



Original Research

Weight Control and Health Beliefs Model: A Comparative Study

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Abstract:

Background:

Obesity is referring to an increase in excess body fat in a quantity that has an impact on one's health. Obesity is linked to a higher risk of morbidity and mortality, as well as a lower quality of life.

Material and method:

A probability simple random sample of 80 male and female employees from faculties of different specializations was selected. The sample was collected from four colleges at the University of Mosul, which are the College of Medicine, Engineering, Science, and education. The sample was selected from a homogeneous group of 280 employees.

Results:

Correlation between HBM and weight control among employee university was positive.

Conclusions:

The study concludes that the intervention through Health Beliefs Model showed a positive effect on many health behaviors that affect weight maintenance, including physical activity, controlling food impulses, dietary planning, monitoring body weight, and supporting family and friends to control weight. All of these behaviors led to a clear improvement in Weight control of the study group approximately three months after the start of the intervention.

Keywords: Weight Control, Health Beliefs Model

Introduction:

The global spread of overweight and obesity significantly limited the means of preventing chronic diseases such as blood pressure and diabetes, which led to them becoming epidemics in many countries of the world. Because of the development of life, urbanization, population growth, the industrial revolution in recent decades, the lifestyle change, the use of automated transportation, and the consumption of processed foods that contain high calories, many countries have witnessed a significant increase in the prevalence of obesity two, three or four times during the past three decades ⁽¹⁾. Studies show that for adults aged 20 years or more, the global standardized body mass index (BMI) increased from 21.7 to 24.5, for men and women, from 22.1 to 24.8, between 1975 and 2016. Within the same period, the global standard prevalence of excess body weight doubled among adults of both sexes, from 21% to 24% for men and 40% for women in 2016. As for those whose body mass index was 30 or more, the increase was four times between males, and for women, the sharp increase was three times. This increase, along with the population increase, led to an increase in the number of obese people globally from 100 million individuals to more than 670 million after four decades ⁽²⁾. Overweight and obesity in previous decades affected developed countries, but in the last decade it has affected developed and developing countries alike ⁽³⁾. According to 2016 estimates, almost 1.9 billion overweight adults ages 19, above which at least 650 million were obese, were present at World Health Organization (WHO).

Often at the age of 18-29 years the increasing direction in the shift from weight gain to obesity. The care experts are vital to obesity since it is accompanied by many psychological and physical problems, including diabetes, heart disease, and several malignancies ⁽⁴⁾. In recent decades, overweight and obesity prevalence has increased rapidly worldwide. The prevalence is largely preventable, given that the overweight is different from the populations and overweight, including obesity and related non-communicable diseases. ⁽⁵⁾. The aim of the current study to identify the relationship between HBM and Weight Control among Employee University.

Methods and Materials:

A probability simple random sample of 80 male and female employees from faculties of different specializations was selected. The sample was collected from four colleges at the University of Mosul, which are the College of Medicine, Engineering, Science, and education. The sample was selected from a homogeneous group of 280 employees. Random selection and random assignment are used to create the experimental and control group. Experimental design by using the randomized controlled trial approach is conducted to determine the efficacy of the HBM in enhancing weight control behaviors among employees in the university of Mosul during January 10th 2023 to March 15th 2024. The data are collected from employees through the utilization of the study instrument. Each one spends approximately (45-55) minutes to have the questionnaire completed. Data is

analyzed using the "Statistical Package for Social Science" (SPSS) software for Windows (Version 24). Two different approaches are employed for the

data analysis which includes: Pearson Correlation Coefficient and Descriptive Statistical ⁽⁵⁻¹⁰⁸⁾.

Results:

Table (1): The experimental and control groups' demographic variables and homogeneity

Variables	Experimental group = (40)		Control group = (40)		Total (80)	
	F	%	F	%	F	%
Age						
20-29Y	4	10	4	10	8	10
30-39 Years	17	42.5	18	45	35	43.7
40-49 Years	13	32.5	12	30	25	31.3
50-59 Years	6	15	6	15	12	15
Total	40	100	40	100	80	100
M (SD)	41.17 (0.82)		38.82 (0.87)		39.99 (0.83)	
Gender						
Male	24	60	27	67.5	51	63.7
Female	16	40	13	32.5	29	36.3
Total	40	100%	40	100%	40	100%
Marital status						
Single	8	15	6	20	14	17.5
Married	32	85	34	80	66	82.5
Total	40	100	40	100	80	100
Work type						
Office work jobs	35	87.5	36	85	69	86.3
Non-Office work Jobs	5	12.5	4	15	11	13.7
Total	40	100	40	100	80	100

HBM Concepts							
Baseline test (T 0)	1. Severity						
	2. Susceptibility	0.337*					
	3. Barriers	0.132	0.198				
	4. Benefits	0.194	0.256*	0.217*			
	5. Cues to action	0.132	0.152	0.057	0.215		
	6. Self-efficacy	0.068	0.194	0.117	0.118	0.211	
	7. Behavioral intention	0.1.82	0.128	-0.093	0.265*	-0.077	0.286*
Post-test 1 (T 1)	1. Severity						
	2. Susceptibility	0.286*					
	3. Barriers	0.385	0.251				
	4. Benefits	0.220	0.359*	0.343*			
	5. Cues to action	0.033	0.155	0.166	-0.133		
	6. Self-efficacy	0.234	0.349*	0.450**	0.126	0.288*	
	7. Behavioral intention	0.316*	0.072	0.172	-0.117	0.025	0.352*
Post-test 2 (T 2)	1. Severity						
	2. Susceptibility	0.335*					
	3. Barriers	0.242	0.220				
	4. Benefits	0.198	0.109	0.031			
	5. Cues to action	0.149	0.318*	0.172	-0.017		
	6. Self-efficacy	0.265*	0.421*	0.320*	0.369*	0.199	
	7. Behavioral intention	0.270	-0.0150	0.101	0.387*	0.004	0.234*

Table (2): Pearson correlation coefficient between HBM concepts, and behavioral intentions of weight control among the experimental group.

Table (2) represents the results for Pearson's correlations coefficients among and between health beliefs related to weight control, and behavioral.

Discussion:

The study found the association between health behaviors related to weight control among the experimental group over times. At baseline (T 0), there was a significant correlation between dietary impulse control and physical activity, and a positive correlation between dietary impulse control with dietary planning, weight monitoring, body weight, and family and friends support, and there was found a correlation between monitoring weight with family and friends support regarding weight control behaviors. Individuals with high levels of behavioral confidence consumed more plant-based diets and engaged in more physical activity than those with low levels of self-efficacy. In addition, the 'high self-efficacy' group reduced their stress levels and ate smaller portions of food than their peers. ^(109,110) In posttest (post 1) appears that participants who have social support, dietary planning for weight control, and physical activity, and they monitor their weight for fear of obesity behavior are better at adjusting to food impulse control. This indicates that there is a continuity of the relationship between healthy behaviors and the strengthening of some of them as a result of the program. In posttest 2 there was a continuous correlation between dietary impulse control and dietary planning. While, indicated the positive correlation between physical activity and dietary impulse control, dietary planning, monitoring body weight. Finally, the study found a positive

correlation between dietary planning and family & friends' support. The previous study performed by ⁽¹¹¹⁾ indicated that the greater weight loss was a correlation with using dietary impulse control, weight reduction planning and monitoring, motivational support, information gathering, and self-monitoring strategies.

Conclusion:

The study conclude that the intervention through Health Beliefs Model showed a positive effect on many health behaviors that affect weight maintenance, including physical activity, controlling food impulses, dietary planning, monitoring body weight, and supporting family and friends to control weight. All of these behaviors led to a clear improvement in Weight control of the study group approximately three months after the start of the intervention.

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