UNIVERSITI TEKNOLOGI MARA

THE PREVALENCE OF VISUAL IMPAIRMENT AMONG CHILDREN WITH DISABILITY

NOOR SHUHADA BINTI AZIZ

Dissertation submitted in partial fulfilment of the requirements for the degree of

Bachelor of Optometry (Hons) Faculty of Health Sciences

July 2016

AUTHOR'S DECLARATION

I declare that the work in this proposal is considerably my own, and to the extent that any part of this work is not my own, I have indicated that it is not mine by fully acknowledgement in accordance with the standard referring practices of the discipline.

I, hereby, acknowledge that I have been supplied with the Academic Rules and Regulations for undergraduate Universiti Teknologi Mara (UiTM) regulating the conduct of my study and research.

| Name of Student | : Noor Shuhada binti Aziz |
|-----------------|---|
| Student I.D. No | : 2012479928 |
| Program | : Bachelor of Optometry |
| Faculty | : Health Sciences |
| Thesis | : The Prevalence of Visual Impairment among Children with |
| | Disability |

Signature of Student : **Date** : July 2016

ABSTRACT

THE PREVALENCE OF VISUAL IMPAIRMENT AMONG CHILDREN WITH DISABILITY

Purpose: Visual impairment was reported to be common among children with disability and could significantly impair the independence in quality of life. The objectives of this study were to determine the prevalence of visual impairment and its relationship between demographic data, visual acuity and refractive error among disability children.

Method: A total of 27 clinical records of eye examination from year 2012 to 2015 among disability children (12 boys and 15 girls) at community based centre in Selangor aged one to 18 years old were reviewed.

Results: The mean age of disability children was 9.85 ± 4.55 years. It showed that 42.31% of the disability children had insignificant refractive error, whereby 34.61% were hyperopia and 23.1% were myopia. The overall prevalence of visual impairment among disability children was 25.93% with boys had higher prevalence of visual impairment (17.81%) than girls (7.41%). There was a strong positive linear relationship between visual acuity and visual impairment (r=0.80, p=0.01), meanwhile age (r=-0.22, p=0.36), gender (r=-0.32, p=0.10), types of disability (r=-0.37, p=0.07) and refractive error (r=-0.05, p=0.80) were poorly correlated with visual impairment.

Conclusion: The outcomes of this study provide a profile on visual impairment status among disability children. The prevalence of visual impairment among children with disability was high. The visual acuity was revealed to be strongest variable that correlated with visual impairment among children with disability. Thus, this profile could help the clinician to be better prepared when dealing with children with any types of disability and also early detection of any visual disorder.

TABLE OF CONTENT

| AUTHOR'S DECLARATION | | ii |
|----------------------|---|--------|
| SUPERVISOR SIGNATURE | | iii |
| ACKNOW | LEDGEMENT | iv |
| TABLE O | F CONTENT | v |
| LIST OF | FIGURES | vii |
| LIST OF | ΓABLES | viii |
| LIST OF A | ABBREVIATIONS | ix |
| ABSTRAC | CT | X |
| ABSTRAI | κ. | xi |
| | | |
| CHAPTE | R 1 : INTRODUCTION | 1 |
| 1.1 | Background | 1 |
| 1.2 | Problem statement | 2 |
| 1.3 | Research question | 3 |
| 1.4 | Objectives of the study | 3 |
| 1.5 | Rationale of the study | 3 |
| CHAPTE | R 2 : LITERATURE REVIEW | 5 |
| 2.1 | Children with Disability | 5 |
| 2.2 | Children with Disability in Malaysia | 6 |
| 2.3 | Challenges Faced by People with Disabilities | 7 |
| 2.4 | Global Magnitude of Visual Impairment and Blindness | 8 |
| 2.5 | Prevalence of Visual Impairment among Children in Malaysia | 9 |
| 2.6 | Prevalence of Visual Impairment among Children with Disability | 11 |
| 2.7 | Relationship of Demographic with Visual Impairment and Disability | ity 13 |
| CHAPTE | R 3 : MATERIALS AND METHODS | 16 |

| 3.1 | Study Design | 1 | 6 |
|-----|--------------|---|---|

| 3.2 | Sampling | 16 |
|------------------------------------|---|----|
| 3.3 | Study Procedure | 16 |
| 3.4 | Statistical Methods | 18 |
| | | |
| CHAPTER | 4 : RESULTS | 19 |
| 4.1 | Demographic Data | 19 |
| 4.1.1 | Age and gender distribution of disability children | 19 |
| 4.1.2 | Distribution of children by types of disability, gender and age | 20 |
| 4.2 | Prevalence of Visual Impairment among Children with Disability | 21 |
| 4.3 | Association between Demographic Data, Visual Acuity, Refractive Error and Visual Impairment 22 | |
| 4.3.1 | Association between demographic data and visual impairment | 22 |
| 4.3.2 | Association between visual acuity and visual impairment | 23 |
| 4.3.3 | Association between refractive error and visual impairment | 23 |
| | | |
| CHAPTER | 5 : DISCUSSION | 25 |
| 5.1 | Prevalence of Visual Impairment among Children with Disability | 25 |
| 5.2 | Association between Demographic Data, Visual Acuity, Refractive Error and Prevalence of Visual Impairment among Children with Disability 2' | |
| CHAPTER | 6 : CONCLUSION | 29 |
| 6.1 | Conclusion | 29 |
| 6.2 | Limitation | 29 |
| 6.3 | Recommendation | 29 |
| REFEREN | CES | 31 |
| APPENDIX | | 35 |
| APPENDIX A Intellectual Properties | | 36 |