

## Inspection of Nurses Techniques to Phototherapy in Neonatal Intensive Care Units: A cross-Sectional Study

Laith Nawfal Bura'a<sup>1</sup>, Nasir Muwfaq Younis<sup>2</sup>

\*Department of  
Health, Mosul, Iraq

\*\* Prof, PhD .College  
of Nursing /  
University of Mosul/  
IRAQ

**Abstract:** - Objective: The aim of the study to identify the inspection of nurses Techniques to phototherapy in neonatal intensive care units.

**Material:** Purposive sampling with no probability. Between the beginning of January 2024 and the beginning of February 2024, a sample was taken. The nurses working in Mosul's neonatal units were the ones who provided the sample. There were a total of (62) participants in the study, including (50) men and (12) women. The performance was divided into two sections: The first section dealt with the demographics of nurses. The second section dealt with the use of phototherapy by nurses in neonatal units.

**Results:** The discovery revealed a substantial majority of them were males within the range of (80.65%), while women were (19.35%), and the average gender was (1.21), indicating that they were predominately male. The sample included in the study had the following ages: (30.43).

**Conclusion:** This study concluded through the program that the nurses in the study sample before starting the program did not have any information related to the practical aspect of phototherapy, but when giving the program and after the second test, the results were clearly shown, there are very significant significant differences

**Keywords:** inspection, nurses, phototherapy, neonatal intensive care units.

**Copyright:** © 2025 the Authors. Published by Publisher. This is an open access article under the CC BY-NC-ND license (<https://creativecommons.org/licenses/by-nc-nd/4.0/>).

**Supplementary information** The online version of this article (<https://doi.org/xx.xxx/xxx.xx>) contains supplementary material, which is available to auto-hized users.

**Corresponding Author:** Nasir Muwfaq Younis †, Prof, PhD .College of Nursing / University of Mosul/ IRAQ

### Introduction:

The term phototherapy literally means the use of light, especially ultraviolet light, to treat medical condition. Natural sunlight has been known to be beneficial in certain skin disorders for thousands of Years, and it is the

ultraviolet part of the radiation produced by the sun that is used in phototherapy. Indian medical literature dating to 1500 BC describes a treatment combining herbs with natural sunlight to treat non-pigmented skin areas. It was in the 19th century that the use of artificial light source of phototherapy happened Prof. Niels Ryberg Finsen is known as the father of phototherapy <sup>(1)</sup>.Studies have shown that when phototherapy was withheld, 36% of infants with birth weights of less than 1500 g required an exchange transfusion. When phototherapy was used, only 2 of 833 such infants (0.24%) received exchange transfusions. Between January 1988 and October 2007, no exchange transfusions were needed in the neonatal intensive care unit at William Beaumont Hospital, in Royal Oak, Michigan, for 2425 infants who weighed less than 1500 g at birth <sup>(2)</sup>.Wash hands before and after any nursing procedure , Ensure that the premature body is exposed to light, Covering the eyes and genitals of the premature infant so as not to allow the passage of light, The distance of the light from the premature body is 10-30 cm, Turn off the lighting device when the baby is breast-feeding (breastfeeding) and when examining to protect the eyes of the baby, mother, and workers in neonatal care units from the influence of light <sup>(3)</sup>.Remove the eye cover when feeding, Giving intravenous fluids according to the doctor's instructions, and avoiding exposure of the newborn to dehydration, Changing the newborn's position in the incubator to ensure that the rest of the body is exposed to light and to avoid skin ulcers, Explaining the importance of phototherapy and breastfeeding to the newborn's parents to help them accept the treatment and nursing documentation after any nursing procedure and intervention <sup>(4)</sup> .

## Method and Materials:

Non\_ probability, purposive sampling methods. The sample was collected from the beginning of January, 2024, to the beginning of February2024,. The method of collecting the sample was from nurses working in neonatal units in the city of Mosul. The number of participants in the study were (62) among (50) males, (12) female .A performance was built for the purpose of conducting the questionnaire and the study on the nurses' knowledge about phototherapy for newborns. The performance consisted of two main parts: The first part was related to demographic information such as (gender, age, cultural level, years of service, length of service in the neonatal care unit, their participation in Courses related to phototherapy for newborns).The second part was related to the nurses' practices of phototherapy in neonatal units.).The second instrument ( constructed checklist ) for nurses practice regarding phototherapy in neonatal care units, this axis contain (16) points .A questionnaire was utilized to gather the data, and SPSS version 25 was used for the analysis<sup>(5-115)</sup>.

## Results:

*Table (1): The demographic variables of the study sample (N=62)*

Demographic Characteristics	N	Mean	SD	Std. Error	F	P-value
Age	62	30.43	0.32	0.1548	1.832	0.532
Gender	62	1.21	2.97	0.1876	1.981	0.551
Level of Education	62	2.23	1.24	0.1298	0.000	1.000
Experience	62	7.33	0.87	0.1622	1.331	0.312

**Table (2): Results of comparison between each sample according to checklist in three observations as a (pre-test, post-test1 and post test2)**

Practice	Score	Pre-test		Post-test 1		Post-test 2	
		N	%	N	%	N	%
<b>1: Hand sterilization before and after each procedure with a newborn baby .</b>	0	19	63%	0	0%	0	0%
	1	10	33%	0	0%	4	13%
	2-3	1	4%	30	100%	26	87%
<b>2: Wear a mask and wear medical gloves.</b>	0	15	50%	0	0%	0	0%
	1	15	50%	0	0%	4	14%
	2-3	0	0%	30	100%	26	86%
<b>3: Cleaning and sterilizing the incubator before each entry for newborns.</b>	0	12	40%	0	0%	0	0%
	1	17	57%	0	0%	4	13%
	2-3	1	3%	30	100%	26	87%
<b>4: The baby's weight when entering the neonatal care unit.</b>	0	30	100%	0	0%	0	0%
	1	0	0%	12	40%	15	50%
	2-3	0	0%	18	60%	15	50%
<b>5: Observe and measure the vital signs of each child and record them in the drum.</b>	0	6	20%	0	0%	0	0%
	1	20	67%	3	10%	5	17%
	2-3	4	13%	27	90%	25	83%
<b>6:Observe and measure the percentage of bilirubin in the blood for each child and write it down in the tympanum.</b>	0	24	80%	0	0%	0	0%
	1	4	13%	3	10%	8	27%
	2-3	2	7%	27	90%	22	73%
<b>7:Observe skin color and signs of fluid loss in a newborn baby.</b>	0	30	100%	0	0%	0	0%
	1	0	0%	2	7%	7	23%
	2-3	0	0%	28	93%	23	77%
<b>8:Caring for the skin of a newborn baby by washing with lukewarm water, applying appropriate ointments and creams, and turning it constantly.</b>	0	30	100%	0	0%	0	0%
	1	0	0%	11	37%	15	50%
	2-3	0	0%	19	63%	15	50%
<b>9:Eye care for a newborn baby by washing with lukewarm water and applying appropriate ointments.</b>	0	30	100%	0	0%	0	0%
	1	0	0%	6	20%	15	50%
	2-3	0	0%	24	80%	15	50%
<b>10:Covering eyes when using light therapy.</b>	0	2	7%	0	0%	0	0%
	1	22	73%	0	0%	0	0%
	2-3	6	20%	30	100%	30	100%
<b>11:Stripping a newborn baby when using phototherapy.</b>	0	0	0%	0	0%	0	0%
	1	24	80%	0	0%	0	0%
	2-3	6	20%	30	100%	30	100%
<b>12:Raising the head slightly for a newborn baby in the incubator to avoid gastric vomiting after feeding.</b>	0	28	93%	0	0%	0	0%
	1	2	7%	3	10%	8	27%
	2-3	0	0%	27	90%	22	73%
<b>13: Sterilization of the navel using medical alcohol for a newborn baby.</b>	0	21	70%	0	0%	0	0%
	1	5	17%	7	23%	12	40%
	2-3	4	13%	23	77%	18	60%
<b>14:Applying a distance (10-30) cm between the newborn baby and the light therapy source.</b>	0	30	100%	0	0%	0	0%
	1	0	0%	0	0%	3	10%
	2-3	0	0%	30	100%	27	90%
<b>15:Giving intravenous fluids using the inserted vial (Micro-Drip).</b>	0	15	50%	0	0%	0	0%
	1	12	40%	0	0%	0	0%
	2-3	3	10%	30	100%	30	100%
<b>16:Nursing documentation of each procedure performed on a newborn child in the tympanic cavity.</b>	0	21	70%	0	0%	0	0%
	1	6	20%	0	0%	0	0%
	2-3	3	10%	30	100%	30	100%

## Discussion:

The purpose of the current study is to educational program of nurses practices towards to phototherapy at neonatal care units. The study included 62 male and female nurses working in the field of neonatal care in hospitals in the city of Mosul and it turns out that a large proportion of them were males within the limits of (80.65%), while women were (19.35%), and the average gender was (1.21), that is, they were dominated by the proportion of males. As for the ages of the sample participating in the study, it was (30.43), that is, they are the youth category and there was a clear effect regarding the educational level, This study similar with others study in Iraq <sup>(116-118)</sup>, who found this male more than female and mean age between (28-31 years).Comparison between (Pretest study) and (Pretest control), comparison between (Post1 test study) and (Post1 test control) and comparison between (Post2 test study) and (Post2 test control).There are no significant differences between (Pretest study) and (Pretest control) , there are significant differences between (Post1 test study) and (Post1 test control) and there are significant differences between (Pos2 test study) and (Pos2 test control) . The study sample before starting the program did not have any information related to the practical aspect of phototherapy, but when giving the program and after the second test, the results were clearly shown, there are very significant significant differences<sup>(119,120)</sup>.

## Conclusions:

This study concluded through the program that the nurses in the study sample before starting the program did not have any information related to the practical aspect of phototherapy, but when giving the program and after the second test, the results were clearly shown, there are very significant significant differences, and these differences continued until the third test, that is, after two months The nurses retained information related to the practical side, unlike the control sample, there were no differences.

## Reference:

- 1.El-Shahat HT. Assessment of Nurses' Knowledge and Practice about Care Needed for Newborn Under Phototherapy in Neonatal Intensive Care Unit (NICU) in Ismailia City. Unpublished Master thesis, Pediatric Nursing, Faculty of Nursing, Suez Canal University. 2014:78.
2. Ibrahim MM, Ouda WE, Ismail SS, Abdal A. Assessment of nursing care provided to neonates undergoing phototherapy. *Egyptian Journal of Health Care*. 2019;10(1):1-2.
- 3.Verma VL, Sharma MK. A Descriptive Study To Assess The Knowledge Regarding Care Of New Born Under Phototherapy Among Staff Nurses With The View To Develop Information Pamphlets In Muskan Hospital, Unnao, UP. *Journal of Nursing and Health Science*. 2020;9(3):65-71.
- 4.Gamal El Said Elsaleih A, Al-Moneim A, Ibrahim I, Morsy Abou Khala MA. Assessment of Neonatal Nurses' Performance Regarding Early Detection of Neurological Dysfunction among Neonates Having Hyperbilirubinemia. *Egyptian Journal of Health Care*. 2020 Mar 1;11(1):142-60.
- 5.Jarding L, Hogden LA, Messier SE, Kozmenko V, Simanton E, Bjornson K, Brockmueller CO. Development and validation of simulation-based procedural checklists for evaluation of neonatal nurse practitioner performance. *Advances in Neonatal Care*. 2018 Oct 1;18(5):386-92.
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.
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: Across-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.