

UNIVERSITI TEKNOLOGI MARA

**THE ASSOCIATION OF HEALTH
LITERACY TOWARDS QUALITY OF
LIFE AND FACTORS ASSOCIATED
WITH QUALITY OF LIFE AMONG
TYPE 2 DIABETES MELLITUS
PATIENTS IN GOVERNMENT
PRIMARY CARE CLINIC**

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of the requirements for the degree of
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CONFIRMATION BY PANEL OF EXAMINERS

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ABSTRACT

Type 2 Diabetes Mellitus (T2DM) is a major health burden worldwide, the prevalence of DM increasing year by year, it is estimated that by the year 2020 the prevalence is 21.6% in Malaysia. Health literacy is defined as the degree to which individuals have the capacity to obtain, process and understand basic health information and services needed to make appropriate health decisions. Poor health literacy is one of the contributing factor leading to poor diabetic health outcome (poor glycemic control, poor medication adherence, more complications, more hospitalization). In terms of quality of life (QOL) as a diabetic health outcome, the evidence on association of health literacy with QOL is limited. One study done revealed that health literacy has indirect effects towards quality of life. Due to the limited evidence there is a need to study on the association of health literacy and QOL. The purpose of this study is to identify the health literacy status, QOL status among T2DM patients, to find the association between health literacy with QOL and to find the factor associated with QOL. Four hundred forty-seven (447) T2DM patients from two government primary care clinic (Klinik Kesihatan Taman Ehsan and Klinik Kesihatan Sg. Buloh) were recruited through convenience sampling for cross sectional study from December 2017 until March 2018. Each of them was given a set of self-administered questionnaires consist of demographic details including treatment types and comorbidities, Health Literacy Survey – Asia questionnaire (HLS – Asia Q 16), Diabetes Related Quality of Life – Brief Clinical Inventory (DQoL-BCI). Anthropometric measurements (body mass index, waist circumference, blood pressure, HbA_{1c}) were taken by the researcher. HLS – Asia Q 16 was used to measure health literacy status while DQoL -BCI questionnaire was used to measure quality of life among T2DM patients. Descriptive statistics to measure the health literacy status and quality of life among T2DM patients. Single linear regression was used to measure the association between health literacy and QOL. Multiple linear regression was used to measure factors associated with QOL. The mean health literacy score among participants was 12.39 (± 3.34), 17.67% participants has inadequate health literacy, 25.73% has problematic health literacy and 56.6% has sufficient health literacy. The mean DQoL-BCI score was 32.09 (± 6.51) out of maximum 75 marks, where higher the score poorer the QOL is. There is a weak negative linear correlation between health literacy score and quality of life score with $R: 0.183$, $p < 0.001$. Factors that positively correlated with better QOL were age, not obese, health literacy level. Factors that negatively correlated with QOL were uncontrolled glycemic status (HbA_{1c} >6.5%), treatment with insulin and treatment combination of insulin and oral hypoglycemic agents. Nearly half of the patients do not have sufficient health literacy. People with risk factors of poor QOL should be identified and intervention to improve QOL should be implemented. A comprehensive program to improve health literacy involving patient and health care system should be in line with the national health plan. More studies are needed in the future to improve the knowledge of health literacy and QOL among T2DM patient's in our country.

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CHAPTER ONE

INTRODUCTION

1.1 Research Background

Diabetes mellitus (DM) is one of the non-communicable diseases that contributes to a major health burden in the world. The rising prevalence of diabetes is alarming. Based on World Health Organisation in 2016, there are 422 million people in the world with diabetes. The diabetes prevalence has doubled since 1980 from 4.7% in 1980 to 8.5% in 2014 (World Health Organization, 2016). It has been increasing steadily for the past 30 years and is growing most rapidly in low and middle income countries like Malaysia.

Based on The National Health and Morbidity Survey of Malaysia (NHMS) in 2015, the overall prevalence of diabetes was 17.5% while in 2011 the prevalence was 15.2%. Based on these figures, it shows that the prevalence of diabetes has increased by 2.3% in 4 years' time. It is expected that by the year of 2020, the estimated prevalence is 21.6% (Institute for Public Health (IPH) Ministry of Health Malaysia, 2015).

DM has been known to be related with complications of microvascular and macrovascular such as stroke, cardiovascular disease, neuropathy, retinopathy, nephropathy and amputation. All these complications are translated into burden and cost to the Ministry Of Health. The estimated cost of managing diabetes and its complication for a 6 month period was calculated to be RM 386,531.21. Per patient annual cost was RM 2,684.24 and RM 1,062.88 for direct and indirect healthcare cost respectively (Pharmaceutical Services Division Ministry of Health Malaysia, 2014).

Health literacy has received a considerable amount of attention in recent years. It is the degree to which individuals have the capacity to obtain, process and understand basic health information and services needed to make appropriate health decisions (Nielsen-Bohlman, Panzer, & Kindig, 2004). Accumulating evidences has shown that health literacy plays a role in many chronic diseases management such as diabetes. Based on literature reviews, poor health literacy is associated with lack of self-management skills, poor understanding of own medical condition, overutilisation of medical facilities, poor glycaemic control, higher healthcare burden and etc (Mancuso,