

UNIVERSITI TEKNOLOGI MARA

**COMPARING EMOTIONAL CRY
TEAR PROTEIN, CRYING
BEHAVIOUR & EMOTIONAL
REGULATION AMONG CHILDREN
WITH AUTISM AND TYPICALLY
DEVELOPING CHILDREN**

NURUL'AIN BINTI SHUHAIMI

Thesis submitted in fulfillment
of the requirements for the degree of
**Master of Health Sciences
(Occupational Therapy)**

Faculty of Health Sciences

December 2019

ABSTRACT

Crying is actually the first form of communication of infant to their caregivers' regardless atypical or typically developing children. There were study conducted in determine differences between children with autism and typically developing children in crying, and it have been prove that children with autism pattern of crying is different from typically developing children. Also there were currently no study done regarding component of protein in emotional cry tear in children with autism. There were two aspect that focused on this study, the first was to see whether there are any relationship between emotion regulation and emotional cry between children with autism and typically developing children. Second was identified the any trace of protein in emotional cry tears and compare the level of concentration in emotional cry tears protein in children with autism and typically developing children. 64 sample participate in this study with age range from 7-12 years old, 32 for each group (children with autism and typically developing children) participate in the first aspect of this study, and total of 19 subject participate in the second aspect of the study, consist of 5 typically developing children and 14 children with autism. Social And Emotional Cry Questionnaire Emotional Regulation Social Skill Questionnaire (ERSSQ) and Social and Emotional Cry Questionnaire (SECQ) were used to measure emotional regulation and crying behavior in this study. There was statistic significant difference between ERSSQ and SECQ with p-value 0.038. There are trace of Human Adrenocorticotrophic Hormone (ACTH) that detected in emotional cry tears in both group. Through this study, there was a Means difference in the emotional cry tears protein (ACTH concentration) between children with autism and typically developing children however, result was not statically significant. There are significant different in emotion regulation and crying behavior between children with autism and typically developing children. The sample means were different between the two groups, but there were no statistical significant different in cry tears protein concentration. This may be due to the sample size is too small. In future research, study needs to be done involving larger sample size.

ACKNOWLEDGEMENT

In the name of Allah SWT Most Gracious, Most Beneficent

Alhamdulillah, all praises to Allah for the strengths and His blessing in completing this thesis. I would like to express my deepest gratitude to my supervisor, Puan Husna Ahmad Ainuddin and Madam Smily, for both of their excellent guidance, constant support, patience, caring, and providing me with an excellent atmosphere for doing research. Not forgotten, my co – supervisor, Mr. Jayachandran for his invaluable help of constructive comments and suggestions throughout the thesis works as well as giving inspiration have contributed to the success of this study. I would also like to say thank you for both Dr Akehsan and also Dr Masne for everything.

I would like to acknowledge Miss Reanae Beaumont and Kate Sofronoff for given me permission on using their ERSSQ for my research. I would also thankful for Kementerian Pendidikan Malaysia for given the permission to conduct this research at Sekolah Kebangsaan Presint 9 (2), Putrajaya. I would also want to thanks to all my friends especially Zara, Kak Hanizah, Siti, Zaidin, Azwan and Kak Miera who help me during my research. I would also like to express my gratitude to my colleague at KPJ Ipoh who keep reminding me and provide with moral support especially Kak Anis, Kogilavani, Solehah and Kua Jee Min and others for their kindness and moral support during my study which contributed in this study direct and indirectly.

Last but not least, my appreciation also goes to my beloved parents; Mr. Shuhaimi bin Mohd Amin and [REDACTED] and also beloved siblings Amirul Alif and Nurul Atikah who keep encouraging me and support me throughout this journey. They were always keep supporting and encouraging me in their best wishes.

TABLE OF THE CONTENT

	Page
CONFIRMATION BY PANEL OF EXAMINERS	ii
AUTHOR’S DECLARATION	iii
ABSTRACT	iv
ACKNOWLEDGEMENT	v
TABLE OF THE CONTENT	vi
LIST OF TABLES	x
LIST OF FIGURE	x
CHAPTER ONE: INTRODUCTION	1
1.1 Introduction	1
1.2 Background of Study	1
1.2.1 Autism Spectrum Disorder Definition	1
1.2.2 Prevalence of Autism Spectrum Disorder (ASD)	2
1.2.3 Emotional Regulation Problem between Children with Autism and Typically Developing Children	3
1.3 Problem Statement	5
1.4 Research Questions	6
1.5 Objectives	7
1.6 Research Hypotheses	7
1.6.1 Null Hypotheses	7
1.6.2 Alternative Hypotheses	7
1.7 Conceptual Framework	8
1.8 Significance of Study	9
1.8.1 Significance To Health Care Professionals And Others	10
1.8.2 Significance of Children with Autism Spectrum Disorder	11
1.9 Definition of Terms	13
1.9.1 Conceptual Definitions	13
1.9.2 Operational Definitions	14
SUMMARY POINT	15

CHAPTER ONE

INTRODUCTION

1.1 Introduction

This chapter deals on the background of the study, problem statement, purpose, objectives, research question, research hypothesis, conceptual framework, significance of the study and definition of terms. The background of the study briefly discusses about the previous studies on the crying tears produced by children with autism and typically developing children. Problem statement and purpose of the study explains about the gap from the previous study to this current study. The aim, specific objectives, research questions, and research hypothesis are answered in this present study. This study uses Accountability- Well-Being – Ethics (AWE) framework as a conceptual framework.

Significance of this study consists of the current need for the study and it is also supported by early studies to present the rationale of the study. Finally, the definitions of terms used in this study are separated into conceptual and operational definitions.

1.2 Background of Study

1.2.1 Autism Spectrum Disorder Definition

American Psychiatric Association (2013) stated that autism is generally described as a pervasive neurodevelopmental disorder characterized by impairments in social communication and restricted, repetitive patterns of behavior, interests or activities. Children with autism have deficits in early social and communication skills, cognitive, visual perspective, social skills, language, play, adaptive, and motor skills (Baron-Cohen, 1995, Nobre et al, 2000, Tervo, 2003 Senju, 2012). Other than that, children with autism also have problems in regulating their emotions and this results into other behaviour problems such as temper tantrum, aggressiveness, seeking attention, and manipulating others. . Children with autism are also often associated with impairments which may give certain impacts in their lives like having problems in independent functioning, awkward in social situations, feeling of discomfort when with peers, and eventually social isolation (Myles, Barnhill, Hagiwara, Griswold & Simpson, 2011).