



Enhancing Weight Control Behaviors among University Employees: Health Beliefs Model

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Abstract:

Background: Maintaining a healthy weight is difficult for most people. The build-up of extra body fat is characterized as overweight and obesity, a global health pandemic, as seen by the increasing incidence of overweight and obesity around the world.

Material and method: True experimental design, using a randomized controlled trial method, is carried out throughout the current study to identify the efficacy of health beliefs model through intervention in changing employees' behaviors related to weight control at university of Mosul for the period from January 10 th 2023 to March 15 th 2024.

Results: Findings of this study depict that there were statistically significant differences among all elements of the health belief model about to weight control and except the perceived barrier was the only belief that showed no significant changes over time. It also showed that there were statistically significant differences among employees' behaviors related to weight control.

Conclusions: This trial concluded that health intervention based on the health beliefs model shows the importance of maintaining weight and a positive influence on employees' health beliefs and behaviors towards weight control.

Keywords: Weight Control, Behaviors, Mosul University Employees, Health Beliefs Model.

Introduction:

Maintaining a healthy weight is difficult for most people. The buildup of extra body fat is characterized as overweight and obesity, a global health pandemic, as seen by the increasing incidence of overweight and obesity around the world. People that are overweight have a Body Mass Index (BMI) level from 25 to 30 kg per square meter, while obese people have a BMI of 30 kg/ square meter or more ⁽¹⁾. The body mass index is the most popular metric for determining whether a child, adolescent, or adult is obese. BMI is a height rate bodyweight measure that is computed as kilograms divided by meters squared (Kg/m²) from measured weight in (Kg) and height in (meters) ⁽²⁾. In epidemiology, the excess mass of fat defines overweight or obesity as the most commonly estimated anthropometric criteria. The most common indications are body mass in the weight /size, which aims to convert weight into a number independent of size, and measuring the thickness of certain folds of skin with a compass. in adults, BMI is the measurement by multiplying weight in (Kg) by squared height in (meters). It is widely accepted as the international standard of measurement ⁽³⁾. Obesity has been more common in recent decades around the world, with the average adult BMI increasing from 22 kilograms per square meter in 1975 to 24 kilograms per square meter in 2014. Male obesity rates have climbed from 3.2percent to 10.8 percent, while female obesity rates have from 22 kilograms per square meter in 1975 to 24 kilograms per square meter in 2014. From the standpoint of public health, obesity and overweight are significant risk factors for several chronic diseases, such as diabetes type two, heart diseases, and cancer. According to one survey, a two percent rise in society's average BMI results in a one yeas reduction in life expectancy ⁽⁴⁾. The main causes leading to the prevalence of obesity include excessive intake of high foods and sucrose-enriched drinks, as well as a lack of physical activity. The most effective treatment programs use a behavior therapy strategy that combines better food and eating habits, frequent exercise, and daily life modification

⁽⁵⁾. Overweight and obesity have become more common around the world in recent decades. According to international estimates from 2008, 1.6 billion persons who are 20 years old and above were overweight, around two hundred million men and approximately three hundred million women around the world suffer from obesity. According to projections, in 2030, In the United States, there would be greater than 65 million obese people than in 2011, with 11 million obese and overweight adults in the United Kingdom (UK). According to estimates, the average of obesity in UK adults would rise to 47 percent and 36 percent were female by 2035, and 60 percent for male and 50 percent for women by 2050 ⁽⁶⁾.

Methods and Materials:

True experimental design, using a randomized controlled trial method, is carried out throughout the current study to identify the efficacy of health beliefs model through intervention in changing employees' behaviors related to weight control at university of Mosul for the period from January 10 th 2023 to March 15 th 2024. The study was conducted at the University of Mosul, which is located on the northern side of the left part of the city. The University of Mosul is considered one of the largest educational and research institutions in the city of Mosul and the second largest in Iraq after the University of Baghdad. It includes 22 colleges in different disciplines in four colleges in the College of Engineering, Science, Medicine, and Education at the University of Mosul. The study sample consisted of 80 employees who participated in a training program for behaviors change. The study sample was selected from four colleges in the University of Mosul's includes Sciences, Engineering, Education, and Medicine Colleges. The intervention for the experimental group involved a health intervention lecture about weight control. Analyzed data using SPSS, Version 24 using descriptive statistics, inferential statistics, and mixed-design analysis of variance (ANOVA). ⁽⁷⁻⁷⁵⁾.

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

The table (1) showed that the ages of the participants in the study ranged from 20 to 60 years, and their average age was (39.99) years with a standard deviation of (0.83) The demographic information showed that the majority of the employees in the study group and the control group were male (60%), (67.7%), respectively. Most of the participants are

married people (85%), the study group (85%) for the control group, and the vast majority of both groups are engaged in office work (86.3%). Finally, most of the employees had a bachelor's degree (71.3%).

Table (2): Results of score range, weighted mean, and rank for change in HBM Concepts and intentions of weight control behaviors across study group.

HBM Concepts	Score Range	Weighted Mean			Range	Rank
		Pre-test	Post-test1	Post-test2		
P. severity	(1-5)	2.47	3.38	3.24	2.46	5
P. susceptibility	(1-5)	2.51	3.48	3.33	2.85	3
P. barriers	(1-5)	3.28	3.22	3.23	0.05	7
P. benefits	(1-5)	2.41	3.52	3.45	2.77	2
Cue to action	(1-5)	2.24	3.47	3.31	3.34	4
Perceived self-efficacy	(1-5)	2.22	3.19	3.09	2.60	6
Behavioral intention of weight control	(1-5)	2.78	3.83	3.76	3.6	1
Total Mean	(1-5)	2.55	3.44	3.34		

Table (2) revealed that (Range score, Mean, Total mean rank, and range). There was a clear change between (T1, T2, and T0) as a result of the educational program used. It turns out that (Behavioral intention of weight control, perceived benefits, and Perceived susceptibility) are the highest in terms of Weighted Mean, which are estimated to be in terms of (3.76, 3.45, 3.33) respectively.

Discussion

The table (1) showed that the ages of the participants in the study ranged from 20 to 60 years, and their average age was (39.99) years with a standard deviation of (0.83). The demographic information showed that the majority of the employees in the study group and the control group were male (60%), (67.7%), respectively. Most of the participants are married people (85%), the study group (85%) for the control group, and the vast majority of both groups are engaged in office work (86.3%). Finally, most of the employees had a bachelor's degree (71.3%). Another study conducted by (Black, 2021) indicated that all four

weight-related beliefs were linked to a desire to engage in healthy behavior. Higher self-esteem and fewer intents to engage in unhealthy weight-control practices were linked to weight controllability views, whereas higher weight should beliefs were linked to stronger dieting intentions and worse body satisfaction. Dieting intents were adversely connected with weight-neutral views, but self-esteem and body satisfaction were positively correlated. At post-test 2 many of the study factors that showed substantial correlations at (T1) remained in correlation at this time (T2), showing that the correlation remained stable after two months of intervention. However, there is a positive association between severity and susceptibility, susceptibility and cue to action, and a positive correlation between self-efficacy and severity, susceptibility, obstacles, and benefits, as well as a positive correlation between behavioral intention and severity. This could be due to education, as the more participants believed in the susceptibility and severity of overweight and obesity, as well as the benefits of maintaining a healthy weight, the higher their self-confidence and

intentions to follow healthy weight-control practices. Table (2) revealed that (Range score, Mean, Total mean rank, and range). There was a clear change between (T1, T2, and T0) as a result of the educational program used. It turns out that (Behavioral intention of weight control, perceived benefits, and Perceived susceptibility) are the highest in terms of Weighted Mean, which are estimated to be in terms of (3.76, 3.45, 3.33) respectively.

Conclusion:

This study concluded that the trial concluded that health intervention based on the health beliefs model shows the importance of maintaining weight and a positive influence on employees' health beliefs and behaviors towards weight control.

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