



EFFICACY OF DIFFERENTIAL EXERCISE INTERVENTION PROGRAMS ON IMPROVEMENT IN PERCEIVED HEALTH-STATUS AMONG MIDDLE AGED INDIVIDUALS WITH TYPE 2 DIABETES MELLITUS IN KELANTAN, MALAYSIA

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ABSTRACT

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1. INTRODUCTION

Lifestyle-related diseases like diabetes mellitus (DM) have emerged as major public health problems in all over the world. In a study it was stated that DM will see the greatest increase in the developing countries of Africa, Asia, and South America and among them 90% of diabetic individuals will be having T2DM¹. International Diabetes Federation (IDF) has also stated that 77% of people with Type 2 Diabetes Mellitus

In pursuit of exploring solutions for the improvement in perceived health status of type 2 diabetic population (T2DM), this study purports to compare the efficacy of aerobic and combined exercise intervention programs pertaining to T2DM individuals in Kelantan, Malaysia. This study was carried out with 75 middle aged participants with middle income status. This study has designed 14 weeks of intervention sessions along with another 14 weeks of no intervention session to assess the sustainability of the intervention programs. The EuroQol 5D-5L questionnaire was used to assess the progress in the perceived health status of the population. After 14 weeks of aerobic exercise, significant improvement in state of mobility ($p = .001$) and pain or discomfort ($p = .011$) was observed. In case of the participants in the combined exercise, post-intervention improvements in perceived sense of mobility ($p = .001$) were also evident. Hence, combined exercise program had shown the best outcome compared to aerobic and control group.

(T2DM) resides in countries with high percentage of low- and middle-income population². T2DM is a major source of premature mortality and morbidity related to cardiovascular disease (CVD), kidney disease (diabetic nephropathy), eye disease (diabetic retinopathy), and nerve disease (diabetic neuropathy)³.

There were 3.3 million cases of DM in Malaysia and the prevalence in adults (20-79 years) is 16.6% in 2015⁴. The rate of prevalence