UNIVERSITI TEKNOLOGI MARA

ABILITY AMONG PHARMACY STUDENTS OF UNIVERSITY

SCIENCE OF MALAYSIA (USM) TO IDENTIFY POTENTIAL

DRUG-DRUG INTERACTIONS AMONG ANTI-DIABETIC DRUGS

FADILAH DIYANA BINTI MOHAMAD ISA

Dissertation submitted in partial fulfillment of the requirements for the

Bachelor of Pharmacy (Hons)

Faculty of Pharmacy

2013

ACKNOWLEDGEMENT

TABLE OF CONTENTS

ABSTRACT

Introduction: Rising in the number of concomitant medications will greatly increase the risks of drug-drug interactions (DDIs). Diabetes mellitus (DM) has become the worrisome issue among the health care members. Patients who are ailing with T2DM for instance, at elevated risks of getting other chronic health problems like hypertension, stroke and hyperlipidaemia. Those patients are provided with various types of medications. They are more vulnerable to polypharmacy. So one of the purposes for this study to evaluate the ability of third year and fourth year pharmacy students' to identify the drug-drug interactions involving anti-diabetic agents. **Methods:** Descriptive cross-sectional study and had been done in that involved 125students comprise of third year and fourth year pharmacy students from University of Science Malaysia (USM). One of the important parts of the questionnaire was 20 questions to test them on the understanding of basic pharmacology involving drug-drug interactions (DDIs) and their ability to determine severity of drug pairs through true and false selection. **Results**: About 44% of the participants that consist of 39 third year students and 16 fourth year students were considered as having adequate knowledge on DDIs involving anti-diabetic medications. Another 56% of the participants consist of 35 students from each year showed opposite result. The passing marks of the students were 15 over 20. The findings also showed that there were significant difference between the students previous education and time spent on their DDIs classes with their knowledge ranking. **Conclusion:** Among the

CHAPTER 1

INTRODUCTION

1.1 Background of Study

Rising in the number of concomitant medications will greatly increase the risks of drug-drug interactions (DDIs). Consequently, the chances of ineffective treatment as well as drug related toxicity will elevate.[1]DDIs usually happen when the action or effect of one particular drug is altered by the presence of another drug which is taken prior administration or by concomitant drugs intake [2]. There are two types of DDIs which are pharmacodynamic and pharmacokinetic DDIs. Pharmacodynamic drug interaction is allied with the effect of the drug on the body. Conversely, pharmacokinetic drug interaction is linked with the effect of the body on the drug that can be initiated by any modification in the absorption, distribution, metabolism or excretion of the drug within the body [3].

DDI among diabetic patient is not a new issue. Globally, diabetes mellitus (DM) has become the worrisome issue among the health care members. [8] Type 2 diabetes mellitus (T2DM) specifically, has becomes an epidemic health issue that has been estimated to affect more than 350 million people worldwide in 2011. Surprisingly, the prevalence is predicted to continuously grow up to 550 million cases by 2030 [4]. T2DM is caused by the impairment in the insulin secretion by the pancreas as well as the insensitivity of the body cells to insulin action. T2DM can be controlled by having lifestyle changes and early identification of high-risk individuals. But, the