



Original Research

Improving University Staff Members' Weight Control Practices: 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 Improving University Staff Members' Weight Control Practices.

Keywords: Improving, University Staff Members', Weight Control Practices, 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 3.2 percent 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 year 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).⁽⁷⁻¹⁰⁷⁾.

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 ⁽¹⁰⁸⁻¹¹¹⁾ 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 Improving University Staff Members' Weight Control Practices.

Reference:

1. Fleary SA, Ettienne R. Inherited or behavior? What causal beliefs about obesity are associated with weight perceptions and decisions to lose weight in a US sample?. *International Scholarly Research Notices*. 2014;2014(1):632940.
2. Funk LM, Jolles SA, Voils CI. Obesity as a disease: has the AMA resolution had an impact on how physicians view obesity?. *Surgery for obesity and related diseases*. 2016 Aug 1;12(7):1431-5.
3. Gill L, Sullivan KA. Boosting exercise beliefs and motivation through a psychological intervention designed for poststroke populations. *Topics in stroke rehabilitation*. 2011 Sep 1;18(5):470-80.
4. Goodarzi A, Heidarnia A, Tavafian SS, Eslami M. Predicting oral health behaviors among Iranian students by using health belief model. *Journal of education and health promotion*. 2019 Jan 1;8(1):10.
5. Hartmann-Boyce J, Aveyard P, Piernas C, Koshiaris C, Velardo C, Salvi D, Jebb SA. Cognitive and behavioural strategies for weight management in overweight adults: Results from the Oxford Food and Activity Behaviours (OxFAB) cohort study. *PLoS One*. 2018 Aug 10;13(8):e0202072.

6. Younis NM, Ibrahim RM, Ahmed MM. Lifestyle of Elderly in Mosul Governorate: A Cross-Sectional Study. *Journal of Current Medical Research and Opinion*. 2024 Sep 1;7(09):3515-24.
7. Ibrahim RM, Ahmed MM, Younis NM. Apply the Health Beliefs Model among students to Enhancing Intentions: Randomized Control Trail. *Journal of Current Medical Research and Opinion*. 2024 Sep 1;7(09):3505-14.
8. Ibrahim RM, Ahmed MM, Younis NM. Using the Behavioral Motivation to Enhancing Behavior of Students Towards Addiction. *Journal of Current Medical Research and Opinion*. 2024 Jul 22;7(07):3337-44.
9. Bura'a LN, Younis NM. An Interventional Program on Nurses Knowledge and Practice towards Phototherapy in Neonatal Care Units. *Int J Membrane Sci Technol*. 2023 Jul 2;10(2):1428-32.
10. Younis NM. Evaluation the health lifestyle of kindergarten students at Mosul city/Iraq. *International Journal of Medical Toxicology & Legal Medicine*. 2023;26(1and2):148-52.
11. Younis NM. Prevalence of Electronic Hookah and Risk Factors among University Students in Mosul City/Iraq. *Int J Membrane Sci Tech*. 2023 Jul 2;10(2):1422-7.
12. Ahmed MM, Naji AB, Younis NM. Efficacy of an educational program based on health belief model to enhancing weight control behaviors among employees in the University of Mosul: a randomized controlled trial. *Revis Bionatura*. 2023;8(3):28.
13. Younis NM, Ahmed MM, Dhahir NM. Knowledge and Attitude toward older adults among Nursing Students. *Signal*. 2012;84:70.
14. Mohammad FH, Noori LK, Younis NM. Assessment of Nutritional habits among Mosul University Students regarding breakfast. *Rawal Med J*. 2023 Mar 3;48(1):96.
15. Ibrahim RM, Ahmed MM, Younis NM. Mental health problems with aging: Across Sectional Study. *Journal of Current Medical Research and Opinion*. 2024 Aug 17;7(08):3454-61.
16. Younis NM, Ahmed MM, Ibrahim RM. Application the Beliefs Model to change the Beliefs Concerning the drug Abuse. *Journal of Current Medical Research and Opinion*. 2024 Aug 17;7(08):3445-53.
17. Ahmed MM, Younis NM, Abdulsalam RR. Assessment of changes in sleep habits in elementary students during covid_19 lockdown. *International Journal of Medical Toxicology & Legal Medicine*. 2022;25(1and2):76-80.
18. Adea MK, Lefta RM, Younis NM. Impact of psychosocial aspect parameters on psoriasis patients' quality of life at outpatient clinic in Al-Dewania City, Iraq. *Rawal Med J*. 2022 Dec 11;47(4):892.

19. Ibrahim RM, Ahmed MM, Younis NM. Modifications in Sleep Patterns During the COVID-19: Review of Subject. *Journal of Current Medical Research and Opinion*. 2024 Jul 25;7(07):3354-62.
20. Taher AK, Younis NM. Effect of a trans theoretical model in improving behaviors of health care workers related to electronic hookah in Mosul, Iraq. *Rawal Medical Journal*. 2023 Mar 3;48(1):228-.
21. Ibrahim RM, Idrees NH, Younis NM. Epidemiology of leukemia among children in Nineveh Province, Iraq. *Rawal Med J*. 2023 Mar 3;48(1):137.
22. Ali HA, Abbas FF, Younis NM. Mothers' knowledge and attitudes towards breastfeeding in Thi-Qar City, Iraq. *Rawal Med J*. 2023 May 27;48(2):514.
23. Ahmed MM, Ibrahim RM, Younis NM. Perceived Susceptibility toward Smoking among Students. *Journal of Current Medical Research and Opinion*. 2024 Jul 12;7(07):3217-25.
24. Ahmed MM, Younis NM, Dhahir NM, Hussain KN. Acceptance of Covid-19 vaccine among nursing students of Mosul University, Iraq. *Rawal Medical Journal*. 2022 Apr;47(2):254.
25. Abbas AS, Younis NM. Efficacy of Pender's Health Promotion-based Model on Intervention for Enhancing University of Mosul Hypertensive Employees' Eating Behaviors: A randomized Controlled Trial. *Revis Bionatura*. 2022;7(3):35.
26. Younis NM, Mahmoud M, Ahmed A. University Students' Attitude Towards E-Learning. *Bahrain Medical Bulletin*. 2021;43(2):460-2.
27. Younis NM, Taher AK. Efficacy of Trans Theoretical Model Intervention for Improving Behaviors related to Electronic Hookah Smoking among Healthcare Workers in Mosul Hospital: A Randomized Control Trail. *Int J Membrane Sci Tech*. 2023 Jul 2;10(2):1433-9.
28. Younis NM. Epidemiology of Hepatitis B-virus in Nineveh province: Retrospective Study. *Int J Membrane Sci Technol*. 2023 Jul 2;10(2):1440-4.
29. Abbas AS, Younis NM. Assessing the effect Pender's Model in changing employees' Eating Behaviors suffer hypertension at Mosul University Iraq. *Pakistan Journal of Medical & Health Sciences*. 2022 Jul 29;16(06):476-.
30. Ayed AY, Younis NM, Ahmed MM. Comparison of infection severity of vaccinated and unvaccinated health workers with Corona Virus: A cohort study. *Journal of Education and Health Promotion*. 2023 Sep 1(1):336.
31. Younis N. Assessment of healthy lifestyle habits among Mosul university students. *Int J Adv Nurs Stud*. 2014 Jul 1;3(2):69-73.
32. Hussein AA, Younis NM, Ahmed MM. Health Promoting Lifestyle profile Among Nursing Students in Mosul University. *International Journal of Psychosocial Rehabilitation*. 2020;24(09).

33. Younis NM, Naji AB. Assessing the effect of an educational intervention based on health belief model on preventive behaviors of addiction. *Pakistan J Med Health Sci.* 2021;15(3):813-7.
34. Younis NM, Naji AB. Evaluation of preventive behaviors of addiction among students: Application of health belief model. *Indian J Forensic Med Toxicol.* 2021 May 17;15(4):1273-8.
35. Bura'a LN, Younis NM. Educational Program of Nurses Practices Towards to Phototherapy at Neonatal Care Units. *Pakistan Journal of Medical & Health Sciences.* 2023 Jun 9;17(04):530-.
36. Younis NM, Naji AB. The effect of health education based on the health belief model about changing the belief related to substance use among university students in Mosul city-Iraq. *Annals of the Romanian Society for Cell Biology.* 2021 May 4:14687-98.
37. Younis NM, Hussein AA, Ahmed MM, Younis NM. Quality of life and occupational hazards among cement factory workers in Mosul city. *QoL and Occupational Hazards among Cement Factory Workers.* 2021;24(2):1-8.
38. Younis NM. Assessment for Mortality Rate Children Under Five Years in Mosul City. *Journal of Kufa for Nursing Science Vol.* 2014;4(1).
39. Jasem WM, Younis NM. Assessment of Nurses' Performance Regarding Nursing Documentation in Pediatric Wards at Mosul Hospitals. *Journal of Current Medical Research and Opinion.* 2024 Apr 12;7(04).
40. Ahmed AS, Younis NM. Assessment of Nurses Knowledge Regarding Blood Exchange Transfusion at Mosul Neonatal Care Units. *Journal of Current Medical Research and Opinion.* 2024 Apr 12;7(04):2285-8.
41. Younis NM, Naji A. Efficacy of Health Belief Model-Based Training in Changing the Beliefs about Substance use. *Kufa Journal for Nursing Sciences.* 2021 Jun 25;11(1):221-9.
42. Ahmed MM, Younis NM, Hussein AA. Association between Internet Addiction and Sleep disturbance Among Nursing Students. *International Journal of Psychosocial Rehabilitation.* 2020;24(09).
43. Younis NM, Salih YH. Nursing Students' Knowledge about Caring for the Elderly. *Journal of Current Medical Research and Opinion.* 2024 Apr 15;7(04):2320-7.
44. Abed SM, Suleiman AA, Ahmed SS, Younis NM, Ahmed MM. Road Traffic Accident Characteristics And Injury Outcomes Among Victims In Mosul City. *Journal of Pharmaceutical Negative Results.* 2023 Sep 15:4102-8.
45. Saad WI, Kumait AS, Younis NM. Workplace challenges and violence against nurses: subject review. *Pakistan Journal of Medical & Health Sciences.* 2023 Mar 2;17(01):509-.

46. Taher AK, Younis NM. Evaluation Of Processes Of Change Related To Trans Theoretical Model Of Enhancing Behaviors Of Healthcare Workers User Electronic Hookah. *Journal of Pharmaceutical Negative Results*. 2023 Mar 16;3190-3.
47. Alkaisy MS, Ahmed SS, Alsydan MS, Suleiman AA, Younis NM, Ahmed MM. Post-Traumatic Stress Disorder Following Wars and Repression at Mosul City-Iraq. *Indian Journal of Forensic Medicine & Toxicology*. 2021 May 17;15(3):1240-5.
48. Younis NM, Ali MT, Hasan MK, Khalaf MS, Abdullah MN, Ahmed YL, Abdulkadir MN. Knowledge and attitude of collegians at university in Mosul towards the prevention and control of COVID-19. *Turkish Journal of Physiotherapy and Rehabilitation*. 2021:7975-8.
49. Younis NM, Ahmed MM. Knowledge and Compliance with Standard Precautions among Nursing Students in Mosul University. *Assiut Scientific Nursing Journal*. 2014 Jun 1;2(3):152-9.
50. Younis NM, Ahmed MM, Hussein AA. Epidemiology Of Deaths From Injuries In Nineveh Governorate (2008_2012). *kufa Journal for Nursing sciences*. 2014;4(2).
51. Younis NM, Ahmed MM. knowledge and Attitude of Nursing Students' towards Palliative Care. *Journal of Current Medical Research and Opinion*. 2024 Apr 20;7(04):2345-53.
52. Younis NM, Ahmed MM. Road Traffic accidents in Nineveh Province (2017_2021): A retrospective study. *Journal of Current Medical Research and Opinion*. 2024 Apr 20;7(04):2354-62.
53. Ibrahim RM, Younis NM, Ahmed MM. Knowledge and Attitude of University Students Regarding Rhinoplasty. *Journal of Current Medical Research and Opinion*. 2024 May 1;7(05):2411-9.
54. Hussein AA, Younis NM, Ahmed MM. Assessment of Diabetic Self-Management among Patients with Diabetic Type II. *Journal of Current Medical Research and Opinion*. 2024 May 1;7(05):2402-10.
55. Ahmed MM, Ibrahim RM, Younis NM. Nursing Students' Attitudes about Organ Donation in University of Mosul/Iraq. *Journal of Current Medical Research and Opinion*. 2024 May 1;7(05):2430-7.
56. Ahmed MM, Ibrahim RM, Younis NM. Assessment of Sleep Habits among Nursing Students in Mosul City/Iraq. *Journal of Current Medical Research and Opinion*. 2024 May 1;7(05):2420-9.
57. Ahmed MM, Ali Hussein A, Youns NM. Knowledge, attitude, and practice (KAP) of voluntary blood donation among nurses in Mosul Teaching Hospital. *Mosul Journal of Nursing* (Print ISSN: 2311-8784 Online ISSN: 2663-0311). 2017 Jul 1;5(1):24-32.
58. Ahmed MM, Ibrahim RM, Younis NM. Assessment of Nursing Students' Attitudes Toward Obese Individuals. *Journal of Current Medical Research and Opinion*. 2024 May 4;7(05):2468-76.

59. Younis NM, Ibrahim RM, Ahmed MM. Apply Health Beliefs Model Towards of Substance Abuse. *Journal of Current Medical Research and Opinion*. 2024 May 4;7(05):2460-7.
60. Ibrahim RM, Ahmed MM, Younis NM. Prevalence of COVID-19 among Students in Mosul University. *Journal of Current Medical Research and Opinion*. 2024 May 4;7(05):2477-88.
61. Younis NM, Ahmed MM, Dhahir NM. Knowledge and Attitude toward older adults among Nursing Students. 2021. *PJM HS.*;15(3).
62. Ahmed MM, Ibrahim RM, Younis NM, Ahmed SS. Nurses Knowledge and Practice about adverse Effects Following Immunization at Primary Health Care Centers in Mosul City. *Journal of Current Medical Research and Opinion*. 2024 May 15;7(05):2536-42.
63. Hussein AA, Ahmed MM, Younis NM, Ibrahim RM. Apply Pender's Health Promotion Towards Hypertension of Employees in Mosul City/Iraq. *Journal of Current Medical Research and Opinion*. 2024 May 15;7(05):2529-35.
64. Ibrahim RM, Ahmed MM, Younis NM. Benefits and Challenges of Healthy Dieting among Nursing Students. *Journal of Current Medical Research and Opinion*. 2024 May 15;7(05):2521-8.
65. Allawi RH, Ahmed MM. Assessment of Nurse's Knowledge Towards Diabetic Ketoacidosis among children in Mosul City/Iraq. *Rawal Medical Journal*. 2023 Apr;48(2).
66. Allawi RH, Ahmed MM. Assessment of Nurses' Practices Towards Children with Diabetic ketoacidosis. *Pakistan Journal of Medical & Health Sciences*. 2023 Jun 2;17(04):444-.
67. Kaleel MI, Mahmoud MA. Assessment of Mothers' Knowledge about Breastfeeding Premature Infants in Mosul city. *Journal of Current Medical Research and Opinion*. 2024 Apr 19;7(04):2328-33.
68. Mahmoud MM, Ahmed MM. Assessment of Self-Management Behavioral Skill among Patients with Diabetic type II in Mosul City. *Journal of Current Medical Research and Opinion*. 2024 Apr 19;7(04):2334-9.
69. Ibrahim RM, Al Hafidh NM. Acute Diarrhea in Exclusively Breast Fed Infants in relation to Zinc Level. *Pak J Med Health Sci*. 2021;15:1431-5.
70. Younis NM, Ahmed MM, Abdulsalam RR. Assessing quality of life in palliative care. *International Journal of Medical Toxicology & Legal Medicine*. 2021;24(3and4):115-8.
71. Muwfaq YN, Ahmed MM, Abdulsalam RR. Assessing Quality of Life in Palliative Care. *Bahrain Medical Bulletin* 2021;43(3):594-6.
- 72 Ahmed MM, Younis NM, Hussein AA. Prevalence of tobacco use among health care workers at primary health care centers in Mosul City. *Pakistan Journal of Medical and Health Sciences*. 2021;15(1):421-4.

73. Younis NM, Ahmed MM, Hussein AA. Nurses' knowledge, attitude and practice towards preparedness of disaster management in emergency of mosul teaching hospitals. *Medico-Legal Update*. 2020 Jul 1;20(3):775-9.
74. Naji AB, Ahmed MM, Younis NM. Adherence the preventive measure against for covid-19among teachers at university of mosul. *International Journal of Medical Toxicology & Legal Medicine*. 2021;24(3and4):273-7.
75. Ibrahim RM, Ahmed MM, Younis NM. Correlations Between Health Beliefs Model and substance use among University students. *Journal of Current Medical Research and Opinion*. 2024 Jun 12;7(06):2810-8.
76. Ahmed MM, Ibrahim RM, Younis NM. Enhancing Weight Control Behaviors among University Employees: Health Beliefs Model. *Journal of Current Medical Research and Opinion*. 2024 Jun 12;7(06):2801-9.
77. Younis NM, Ahmed MM, Ayed AY. HIV knowledge and preventive Standards Precautions Among Healthcare Workers in Blood Transfu-sion Centers.
78. Younis NM, Ibrahim RM, Ahmed MM. Health Problems Related to Quality of Life among Aging in Iraq. *Journal of Current Medical Research and Opinion*. 2024 Jun 24;7(06):3015-24.
79. Younis NM, Ibrahim RM, Ahmed MM. Independency Domains Among Old Age in Mosul City/IRAQ. *Journal of Current Medical Research and Opinion*. 2024 Jun 24;7(06):3025-33.
80. Ayed AY, Younis NM, Ahmed MM. Teachers' knowledge about communicable disease control at primary schools in Mosul City: A cross-sectional study. *International Journal of Academic Medicine*. 2024 Apr 1;10(2):75-9.
81. Younis NM, Ibrahim RM, Ahmed MM. Life of adaption among Old Adults in Nineveh Governorate. *Journal of Current Medical Research and Opinion*. 2024 Jul 1;7(07):3099-106.
82. Younis NM, Ibrahim RM, Ahmed MM. Personal Hygiene Towards Old Age. *Journal of Current Medical Research and Opinion*. 2024 Jul 1;7(07):3107-113.
83. Younis NM, Ahmed MM, Dhahir NM. Knowledge and Attitude toward older adults among Nursing Students. 2021.
84. Ibrahim RM, Ahmed MM, Younis NM. Physical activity among Elderly in Mosul City/IRAQ. *Journal of Current Medical Research and Opinion*. 2024 Jul 5;7(07):3149-54.
85. Ibrahim RM, Ahmed MM, Younis NM. Psycho-Social Aspects Among Elderly in Nineveh Governorate. *Journal of Current Medical Research and Opinion*. 2024 Jul 5;7(07) : 3155-63.
86. Ibrahim RM, Ahmed MM, Younis NM. Perceived Benefits Related to Drug Abuse among Students. *Journal of Current Medical Research and Opinion*. 2024 Jul 8;7(07):3179-86.

87. Ibrahim RM, Ahmed MM, Younis NM. Perceived Barriers for substance Abuse among Students. *Journal of Current Medical Research and Opinion*. 2024 Jul 8;7(07):3171-8.
88. Ibrahim RM, Ahmed MM, Younis NM. Correlation Between HBM and Weight Control among Employee University. *Journal of Current Medical Research and Opinion*. 2024 Jun 17;7(06):2870-8.
89. Al-Ghurairi SA, Younis NM, Ahmed MM. Prevalence of weight gain among students of Mosul University, Iraq during quarantine 2020. *Rawal Medical Journal*. 2022 Jul;47(3).
90. Ahmed MM, Younis NM, Hussein AA. Violence Towards Nurses Staff at Teaching Hospitals in Mosul City. *Indian Journal of Forensic Medicine & Toxicology*. 2020 Jul 1;14(3).
91. Ahmed MM, Ibrahim RM, Younis NM. Perceived Seriousness related to Smoking among students. *Journal of Current Medical Research and Opinion*. 2024 Jul 13;7(07):3234-43.
92. Ahmed MM, Younis NM, Ibrahim RM. Evaluation of Behavioral Control aimed at Improving Students' Behavior Concerning Substance abuse. *Current Clinical and Medical Education*. 2024 Jul 19;2(7):92-9.
93. Ahmed MM, Ibrahim RM, Younis NM. Behavioral Intention to Improvement Behavior of Students' related to Drug Use: Apply the Health Beliefs Model. *Current Clinical and Medical Education*. 2024 Jul 19;2(7):100-6.
94. Younis NM, Ahmed MM, Dhahir NM. Prevalence of coronavirus among healthcare workers. *International Journal of Medical Toxicology & Legal Medicine*. 2021;24(1and2):267-70.
95. Younis NM, Ibrahim RM, Ahmed MM. Relationship between Quality of Life and Lifestyle of Health Old Age. *Current Clinical and Medical Education*. 2024 Aug 1;2(8):18-28.
96. Ibrahim RM, Ahmed MM, Younis NM. Correlation between Physical Activity and Quality of Life of Elderly. *Current Clinical and Medical Education*. 2024 Aug 1;2(8):9-17.
97. Younis NM, Ibrahim RM, Ahmed MM. Relationship between Personal Hygiene and Elderly Health. *Current Clinical and Medical Education*. 2024 Aug 4;2(8):199-206.
98. Ibrahim RM, Ahmed MM, Younis NM. Association between Psychological Problem and Health old age. *Current Clinical and Medical Education*. 2024 Aug 4;2(8):190-8.
99. Younis NM, Ahmed MM, Ibrahim RM. Motivation of Application Health Beliefs Models With Substance Abuse. *Current Clinical and Medical Education*. 2024 Aug 10;2(8):236-43.
100. Younis NM, Ahmed MM, Ibrahim RM. Confidence of Application Health Beliefs Models with Addiction. *Current Clinical and Medical Education*. 2024 Aug 10;2(8):218-26.

101. Younis NM, Ahmed MM, Ibrahim RM. Health Beliefs Model in Enhancing the Beliefs Concerning Healthy Weight. *Current Clinical and Medical Education*. 2024 Aug 10;2(8):227-35.
102. Ibrahim RM, Ahmed MM, Younis NM. Effectiveness of a Model-Based Intervention Based on Health Beliefs in Altering the Beliefs of Students Regarding Substance use. *Journal of Current Medical Research and Opinion*. 2024 Jul 29;7(07):3363-72.
103. Ibrahim RM, Younis NM, Ahmed MM. Sleep Disorder with Internet Addiction in University Students: A Cross-Sectional Study Correlational. *Journal of Current Medical Research and Opinion*. 2024 Aug 27;7(08):3492-504.
104. Ibrahim RM, Younis NM, Ahmed MM. The relationship between factory workers' quality of life and occupational hazards. *Current Clinical and Medical Education*. 2024 Aug 27;2(8):369-80.
105. Nasir MY, Rian MI, Nada HI. Prevalence of snake bite among children in Nineveh Governorate/Iraq: A retrospective study. *International Journal of Medical Toxicology & Legal Medicine*. 2022;25(3and4):166-9.
106. Bura'a LN, Younis NM. Nurses knowledge regarding to phototherapy at neonatal care units in Mosul City, Iraq. *Rawal Med J*. 2023 May 27;48(2):379.
107. Ibrahim RM, Ahmed MM, Younis NM. Nursing Students' Information Toward Distraction Techniques for Children Undergoing Procedures. *Journal of Current Medical Research and Opinion*. 2024 May 23;7(05):2597-605.
108. Muwfaq Younis N. Efficacy of Health Beliefs Model-Based Intervention in Changing Substance Use Beliefs among Mosul University Students: A Randomized Controlled Trial. *Revis Bionatura* 2022; 7 (2) 35.
109. Ahmed MM, Younis NM, Ibrahim RM. Apply the HBM in Changing the Beliefs Related to Weight Control Behaviors among Employees. *Journal of Current Medical Research and Opinion*. 2024 Jul 22;7(07):3345-53.
110. Younis NM, Ahmed MM, Ibrahim RM. Motivation of Students for Enhancing the Beliefs related to Substance abuse: Apply Health Beliefs Model. *Journal of Current Medical Research and Opinion*. 2024 Sep 5;7(09):3549-58.
111. Ibrahim RM, Idrees NH, Younis NM. Knowledge about Type 1 Diabetes in Children among Nursing Students of the University of Mosul. *The Malaysian Journal of Nursing (MJN)*. 2024 Jul 25;16(1):117-23.