

Health Beliefs Model in improving smoking Beliefs among Mosul Students

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Abstract:

Substance use is inveterate trouble which is associated with significant morbidity and mortality. These troubles also account for important health care employment and medical costs. However, the Substance use problems are associated with capitalize health retro gradation, weakness and death due to impacts and exceed. There is growing concern about the effects of conflict and wars on substance use in Iraq. To determine the efficacy of Health Belief Model-based intervention in changing health belief related to substance use of university students.

Experimental design, using a randomized controlled trial approach, is carried throughout the current study to determine the efficacy of health beliefs model-based intervention in changing the belief related to substance use among university students in Mosul City for period from 26-November 2019 to 1-March 2021. The study sample consisted of 80 students who participated in training program for behaviors change. The intervention for the experimental group involved a health education lecture about substance use. Analyzed data using SPSS, Version23 using both descriptive statistics, inferential statistics (Means, and SD, Number and percentage). This results of revealed that there were statistically significant differences among all concepts of the Health Belief Model related to substance use, add to behavioral motivation, behavioral control and intension) over time. On the contrary, the perceived barrier was the only belief that showed no significant changes over time. This study concluded that designing an HBM-based study could affect students' understanding and their behaviors in the field of substance abuse. Considering the positive correlation between construct of HBM, particularly in "perceived benefits and perceived severity" related to students' beliefs.

Keywords: Health Beliefs Model, smoking, Beliefs

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INTRODUCTION

Substance use is inveterate trouble which is associated with significant morbidity and mortality. These problems also account for important health care employment and medical costs ^{1,2}. Substance use disorders and intemperance represent universal public health problem of substantial socioeconomic inclusion ^{3,4}. Many clinical studies signalize that there is an association between substance use and personality troubles with guide that personality pathology may affect both an etiology and course of substance use troubles ^{5,6}. Substance use problems are associated with capitalize health retro gradation, weakness and death due to impacts and exceed ^{7,8}. There is growing concern about the effects of conflict and wars on substance use in Iraq ^{9,10}. It emerged that substance abuse can have an effect on society systems do not only serve as a health concern but also as a social issue and other opioid addictions, too health issues, coupled with social disadvantage ^{11,12}. Students are among the groups with higher drug risk abuse because they don't know the illegal drugs' outcomes yet have no right convictions about them ¹³. Substance use "alcohol, tobacco, hookah and illicit drugs" is a big issue of the world today ^{14,15}. Substance use causes clinical, practical and significant sickness such as health problems, inability and defeat to meet responsibilities at work, school, house and university¹⁶. Usage of substance by young adults. In a 2010 survey it was found that approximately 27 million psychological and social disorders were triggered by the use of "high-risk" drugs that posed a danger to their health. Around 300,000 casualties in 2015 were caused by substance use disorders ¹⁷. In terms of drug use disorders, evidence now shows that during puberty, more than (85 per cent) of those who meet requirements for a drug use disturbance early in their lifetime do so. Unlike adulthood, which transmits adolescents without meeting requirements for a drug use problem, it is unlikely that one will ever grow ^{18,19}. However, preparing college has historically been looked a defensive factor against the development of substance use troubles in new decades substance use has become one of the most diffuse health troubles on university in the United States ²⁰⁻¹²⁰. According to the United States study on medicine and criminality the number of alcoholism users was between (155-250 million) in 2013, approximately (5.3- 7.5%) of the people aged 15 to 65 years old. ^{121,122}, and SUD prevalence is expected to growing over time. Genetic factors involved in SUD etiology with factor implicated in the regulation of several neurobiological system (including dopaminergic and glutamatergic) found to be significant ²³. In 2017, (more 70,000 population) died from medicine overdoses unmatched the number of deaths from HIV, vehemence or traffic accidents at their peaks ¹²⁴. Smoking use is the single most block able cause of death in the United States. Although the 2014 Surgeon General's statement the Health successive of Smoking (50 Years) of Progress, demonstrated that the spread of stream smoking is on the refuse the report confirms the need to further monitor types of use for all tobacco products, particularly as disparity in use persevere and alternative forms of smoking use are rising in publicity among young ¹²⁵. Mousawi,2014, found in Iraqi studies on secondary school and university students reported smoking use rates spreading from (3.2- 21%). However, to the World Health Organization (WHO), record (3.3 million) deaths in the world are attributable to alcoholism in 2012¹²⁶, this statement specified that unintentional injuries comprised the second largest part of alcohol concerning deaths after cardiovascular diseases and that a large plurality of alcohol concerning deaths and injuries in the world are way traffic concerning and happen in developing countries. The most common age ambit of narcotic abusers in the world is (18 - 25) years. Some of students are at these ages and narcotic abuse increase has been showed in them, among illegal drugs with consuming of (3.8%) is the most common abused narcotic in the world ^{127,128}.

Methodology:

Experimental design by using the random controlled trial approach is conducted to determine the efficacy of the HBM in changing the belief related to substance use among university students in Mosul City for during from 26 of November / 2019 till 1 of March /2021. A probability (simple random sample) of (N=80) undergraduate student in different specialties would be selected. The study sample will be recruited from (4) colleges in the University of Mosul's Engineering, Sciences, Medicine and Education Colleges. A sampling pool consisted of distributed at four college in Mosul University included (Political Science, Engineering, Sciences, and Nursing Colleges). The sample will be randomly assigned into experimental and control groups of (40) undergraduate student for each group and are

evenly distributed with esteem to their age and the colleges. Such chosen is employed by pool of topics that have the criteria contain students who have using on (Smoking, Hookah, Drug abuse and Alcohol).The study is carried out in Iraq. In University of Mosul is a public university situated in Mosul. It's one of the largest educational and research centers in the Mosul City, and the second largest in Iraq. Contain of 22 colleges in different specialties divided in to four colleges in the University of Mosul's Engineering, Sciences, Medicine and Education College. Mosul University is located in the north side of the center of Mosul City at the right braid of the Tigris River.The data are collected from students in University of Mosul of selected 22 colleges in Mosul City. They are four colleges in the University ofMosul's Political Science, Engineering, Sciences, and Nursing Colleges, from the period from 19 of January up to the 27 of February / 2020. Data is analyzed using the "Statistical Package for Social Science" (SPSS) software for Windows (V:23). We calculated mean, standard deviation, frequency and percentage to describe the entrant of the study. Pearson chi-square and t-test are used to explore the homogeneity of characteristics between experimental and control groups at baseline (Pretest)

Results:

Table 1: Descriptive Statistics Measuring Change in Health Belief Model Concepts, Motivation, Behavioral Control and Behavioral Intensions Across Study Group and Over Times

HBM Concepts	Groups	<i>M (SD)</i>		
		(T 0)	(T 1)	(T 2)
Perceived Susceptibility	Exp	2.42 (0.76)	3.25 (0.41)	3.21 (0.46)
	Con	2.39 (0.48)	2.44 (0.70)	2.51(0.62)
Perceived Severity	Exp	3.12 (0.71)	3.89 (0.38)	3.82 (0.33)
	Con	3.17 (0.67)	3.28 (0.79)	3.23 (0.64)
Perceived Benefits	Exp	2.91 (0.76)	3.78 (0.41)	3.63 (0.90)
	Con	2.96 (0.78)	3.13 (0.72)	3.11 (0.88)
Perceived Barriers	Exp	2.75 (0.59)	2.69 (0.50)	2.70 (0.56)
	Con	2.91 (0.56)	2.93 (0.51)	2.87 (0.70)
Cue to action	Exp	2.31 (0.70)	3.18 (0.78)	3.35 (0.40)
	Con	2.27 (0.61)	2.61 (0.62)	2.83(0.61)
Perceived Self-Efficacy	Exp	2.27 (0.91)	3.22 (0.60)	3.26 (0.56)
	Con	2.41 (0.99)	2.56 (1.00)	2.55 (0.95)
Motivation	Exp	2.77 (0.76)	3.62 (0.36)	3.58 (0.48)
	Con	2.69 (0.90)	2.78 (0.77)	2.72 (0.91)
Behavioral Control	Exp	2.83 (0.99)	3.38 (0.30)	3.36 (0.45)
	Con	2.73 (0.54)	2.81(0.51)	2.89 (0.59)
Behavioral Intentions	Exp	2.81(1.05)	4.07 (0.70)	3.71 (0.69)
	Con	2.92(0.86)	3.08 (1.02)	3.04 (0.89)

Table 1: indicated that before the intervention, mean scores for all concepts of HBM, adds to Motivation, Control, and behaviors intensions of students they were almost equal. However, after the intervention were significantly different in the study group, while it was not significant in the control group. The difference was higher among the intervention group than the control group and it was positive for all concepts except for perceived barriers. This issue indicates that education caused significant increase in scores of sensitivities, severity, perceived benefits, cues to action, self-efficiency, motivation, behavioral control and intensions. It further reduced perceived barriers of students in the intervention group.

Table 2: Repeated Measures ANOVA Tests the health beliefs model in changing the belief related to substance use among university students

Health Belief Model	"Repeated Measures ANOVA Tests"			
	F	P	(η^2)	O.P.
Main time effects	26.075	0.000	0.404	1.000
Between group effects	7.877	0.006	0.092	0.792
Groups interaction overtime	11.948	0.000	0.237	0.994

The findings of Table 5 show that the interaction of time and group is significant ($F= 11.948, p= 0.000$) and that the key impact of time is significant ($F= 26.075, p= 0.000$) in the subject's test. And the test between groups shows the importance of the variable group $F= (7.877, p= 0.006)$ there.

Discussion:

Table (1). This means that the students' belief was low prior to implementation the intervention at pretest. It was also found that there were no statistically significant differences between study and control groups ($p > 0.05$) in the score of the students' beliefs towards all concepts of Health Belief Model related to substance use at pretest (table 4). This means that all students who participated in the study (study and control groups) were homogeneous and they had the same information and knowledge about substance use at baseline. After that, all sessions of the intervention had been given for study group participants only. After completion the intervention, a posttest-1 was carried out for both groups (study and control) .The results showed that there was a clear change in mean except for perceived barriersfor a study group. This indicates that the interference has become positively affected .The main purpose of this step was to evaluate the outcomes of the educational program,on the contrary to the control group.And then after (2) months, a posttest-2 was also performed for both groups to investigate the efficacy of the education program. The main purpose of this step was to identify the efficacy of the educational program in retaining adequate information and knowledge by the study group participants.This research is consistent with the findings of studies performed on target group on substance use and the impact of education on the health belief model¹²⁹⁻¹⁵⁰.This result is consistent with the study of (Barjouny , et al., 2012) showed that there is a significant correlation between the health belief model parts and preventive behaviors of addiction and drug abuse and also a significant correlation between the variables of students and (HBM) in preventive behaviors of drug abuse ($P=0.002$)¹⁵¹⁻¹⁵² .This outcome is consistent with the (Fadaei et al., 2020) study that showed that there is a post-test level, the mean intervention and control groups scored substantially different; the preventive substance abuse in the intervention group, behaviors and their dimensions changed (p value < 0.001 and $t = 14.57$).In line with this study (Mahmood et al., 2018) who found after the introduction of a health education program, the knoweldge of drug use by students has increased significantly and this reflects the effectiveness of health education program to enhance the awareness of substance use amongst students. This study similar to (Nayak&Jose., 2018), this research also aligned with our results, as students' expectations regarding the use of drugs have clearly increased following the introduction of an education program with a (3.03) Mean gap¹⁵³⁻¹⁵⁸.

Conclusion:

This study concluded through the clear results, Health education through a health belief model demonstrates the importance of substance use prevention and has a positive impact on student perceptions of perceived susceptibility, perceived severity, perceived benefits of advised substance use stopping interventions in the prevention of addiction and reduction of different health hazards, Cues to action for activate "readiness" to quit within substance user and

self-efficacy for confidence in their ability to terminate use of substance and designing an HBM-based study could affect students' understanding and their behaviors in the field of substance abuse. Considering the positive correlation between construct of HBM, particularly in "perceived benefits and perceived severity " related to students' beliefs. These beliefs implied a significant correlation with each other and with the attention to the prevention of addiction.

Conflict of interest:

The author declares that there is no conflict of interest for this study.

Reference:

1. Maqbool, M., Dar, M. A., Rasool, S., Gani, I., & Khan, M. (n.d.). Substance use disorder and availability of treatment options(2018): an overview.
2. Mahmoud Mohammed Ahmed, NasirMuwfaqYounis and Ahmed Ali Hussein. 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), pp. 421–424
3. Whiteford, H. A., Ferrari, A. J., Degenhardt, L., Feigin, V., & Vos, T. (2015). The global burden of mental, neurological and substance use disorders: an analysis from the Global Burden of Disease Study 2010. *PloS One*, 10(2), e0116820.
4. Yu J, Ariza-Montes A, Giorgi G, Lee A, Han H. Sustainable relationship development between hotel company and its employees: Linking job embeddedness, job satisfaction, self-efficacy, job performance, work engagement, and turnover. *Sustainability*. 2020;12(17):7168.
4. Younis NM, Ibrahim RM, Ahmed MM. Health Problems among Elderly in Nineveh province, Iraq. *Current Clinical and Medical Education*. 2025 Dec 12;3(12):54-64.
5. Ahmed MM, Ibrahim RM, Younis NM. Evaluation of Nursing Students' Perceptions of Obese individuals. *Current Clinical and Medical Education*. 2025 Dec 6;3(12):1-0.
6. Younis NM, Ahmed MM, Ibrahim RM. Life of style in Internal Sections for University Students. *Current Clinical and Medical Education*. 2025 Dec 6;3(12):11-20.
7. Ahmed SS, Alkaisy MS, Ahmed MM, Younis NM. Evaluation of Audit Electroconvulsive Therapy Service in Psychiatric Unit at Mosul City. 2021
8. Younis NM, Ahmed MM, Ibrahim RM. The impact of Playing Video Games on Elementary School Pupils of Mosul City. *Current Clinical and Medical Education*. 2025 May 6;3(5):39-49.
9. Bura'a LN, Younis NM. Inspection of Nurses Techniques to Phototherapy in Neonatal Intensive Care Units: A cross-Sectional Study. *Current Clinical and Medical Education*. 2025 Mar 2;3(03):01-10.
10. Younis NM, Ahmed MM, Ibrahim RM. Evaluation of the Internal Areas' Standard of Living for University of Mosul Students. *Current Clinical and Medical Education*. 2025 May 6;3(5):29-38.
11. 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.
12. 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.
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. *RevisBionatura*. 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 AdvNurs 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-19 among 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 Transfusion 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. MuwfaqYounis N. Efficacy of Health Beliefs Model-Based Intervention in Changing Substance Use Beliefs among Mosul University Students: A Randomized Controlled Trial. *RevisBionatura* 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.
112. Ahmed MM, Hussein AA, Younis NM. Assessment of nursing student's beliefs about healthy dieting. *Journal of Education and Health Promotion*. 2024 Oct 1;13(1):408.
113. Ahmed MM, Ibrahim RM, Younis NM. Improving University Staff Members' Weight Control Practices: Health Beliefs Model. *Journal of Current Medical Research and Opinion*. 2024 Sep 11;7(09):3559-71.
114. Ibrahim RM, Ahmed MM, Younis NM. Weight Control and Health Beliefs Model: A Comparative Study. *Journal of Current Medical Research and Opinion*. 2024 Sep 11;7(09):3572-83.

115. Andreatta PB, Klotz JJ, Dooley-Hash SL, Hauptman JG, Biddinger B, House JB, Ahern K. Performance-based comparison of neonatal intubation training outcomes. *Advances in Neonatal Care*. 2015 Feb 1;15(1):56-64.
116. Luhaib YR, Younis NM. Utilization of Primary Health Care Services in Qayyarah City Northern Iraq. *Journal of Current Medical Research and Opinion*. 2024 Nov 19;7(11):3746-54.
117. Younis NM, Ibrahim RM, Ahmed MM. Evaluation of Nurses Practices Towards to Phototherapy: Cross-Sectional Study. *Journal of Current Medical Research and Opinion*. 2024 Nov 19;7(11):3735-45.
118. Jasem WM, Younis NM. Nurses' Practice Towards Nursing Documentation: Across-sectional Study. *Journal of Current Medical Research and Opinion*. 2024 Nov 25;7(11):3767-78.
119. Jasem WM, Younis NM. Nurses' knowledge Towards Nursing Documentation: A descriptive study. *Journal of Current Medical Research and Opinion*. 2024 Nov 25;7(11):3755-66.
120. Younis NM, Taher AK. Transtheoretical Model on changing Electronic Smoker-Related Behaviors among Caregiver. *Current Clinical and Medical Education*. 2025 Feb 25;3(2):43-51.
121. Younis NM, Ahmed MM, Ibrahim RM. Using the Nola Pender's Model in Health Promotion towards Hypertension of Employees in Nineveh province. *Current Clinical and Medical Education*. 2025 Mar 9;3(03):39-53.
122. Younis NM, Ahmed MM, Ibrahim RM. Quality of life for Students Universities in Internal Sections: A cross-Sectional Study. *Current Clinical and Medical Education*. 2025 Apr 4;3(4):1-1.
123. Younis NM, Ahmed MM, Ibrahim RM. Knowledge of Healthcare Giver Towards Pharmacovigilance: A Descriptive Study. *Current Clinical and Medical Education*. 2025 Apr 4;3(4):12-22.
124. Ahmed MM, Younis NM, Ibrahim RM. Pharmacovigilance Barriers for Healthcare Providers: A cross-sectional study. *Current Clinical and Medical Education*. 2025 May 1;3(5):18-28.
125. Younis NM, Ahmed MM, Ibrahim RM. Healthcare Provider Perceptions of Pharmacovigilance: A Cross-Sectional Investigation. *Current Clinical and Medical Education*. 2025 May 1;3(5):7-17.
126. Mnawer MS, Younis NM. Effectiveness of an Educational Program in Improving Nurses' Knowledge Towards Communicable Diseases. *Salud, Ciencia y Tecnología-Serie de Conferencias*. 2025(4):1584.
127. Wahab MA, Younis NM. Efficacy of an Educational Program Based Intervention in Improving Nurses' knowledge Toward Radiation Protection Measures: A Randomized Controlled Trails. *Salud, Ciencia y Tecnología-Serie de Conferencias*. 2025(4):1585.
128. Taher AK, Younis NM. Impact of a Transtheoretical Model on Enhancing Electronic Hookah-Related Behaviors among Nurses. 2025
129. Ahmed MM, Ibrahim RM, Younis NM. Diabetic Distress among Patients with Type II: A Descriptive Study. *Advanced Biomedical Research*. 2025 Mar 1;14(1):23.
130. Taher AK, Younis NM. Impact of a Transtheoretical Model on Enhancing Electronic Hookah-Related Behaviors among Nurses. 2025
131. 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.
132. Younis NM, Ahmed MM, Ibrahim RM. The Relationship Between Lung Cancer and Addiction: A Comprehensive Review. *Current Clinical and Medical Education*. 2025 Jun 5;3(6):1-0.
133. Younis NM, Ahmed MM, Ibrahim RM. Using the Health Promotion Towards Hypertension among Employees: A Randomized Controlled Trial. *Current Clinical and Medical Education*. 2025 Jun 11;3(6):29-38.
134. 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.

135. 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.
136. 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.
137. 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. *RevisBionatura*. 2023;8(3):28.
138. Awad MS, Younis NM, Aneed SH, Diala CG, Okenwa CR, Hammed SU, Ibishagba SM, Uduebholo VJ, Ohaekwe CC, Binuyo OA, Owokoya AO. Attitude of University Students toward Covid-19 Vaccines. *International Journal of Medical and All Body Health Research*. 2025;6(4):01-4.
139. Younis NM, Ahmed MM, Ibrahim RM. Nurses Practice Toward Adverse Effects Following Immunization: Cross-Sectional Study. *Current Clinical and Medical Education*. 2025 Jun 27;3(6):64-73.
140. Ali JM, Younis NM. Utilizing an intervention based on the health beliefs model to enhance nurses' perceptions of drug dosage errors. *International Journal of Pediatrics and Adolescent Medicine*. 2025 Aug 1:10-4103.
141. Ahmed MM, Ibrahim RM, Younis NM. Assessing Nurses' Knowledge about Vaccination: A Survey Study. *Current Clinical and Medical Education*. 2025 Nov 29;3(11):1-9.
142. Younis NM, Ahmed MM, Ibrahim RM. The Impact of the Interrelationship Between Smoking and Addiction on Lung Cancer: A survey study. *Current Clinical and Medical Education*. 2025 Nov 29;3(11):10-8.
143. Younis NM, Ibrahim RM, Ahmed MM. Challenges facing nurses in Iraq: A review study. *Current Clinical and Medical Education*. 2025 Nov 29;3(11):19-28.
144. Younis NM, Ibrahim RM, Ahmed MM. The frequency of COVID-19 among Mosul University students. *Current Clinical and Medical Education*. 2025 Dec 6;3(12):21-32.
145. Younis NM, Ibrahim RM, Ahmed MM. Independency Aspect among elderly in Nineveh Province/Iraq. *Current Clinical and Medical Education*. 2025 Dec 12;3(12):44-53.
146. Younis NM, Ibrahim RM, Ahmed MM. Elderly people's personal hygiene in Nineveh Province, Iraq. *Current Clinical and Medical Education*. 2025 Dec 12;3(12):65-73.
147. Dhahir NM, Ahmed MM, Younis NM. The association between health beliefs and breast self-examination among healthcare providers: A cross-sectional study. *Journal of Education and Health Promotion*. 2026 Feb 1;15(1):82.
148. Jumaa ZY, Younis NM. Parents' knowledge about immunization with pentavalent vaccine who attended primary health care centers in Al-Diwaniyah City, Iraq. *Journal of Education and Health Promotion*. 2025 Dec 1;14(1):555.
149. Wahab MA, Younis NM. Efficacy of the protection motivation theory (PMT) in promoting preventive behaviors among nurses were exposed to radiation at hospitals: A-randomized controlled trail. *Journal of Education and Health Promotion*. 2026 Jan 1;15(1):12.
150. Younis NM, Ibrahim RM, Ahmed MM. Improving Employee Hypertension: Use Pender's Health Promotion. *Current Clinical and Medical Education*. 2025 Dec 16;3(12):74-82.
151. Younis NM, Ahmed MM, Ibrahim RM. Tobacco Prevalence Smoking habits among nurses at the Mosul City Hospital. *Current Clinical and Medical Education*. 2026 Mar 6;4(03):1-0.
152. Younis NM, Ahmed MM, Ibrahim RM. Incidence Rate of COVID-19 among university students. *Current Clinical and Medical Education*. 2026 Mar 6;4(03):11-20.
153. Younis NM, Ahmed MM, Ibrahim RM. Healthy Related Quality of Life the Elderly in Mosul province, Iraq. *Current Clinical and Medical Education*. 2026 Mar 6;4(03):21-30.
154. Ahmed MM, Ibrahim RM, Younis NM. Association between Substance Abuse and Road Traffic Accidents in Iraq. *Journal of Forensic Science and Medicine*. 2026 Jan 1;12(1):32-6.

155. Abdullah MK, Younis NM. Barriers to quitting smoking among nursing students in Iraq. *Journal of Holistic Nursing Science*. 2025 Sep 9;12(2):262-71.
156. Idress NH, Ibrahim RM, Younis NM. Mode of delivery and its influences on neonatal morbidity among newly born babies at maternity teaching hospitals in Mosul City: A comparison study. *Journal of Education and Health Promotion*. 2025 Nov 1;14(1):470.
157. Younis NM, Ahmed MM, Majeed HM. Epidemiological profile of substance abuse in Iraq: Retrospective study. *Journal of Education and Health Promotion*. 2025 Jun 1;14(1):255.
158. Younis NM, Ahmed MM, Ibrahim RM. Self-efficacy of Health Beliefs Models Toward Addiction among Students. *Journal of Current Medical Research and Opinion*. 2024 Jul 17;7(07):3303-12.