screening, school screening, follow up vision screening, vision screening in older, vision screening in children, preschool children.

TABLE OF CONTENT

TITLE	PAGE
APPROVAL	ii
DECLARATION	iii
ACKNOWLEDGEMENT	iv
ABSTRACT	v
ABSTRAK	vi
TABLE OF CONTENTS	viii
LIST OF TABLES	x
LIST OF FIGURES	xi
LIST OF ABBREVIATIONS	xii
CHAPTER 1 INTRODUCTION	1
1.1 Background of Study	1
1.2 Problem Statement	2
1.3 Significance of Study	3
1.4 Objectives	4
1.4.1 General Objective	4
1.4.2 Specific Objective	4
1.5 Research Questions	4
CHAPTER 2 LITERATURE REVIEW	5
2.1 The Eye Screening and A Comprehensive Eye Examination	5
2.2 Rationale for Eye Screening Program	6
2.3 The Target Age	7
2.4 Common Screening And Assessment Tests	9
2.5 Overview of Vision Screening Worldwide	11
2.5.1 Eye Screening Program in Asia	12
2.5.2 Eye Screening Program in Oceania	12
2.5.3 Eye Screening Program in Europe	14
2.5.4 Eye Screening Program in North America	14
CHAPTER 3 METHODOLOGY	16
3.1 Study Designs	16
3.2 Study Settings	16
3.3 Research Procedure	16
3.4 Reviewing Process	17
3.5 Expected Outcome	17
3.6 Conceptual Framework	18

CHAPTER 4	RESULTS	19
4.1	Eye Screening Program in Malaysia	19
4.2	Eye Screening Program in Australia	21
4.3	Eye Screening Program in United States	30
4.4	Eye Screening Program in Sweden	50
4.5	Eye Screening Program in China	52
4.6	Eye Screening Program in New Zealand	53
4.7	Summary of Eye Screening Program Implemented in 6 Countries	54
4.7.1	Age Screened	54
4.7.2	Optometric Screening Tests	55
4.7.3	Referral Criteria	59
CHAPTER 5	DISCUSSION	61
5.1	Age Screened	61
5.2	Optometric Screening Tests	63
5.3	Referral Criteria	65
CHAPTER 6	CONCLUSION	67
REFERENCES		69
APPENDICES		
	Appendix A	84
	Appendix B	85
	Appendix C	86
	Appendix D	87