

UNIVERSITI TEKNOLOGI MARA

**ACUTE EFFECTS OF HIGH
INTENSITY CIRCUIT TRAINING
USING BODY WEIGHT ON BODY
COMPOSITION INDICES IN
SEDENTARY COLLEGIATE
FEMALES**

**PUTRA ASYRAN NAIM BIN
KHAIZAL OZLEN**

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ABSTRACT

In recent years, sedentary behaviour has grown into a global concern due to its adverse effects on overall health and well-being. High-intensity circuit training (HICT) has gained popularity to enhance health and fitness. Despite the recent popularity of this training method, however, research on the effects of high-intensity circuit training using body weight (HICTBW) on body composition in sedentary young adults remains limited. Therefore, this study aimed to explore the impact of 4-weeks HICTBW program on body composition in sedentary collegiate females. Twenty participants were randomly assigned to either a training group, which underwent multiple bodyweight exercises for four weeks, or a control group with no training. The intensity of the training increased progressively over the weeks. In week 1, 60%maxHR with 1 full circuit were conducted. In week 2 and 3, participants performed 2 full circuits at the intensity of 66%maxHR. Finally in week 4, the participants performed 3 full circuits at 68%maxHR. Body composition, including body fat percentage, fat mass, muscle mass, waist-to-hip ratio, and body mass index (BMI), was assessed before and after the intervention. The results showed that there were no significant differences in all variables between the pre-and post-training intervention ($p>0.05$). Although no significant differences in the studied variables were observed between pre- and post-training, there were slight positive changes in all measured parameters. Lack of significant findings could be attributed to the short intervention duration and frequency. Future studies with extended training periods are recommended to better understand the potential impact of HICTBW on body composition in sedentary collegiate females. In conclusion, this study found that HICTBW are safely to be conducted to sedentary young collegiate females.

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TABLE OF CONTENTS

	Page
LETTER OF TRANSMITTAL	iii
AUTHOR'S DECLARATION	iv
ABSTRACT	v
ACKNOWLEDGEMENT	vi
TABLE OF CONTENTS	vii
LIST OF TABLES	x
LIST OF FIGURES	xi
LIST OF SYMBOLS	xii
LIST OF ABBREVIATIONS	xiii
CHAPTER ONE INTRODUCTION	14
1.1 Research Background	14
1.2 Statement of Problem	16
1.3 Purpose of Study	17
1.4 Research Questions	17
1.5 Research Objectives	18
1.6 Research Hypotheses	18
1.7 Operational Terms	19
1.7.1 Sedentary Collegiate Females	19
1.7.2 Body Composition	19
1.7.3 HICT-BW	19
1.8 Limitations	19
1.9 Delimitations	20
1.10 Significance of The Study	20
CHAPTER TWO LITERATURE REVIEW	22
2.1 Introduction	22
2.2 Sedentary Behaviour	22
2.2.1 Inactive Prevalence in Malaysia	23

2.3	Sedentary Behaviour and Diseases	23
2.4	Benefits of Physical Activity	24
2.4.1	Framework of Physical Activity	25
2.4.2	Important of Physical Activity on Body Composition	26
2.4.3	Perceived Barriers to Physical Activity in Collegiate Females	27
2.4.4	Prescribing Exercise for Collegiate Females	27
2.5	High Intensity Circuit Training	28
2.5.1	Advantages of Circuit Training	29
2.5.2	Basic Principles and Guidelines of Circuit Training Program	30
2.5.3	High Intensity Circuit Training using Bodyweight (HICT-BW)	31
2.6	Summary	31
CHAPTER THREE RESEARCH METHODOLOGY		33
3.1	Introduction	33
3.2	Research Design	33
3.2.1	Conceptual framework	33
3.3	Participants and Sampling Technique	34
3.3.1	Inclusion and Exclusion Criteria	34
3.3.2	Sample Size Calculation	35
3.4	Instrumentation	36
3.4.1	Anthropometric Measurement	36
3.4.2	Body Composition Measurement	37
3.4.3	Waist to hip ratio measurement	37
3.5	Intervention	38
3.6	Data Collection Procedures	39
3.7	Data and Statistical Analysis	41
CHAPTER FOUR RESULTS		42
4.1	Introduction	42
4.2	Descriptive Data	42
4.3	Demographic	43
4.4	Statistical Assumption	43
4.4.1	Normality	43