



Original Research

Perceived Seriousness related to Smoking among students

Mahmoud Mohammed Ahmed¹ | Rian Mahmood Ibrahim² | Nasir Muwfaq Younis³

¹Assist. Prof.PhD. College of Nursing / University of Mosul/IRAQ

Assist. Lecture. College of Nursing / University of Mosul/ IRAQ

³Prof, PhD. College of Nursing / University of Mosul/ IRAQ

E-mail co-author:

nasir.muwfaq@uomosul.edu.iq



Abstract:

Background:

The perceived severity of a person's perception of how severe this disorder is, i.e. substance consumers should be aware of the disease effects of drug users such as (tobacco, drug misuse and alcohol consumption) due to addiction that affects health and everyday life consequences of diseases. The aim of the study to assess of Perceived Seriousness related to Smoking among students.

Material and method:

The current study employs a true experimental design with a randomized controlled trial approach to investigate the effectiveness of a health beliefs model-based intervention in altering the beliefs of university students in Mosul City regarding substance use during the period of 5-January 2023 to 1-February 2024. Eighty students who took part in a behavior modification training program made up the study sample.

Results:

Findings of this study depict that there were statistically significant differences among Perceived Seriousness toward smoking among Students.

Conclusions:

The results of this study suggested that the way an HBM-based study is designed may have an impact on students' knowledge and smoking-related behaviors Considering the construct of Perceived Seriousness and its positive correlation.

Keywords: Perceived Seriousness, smoking, Students

Introduction:

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 ⁽¹⁾. Substance use "alcohol, hookah, smoking, and illegal dru are the main anxiety of contemporary world and considers the popular cause of people death and alcoholism worldwide ⁽⁴⁾. The campus setting is a typical place for initiation into the substance use. The student is away from the wakeful eyes of father and mother. They are youth and wanted to try out any modern thing. They are under force from friends to be like rest of the student 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 ⁽²⁾. 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 2012 ⁽³⁾, 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 perceived severity of a person's perception of how severe this disorder is, i.e. substance consumers should be aware of the disease effects of drug users such as (tobacco, drug misuse and alcohol consumption) due to addiction that affects health and everyday life consequences of diseases. They should also be seen by him/her as hreat and may occur to him/her ⁽⁴⁾. Perceived severity in this study conceptualized as university student's beliefs that addiction is a serious condition which can result in severe medical, clinical and psychosocial consequences to them. For example, you probably would stop substance user if it might give you psychological disorders. Similarly, University students are less likely to consider prevention when they think addiction is a minor inconvenience. The aim of the study to assess of Perceived Seriousness related to Smoking among students.

Methods and Materials:

Using a randomized controlled trial methodology and a true experimental design, the current study aims to determine how well a health beliefs model-based intervention can change the attitudes of university students in Mosul City toward substance use between January 5, 2023, and February 1, 2024. The study sample consisted of eighty students who participated in a behavior modification training program. The study sample will be selected from four colleges at the University of Mosul: engineering, science, medicine, and education. Participants in each behavior were randomly assigned to one of two groups: the experimental group or the control group. The intervention given to the experimental group was a lecture on substance use and health education. I analyzed the data using descriptive and inferential statistics (Means, SD, Number, and Percent) as well as chi-square and the t-test using SPSS, Version 23. To measure changes in participant

beliefs, motivation, control, and intentions over three times (pre-test, post-test1, and post-test2), a mixed design analysis of variance (ANOVA) is used in addition to a Pearson's correlation coefficient to assess the relationship between

Health Belief Model concepts, behavioral motivation, behavioral control, and intentions to changing beliefs related to substance use. ⁽⁵⁻⁷⁷⁾.

Results:

Table 1: Repeated Measures ANOVA Tests the health beliefs model in changing the belief related to smoking among university students (Perceived Severity).

Perceived Severity	“Repeated Measures ANOVA Tests”			
	F	P	(η^2)	O.P.
Main time effect	16.387	0.000	0.299	1.000
Between groups effect	11.970	0.001	0.133	0.927
Groups Interaction overtime	10.808	0.000	0.219	0.988

η^2 : Partial Eta Squared (size effect). O.P. Observed Power.

The results of Table 4.11 show that the subject test shows that the primary impact of time is important ($F= 16.387$, $p= 0.000$).

The important interaction indicates that the Health Beliefs Models among the research participants (research and control) are evolving over time and are evolving in different ways, i.e., the lines of the two groups are not parallel in figure (1).

In this specific case, it is obvious in Figure (1) that the study group increases in beliefs over time as compared to the control group, which decreases in beliefs over time. Regarding the size of the effect, (Table 1) shows that about 29 percent of variance from modified beliefs (Perceived Severity) is responsible for the period.

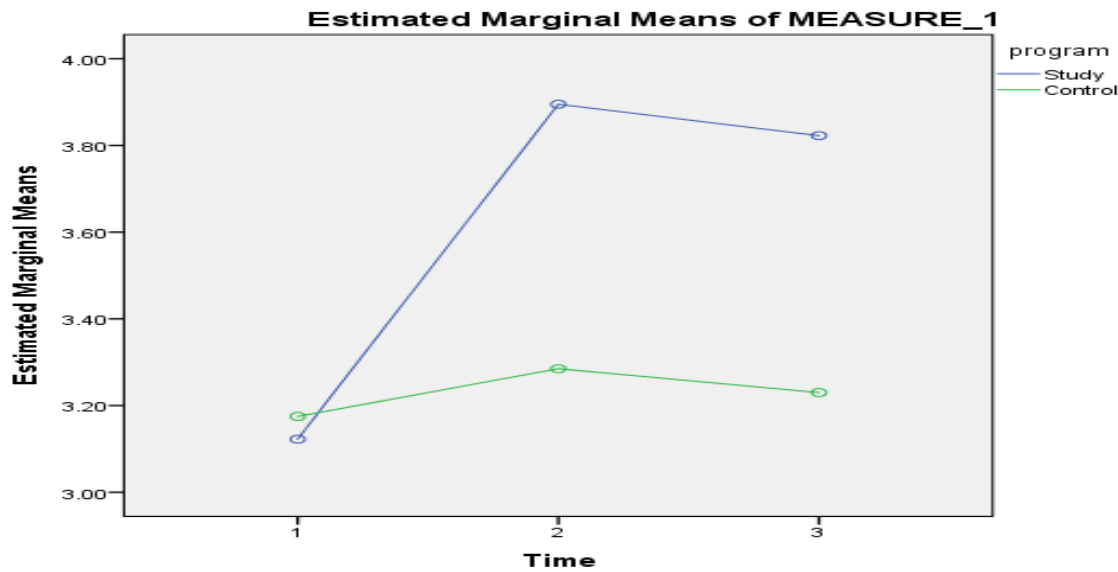


Figure 1: Changing in beliefs related to substance use among university students (Perceived Severity) for the study and control groups throughout the three times.

Table 2: Post-hoc Test Using Bonferroni Corrections Procedure for Changing in the Students' Beliefs about Health beliefs Model (perceived Severity) among Study and Control Group over Times

HBM	Groups	Post hoc Using Bonferroni		
		(pretest) vs (post 1)	(pretest) vs (post 2)	(Post1) vs (post 2)
Perceived Severity	Exp	0.000	0.000	1.000
	Con	0.488	0.728	0.935

Based on estimated marginal means. The mean difference is significant at the 0.05 level. Adjustment for multiple comparisons: Bonferroni. $p < 0.05$ indicated in bold.

Regarding the differences in the (perceived Severity) of Health Belief Model within the three times, table 2 indicates that there is a high significant difference in the perceived Severity of Beliefs of the study group participants.

Concerning control group, the table 2 reveals the fluctuation of Beliefs over time. However, no exact improvement or stable continues change in students Belief is observed.

Discussion:

Perceived seriousness must be perceived and deemed to be at risk of addiction with consequences. This is because the participating students in our study observed the possibility of opioid misuse due to addiction. Therefore, it may have an additional real effect on perceived severity and experience greater danger than others. Perceived severity it was found that the student’s belief in the extent of the harm that could result from this harmful condition and the possibility of causing death and through the program led students to understand how to get rid of seriousness and overcome it and then change behavior towards a positive and correct . The constructs of perceived susceptibility are often grouped together and called perceived threat. The overall students showed changes in their beliefs levels concerning HBM (Perceived severity). There was a major increase in Belief levels for study group participants at posttest-1 and then a slight decrease at posttest-2 in spite of the continuity of the educational program which hoped to retain their Belief levels as much as

possible. This result was certainly due to that students have benefited from the information that was learned from the program. his study, consistent with ⁽⁷⁸⁾, showed that the mean perceived seriousness score at the post-test stage increased significantly. The increase rate was higher in the intervention group, and in this model, than in other constructs. While there was a very little increase in Beliefs levels for control group participants at posttest-1 and then a slight decrease at posttest-2. This result was surely because the students of control group had not participated in the educational program. Concerning control group, the results revealed the fluctuation of Beliefs over time. However, no exact improvement or stable continues change in students’ belief is observed (Table 1).This result surely because the students of control group hadn't received any educational program. So the participants of the study group seemed to get benefit from joining in the program. The significant interaction indicated that the control group and study group are changing over time and they were changing in different ways, in other words. The lines of the two groups are not parallel in (Figure 1).On the other hand, the effect size associated with changed Beliefs (Perceived severity) was observable, with time accountable for about 29% of the variance from changed Beliefs (Table 1).This result is supported by study ⁽⁷⁹⁻⁸³⁾ under the title "An educational intervention using Health Belief Model on smoking preventive behavior among teenagers" in order to test the effect of the health belief model on perceived intensity, was the effect size with changed Beliefs

approximately was 31 %.Regarding the differences in the Health Belief Model (perceived severity) within the three times. Table (2) indicated that there was a high significant differences in the perceived Severity of the study group participants. Table (2) showed that the score of Health Belief Model (Perceived Severity) among study group participants differed significantly from pre-test to posttest1(sig=.000) and from pre-test to posttest-2 (sig=.000).This finding is supported by ⁽⁸⁴⁻⁸⁷⁾, who found the repeated measures ANOVA is a significant differences in the study group in Health Belief Model constructs and also perceived severity toward substance abuse ($P < 0.001$).However, there was no statistically significant differences in the score of student Beliefs from (posttest-1) to (posttest-2). These results indicated that student Beliefs among study group was improved after education with no significant changes from this improvement after three months. All these results indicates that the participants have benefit from the information that was given for them and did not know it previously.

Conclusion:

The findings of this study indicated that students' knowledge and smoking-related behaviors may be influenced by the design of an HBM-based study. Considering the positive correlation and perceived seriousness as a construct.

Reference:

1. Vogel EA, Henriksen L, Schleicher NC, Prochaska JJ. Perceived susceptibility to and seriousness of COVID-19: associations of risk perceptions with changes in smoking behavior. *International Journal of Environmental Research and Public Health*. 2021 Jul 17;18(14):7621.
2. Kaufman AR, Dwyer LA, Land SR, Klein WM, Park ER. Smoking-related health beliefs and smoking behavior in the National Lung Screening Trial. *Addictive Behaviors*. 2018 Sep 1;84:27-32.
3. Oncken C, McKee S, Krishnan-Sarin S, O'Malley S, Mazure CM. Knowledge and perceived risk of smoking-related conditions: a survey of cigarette smokers. *Preventive medicine*. 2005 Jun 1;40(6):779-84.
4. Virgili M, Owen N, Severson HH. Adolescents' smoking behavior and risk perceptions. *Journal of substance abuse*. 1991 Jan 1;3(3):315-24.
5. 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.
6. 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).
7. 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).
8. 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.
9. Younis NM, Ahmed MM, Dhahir NM. Prevalence of coronavirus among healthcare workers. *International Journal of Medical Toxicology & Legal Medicine*. 2021;24(1and2):267-70.
10. 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.
11. Younis NM, Mahmoud M, Ahmed A. University Students' Attitude Towards E-Learning. *Bahrain Medical Bulletin*. 2021;43(2):460-2.

12. 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.
13. 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.
14. 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-.
15. Ibrahim RM, Idrees NH, Younis NM. Epidemiology of leukemia among children in Nineveh Province, Iraq. *Rawal Med J*. 2023 Mar 3;48(1):137.
16. 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.
17. 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.
18. 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.
19. 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.
20. 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.
21. 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.
22. 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.
23. 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.
24. 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.
25. 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.
26. Younis NM, Ahmed MM, Dhahir NM. Knowledge and Attitude toward older adults among Nursing Students. *Signal*. 2012;84:70.
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-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.