

UNIVERSITI TEKNOLOGI MARA

**FINAL YEAR RESEARCH PROJECT – MEDICATION
USE RELATED WITH MEDICAL CONDITION OF
DOWN SYNDROME INDIVIDUAL**

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ABSTRACT

Down syndrome is a genetic disorder caused by trisomy of chromosome 21. This abnormality associated with various types of health problems that Down syndrome individual may face throughout their life. By knowing the problems, practitioners such as doctors and pharmacists can give proper treatment to treat their medical condition. In this study, we identify the health-related problems associated with Down syndrome individual and the use of medication. Further, we analyzed the relationship between health condition and medication used in Down syndrome individual. Chi-Square Test has been used to analyze the data. From the result, most of Down syndrome children exhibit speech and language problems (88.0%) fever, flu and cough (68.5%) and heart problems (25.0%). Hearing problems, sight problems, and hypothyroidism are also common occur in Down syndrome. The percentages of cancer, mental problems and Hepatitis B are extremely low. The most medication given to Down syndrome children was analgesics and antipyretics (56.5%) followed by cough and flu medication (48.9%). Other medications commonly used by Down syndrome children include multivitamin, hormone therapy and respiratory medications. Based on the result, it can be concluded that the use of medication were mainly to treat Down syndrome individual's medical condition.

Keywords: Down syndrome, health problems, medication, Chi-Square Test

CHAPTER 1

INTRODUCTION

1.1 Down syndrome

Down syndrome is the most commonly occurring chromosomal disorder that occurs from the failure of chromosome 21 to segregate normally during meiosis. In general, each individual with Down syndrome carries an extra copy of chromosome 21 with total 47 chromosomes instead of 46 chromosomes. This extra genetic material causes the delays in development of Down syndrome children.

There are three types of Down syndrome; Trisomy 21, translocation and mosaicism. Trisomy 21, also called non-disjunction is the most common type of Down syndrome where the fetus formed has three copies of chromosome 21 instead of two copies. A rare type called translocation is due to part of chromosome 21 and part of another chromosome has joined to form the extra chromosome. The third type, mosaicism is the mildest which occurs during cell division after fertilization therefore only a portion of the fetus's cells have 47 chromosomes and the rest contain usual 46 chromosomes. In Malaysia, the percentage of free trisomy 21 is 94.6 %, translocation trisomy 0.7% and mosaic trisomy 4.7% (Azman *et al.*, 2007).