

ISSN-0971-720X (Print) • ISSN-0973-1283 (Electronic)

Volume 20, Number 3 July-September 2020



# Medico-Legal Update

An International Journal



[www.medicolegalupdate.org](http://www.medicolegalupdate.org)

# Medico-Legal Update

Editor-in Chief

**Prof. (Dr) R K Sharma**

Former Head, Department of Forensic Medicine & Toxicology  
All-India Institute of Medical Sciences, New Delhi-110029  
E-mail: medicolegalupdate@gmail.com

## ASSOCIATE EDITOR

1. **S.K. Dhatarwal** (*Professor*)  
Forensic Medicine, PGIMS, Rohtak, Haryana
2. **Dr. Adarsh Kumar** (*Additional Professor*)  
Forensic Medicine, AIIMS, New Delhi
3. **Dr. Vijaynath V** (*Associate Professor*)  
Forensic Medicine, Vinayaka Mission Medical college, Tamil Nadu
4. **Ms. Roma Khan**, Forensic Sciences, INSAAF Mumbai
5. **Dr. Imran Sabri** (*Assistant Professor*)  
Department of Bio-Medical Sciences, College of Medicine, King Faisal University, Saudi Arabia

## INTERNATIONAL EDITORIAL ADVISORY BOARD

1. **B. N. Yadav** (*Professor*)  
Forensic Medicine, BP Koirala Institute of Medical Sciences, Nepal
2. **Dr. Vasudeva Murthy Challakere Ramaswam** (*Senior Lecturer*)  
Department of Pathology, International Medical University, Bukit Jalil, Kuala Lumpur, Malaysia
3. **Babak Mostafazadeh** (*Associate Professor*)  
Department of Forensic Medicine & Toxicology, Shahid Beheshti University of Medical Sciences, Tehran-Iran
4. **Dr. Sarathchandra Kodikara** (*Lecturer*)  
Forensic Medicine Department of Forensic Medicine, Faculty of Medicine, University of Peradeniya, Sri Lanka

## NATIONAL EDITORIAL ADVISORY BOARD

1. **Prof. N.K. Agarwal** (*Professor*) Forensic Medicine, UCMS, Delhi
2. **P.K. Chattopadhyay**, (*Professor*)  
Forensic Sciences, Amity University, Noida
3. **Dalbir Singh** (*Professor*) Forensic Medicine, PGIMER, Chandigarh
4. **Dr. Harish Pathak**, Mumbai
5. **J. Gargi** (*Professor*) GGS Medical College, Faridkot
6. **P.C. Dikshit** (*Professor*)  
Forensic Medicine, Jamia Hamdard Medical College, New Delhi
7. **Anil Mittal** (*Professor*)  
Forensic Medicine, Vardhman Mahavir Medical college, New Delhi
8. **Balbir Kaur** (*Professor*)  
Forensic Medicine, MM institute of Medical Sciences, Ambala
9. **Mukesh Yadav** (*Professor*) Forensic Medicine, School of Medical Sciences and research, Greater Noida
10. **T.K.K. Naidu** (*Professor*) Forensic Medicine, Prathima Institute of Medical Sciences Andhra Pradesh
11. **S. Das** (*Professor*) Forensic Medicine, Himalayan Institute of Medical Sciences Dehradun
12. **Col Ravi Rautji**, Forensic Medicine, Armed Forces Medical College, Pune
13. **Dr. Manish Nigam** (*Professor and Head*)  
Department of Forensic Medicine & Toxicology Sri Aurobindo Institute of Medical Sciences, INDORE (M.P.)
14. **Dr. Shailesh Kudva** (*Principal*)  
Rajasthan Dental College and Hospital Jaipur-302026
15. **Usmanganishah Makandar** (*Associate Professor*)  
Anatomy, AIMS, Bhatinda
16. **Dr. Pratik Patel** (*Professor and Head*) Forensic Medicine, Smt NHL Municipal Medical College Ahmedabad
17. **Basappa S. Hugar** (*Associate Professor*)  
Forensic Medicine, Ramaiah Medical College, Bangalore

## NATIONAL EDITORIAL ADVISORY BOARD

18. **Dr. Vandana Mudda** (*Awati*) (*Associate Prof*)  
Dept of FMT, M.R. Medical College, Gulbarga, Karnataka, India
19. **Dr. HarishKumar. N.** (*Associate Professor*)  
Dept. of Forensic Medicine, Sri Siddhartha Medical College, Tumkur
20. **Dr. Gowri Shankar** (*Associate Professor*)  
Forensic Medicine, SNMC, Bagalkot
21. **Dr. Manjunath Badni** (*Reader*) Dept of Oral pathology Maharana Pratap college of Dentistry and Research Centre, Gwalior
22. **Dr. L.Ananda Kumar** (*Associate Professor*) Forensic Medicine, Rajiv Gandhi Institute of Medical Sciences, (RIMS), Kadapa
23. **Dr. Ramesh Nanaji Wasnik** (*Associate Professor and Head*)  
Forensic Medicine Late B.R.K.M. Govt. Medical college, Jagdalpur
24. **Dr. Sachin Sinha** (*Reader*), Dept. of Oral Pathology & Microbiology  
Daswani Dental College & Research Centre, Rajasthan
25. **Dr. Sasi Kanth**, *Asst. Professor*, A.C.S.R Government Medical College, Nellore, Andhra Pradesh.

**Medico Legal Update** is a scientific journal which brings latest knowledge regarding changing medico legal scenario to its readers. The journal caters to specialties of Forensic Medicine, Forensic Science, DNA fingerprinting, Toxicology, Environmental hazards, Sexual Medicine etc. The journal has been assigned international standard serial number (ISSN) 0971-720X. The journal is registered with Registrar of Newspaper for India vide registration numbers 63757/96 under Press and Registration of Books act, 1867. The journal is also covered by EMBASE (Excerpta Medica Database) from 1997 and by INDEX COPERNICUS, POLAND. Medico legal update is a half yearly peer reviewed journal. The journal has also been assigned E-ISSN 0973-1283 (Electronic version). The first issue of the journal was published in 1996.

**Website: [www.medicolegalupdate.org](http://www.medicolegalupdate.org)**

© All Rights reserved The views and opinions expressed are of the authors and not of the Medico Legal Update. The Medico Legal Update does not guarantee directly or indirectly the quality or efficacy of any products or service featured in the advertisement in the journal, which are purely commercial.

## Editor

**Dr. R.K. Sharma**  
Institute of Medico-legal Publications  
Logix Office Tower, Unit No. 1704, Logix City Centre Mall,  
Sector- 32, Noida - 201 301 (Uttar Pradesh)

## Printed, published and owned by

**Dr. R.K. Sharma**  
Institute of Medico-legal Publications  
Logix Office Tower, Unit No. 1704, Logix City Centre Mall,  
Sector- 32, Noida - 201 301 (Uttar Pradesh)

## Published at

**Institute of Medico-legal Publications**  
Logix Office Tower, Unit No. 1704, Logix City Centre Mall,  
Sector- 32, Noida - 201 301 (Uttar Pradesh)




---



---

## CONTENTS

---



---

**Volume 20, Number 3**

**July-September 2020**

1. Carbamate Poisoning – An Autopsy Study ..... 1  
*Jinu.M, Thankamma.P.George, N.A.Balaram, Sujisha.S.S*
2. Profile of Burn Deaths: A Study based on Postmortem Examination of Burn Cases at R.N.T. Medical College, Udaipur..... 8  
*Akhilesh Sharma, Manish Kumar Sharma, Ashish Kumar Garg*
3. Psychological Autopsy: the Psychological Assessment of the Dead Individual’s Role in the Death ..... 13  
*Anand Kumar Vasudevan, Hanumantha, Lynne Eccleston*
4. Legality In Hospitals- Medico-Legal Case Management ..... 19  
*Ashwini Pandit, Dhvani Patel, Arushi Chawla*
5. To Assess Association of Bullous Pemphigoid and Neurological Disorders- A Clinical Study..... 24  
*Balkrishna Pralhadrao Nikam, Dhanraj D Chavan, Nischhal Shrivastava*
6. To Assess Clinical Profile of Patients with Dermatophytosis Infection ..... 28  
*Balkrishna Pralhadrao Nikam, Dhanraj D Chavan, Nischhal Shrivastava, Namita Narkhede*
7. The Study of Trends and Out Come of Acute Poisoning in a Tertiary Care Hospital Khammam, Telangana; India..... 32  
*Bharath Kumar Guntheti, Kondru Laxman*
8. Correlation between various Measurements of Sternum with Stature - An Autopsy based Study ..... 40  
*Bhumesh Darade, Pawan Sabale, Shailesh Mohite, Swapnil Akhade, Chaitanya Kulkarni*
9. Assessment of Depression among the Housewives of Alcohol Consuming Husbands in Selected Community Areas, Kancheepuram District, Tamilnadu..... 46  
*Bhuvana.A, Ajaykumar.P, Yaazhini.T, Dineshkumar.S, Devaki. K*
10. A Study to Assess the Knowledge on Oral Health and Self Esteem among Young Adults in Selected College, in Kancheepuram District, Tamilnadu, India ..... 51  
*Gini T.R, Ashika Parveen, Sharmilavathi.A, Avinash.U, Anto Benson, Shanthi*
11. Knowledge and Attitude of Final Year Medical Students Towards Dentistry and Dental Consultation: A Questionnaire-based Study ..... 55  
*Girish Suragimath, Mrunal B Mohite, Ashwinirani SR, Sameer Zope, Siddhartha Varma*
12. Consensual Sexual Intercourse among children Vs Current Legal Provisions under POCSO: A Scientific Review with Prospective Quantitative Analytical Study..... 60  
*H. S. Tatiya, A. A. Taware, H. V. Vaidya, V. T. Jadhav, A. L. Bandgar, S. B. Punpale*

## II

13. Assessment of the Psychological Wellbeing of Elderly Residing at Pooncheri Rural Community Area in Kancheepuram District, Tamilnadu, India..... 66  
*George Fernandez A, Janagiraman N, Shalini M, Vinitha R, Metha*
14. Effectiveness of Flax Seed Pillow on Stress and Physical Parameters of Premature Infants..... 70  
*Tessy Thomas, Sujatha R*
15. A Study to Examine the Association of Health Related Behaviours and Body Mass Index among Young Adults at Selected Colleges in Kancheepuram District, Tamil Nadu, India..... 76  
*J.Sherlinblessy, G.Santhiya, E.Mohan1, Shanthi*
16. Five Year Retrospective Study of Profile of Burn Deaths from Pune Region..... 81  
*Jadhao Vijay T, Bandgar Abhijit L, Taware Ajay A, Tatiya Harish S, Vaidya Hemant V*
17. Pattern of Poisoning Cases in a Tertiary Care Centre in South India - An Observational study..... 86  
*James Rajesh J, Sampath Kumar P, Priyadarshee Pradhan, Jothi Marie Feula A, Siva Reddy B*
18. Estimation of Stature from Footprint Length..... 91  
*Janarthanan R, Muthamizh Selvan*
19. Effect of Structured Exercise Programme on Functional Mobility in Parkinson's Disease..... 96  
*Joshi Madhura S., Kanase Suraj B.*
20. A Study to Assess the Knowledge on Pubertal Changes and Menarche among Adolescent Girls Residing in A Selected Rural Community, Kanchipuram District, Tamilnadu..... 102  
*Jyothish Lal Prasad, Abishek, Aishwariya, Ananthi, Cyril Cherian, Reshma Banu, L. Lakshmi*
21. For Effective, Earlier and Simplified Diagnosis of Retinopathy of Prematurity (RoP), a Probe through Digital Image Processing Algorithm in B-Scan ..... 105  
*K R N Aswini, S Vijaya Raghavan, Sreekanth NP, Manju Sree RP*
22. Effect of Early Physiotherapy for Endotracheal Intubation Induced Temporomandibular Joint Dysfunction –Experimental Study ..... 110  
*Krutika Dnyaneshwar Gawade, Sandeep Babasaheb Shinde, P.B. Jamale*
23. An Observational Study on the Sexual Assault Victims in the Year 2018 at Tertiary Health Care Center of Rajasthan..... 117  
*Mahendra Singh, R.K Punia, Deepali Pathak, Shashank Sharma*
24. Mob Lynching: A New Form of Hate Crime..... 122  
*Manoj Kumar Pathak, Srishti Rai*
25. Radiological Study of Appearance and Fusion of Iliac Crest in hip bone in Bikaner Region in 14-22 Years Age Group ..... 129  
*Mathur Indubala, Sajjad Hussain, Bohra Bhavesh, Sharma Yogesh, Agrawal Anjali*
26. Abortion Laws in India: Issues and Challenges in 21st Century ..... 133  
*Nitesh Bhatt, Pooja Suman*
27. Effect of Core Stability And Functional Mobility Exercises on Muscle Strength after Lumbar Spinal Cord Injury..... 138  
*Neha Y. Kakade, Suraj B. Kanase*

28. A Study to Assess Effectiveness of Jacobson Progressive Relaxation Technique on Sleep Quality among Elderly in Selected Old-Age Home of Kheda District..... 144  
*Patel Margi, Mayavanshi Rashmika, Pandya Rutu, Prajapati Nisha, Patel Vrutta, Khristi Linus, Patel Jay*
29. Awareness of Various Forms of Treatment Approaches in Stroke amongst Rural Population..... 148  
*Prajakta S.Kadam, Suraj B.Kanase*
30. Effect of Multidimensional Exercise Program for Improving Balance in Traumatic Brain Injury Patients..... 155  
*Pranali Kakade, Suraj B Kanase*
31. Traumatic Spinal Injuries: An Autopsy Study at Tertiary Health Care Center of Rajasthan During the Year 2017-18..... 162  
*R.K.Punia, Sanjay Achra*
32. An Analysis of Trends of Homicidal Deaths in Western Mumbai Region ..... 168  
*Rajesh B. Sukhdeve, Sachin S. Sonawane, Shashank Tyagi*
33. Evaluation of Perception of II Year MBBS Students Regarding A Clinical Forensic Medicine Module in a Tertiary Care Centre ..... 174  
*Ravindra Baliram Deokar, Harish Manilal Pathak*
34. A Retrospective Study to Determine the Type of Offence Committed by the Juveniles in the Reformatory Schools of a Capital City of India ..... 180  
*Richa Choudhury, Neeharika Mishra, Pradeep Kumar Yadav*
35. Prevalence of Addiction among Tuberculosis Patients ..... 185  
*Richa Choudhury, Shobhit Shakya, Pradeep Kumar Yadav, Hemant Kumar*
36. A Cross Sectional Autopsy based Study of Homicidal Deaths in Vijayapura, Karnataka ..... 191  
*Siva Kumar V, Tejas J, Shruthi. K. Sivakumar*
37. A Descriptive Study on Alleged Sexual Offenders in South Bangalore ..... 196  
*Sujatha P. L, Ananda. K, Mandar Ramchandra Sane*
38. Pattern and Nature of Fatal Blunt Force Homicidal Injuries and Its Correlation with the Weapon..... 201  
*Sujith Sreenivas C*
39. Prevalence of Odontogenic Cysts and Tumors – A Clinicopathological Study ..... 207  
*Sushruth Nayak, Asha Karadwal, Prachi Nayak, Kush Pathak*
40. A Study of Over-The-Counter (OTC) Drug Usage Pattern among the Patients attending a Medical College Hospital ..... 211  
*Tejasvi.P.K, Magendran.J*
41. Tobacco Toxicity in Tobacco Chewers ..... 217  
*V. Chandrasekhar*
42. Study of Temporary Trends in The Pattern of Poisonings in a Tertiary Care Hospital..... 221  
*V.K.Sowmithra, Magendran.J*

## IV

43. Amputation of Penis Due To Electrocutation- A Case Report..... 228  
*Vedant Kulshrestha, Mohammad Amjad*
44. Towards Digital Diagnosis of Oral Cancer: A Study on Optimum Preferences of Histopathological Techniques and Features..... 232  
*Tabassum Yesmin Rahman, Lipi B. Mahanta, Anup K Das, Jagannath D Sharma*
45. Trauma to the Thoracic Cage – An Autopsy Study..... 239  
*Thankamma P. George, K. Sreekumari, Sreedevi C. S.*
46. Evaluation of the Cookies Formulated with *Costus igneus* Plant Material for Antidiabetic Activity..... 246  
*A. Rajani Chowdary, Raathhika R, Payala Vijayalakshmi*
47. A Study to Assess the Effectiveness of Training Program on Knowledge and Practices Regarding Advanced Cardiovascular Life Support (ACLS) among Staff Nurses in MMIMS & R Hospital ..... 253  
*Alka Walia, Simaranjit Kaur, Vinay Kumari*
48. Punjabi Adaptation of WHO’s Global Physical Activity Questionnaire (GPAQ) in Gurumukhi Script: A Validity and Reliability Study..... 257  
*Harmandeep Singh, Sukhdev Singh, Amandeep Singh*
49. Management of Oroantral Communication Using Double Layered Closure with Buccal Fat Pad and Buccal Advancement Flap: Prospective Randomized Clinical Study ..... 264  
*Kumar Nilesh*
50. Information Booklet on Self-Care Management of Chemotherapy among gynecological Cancer Survivors at Selected Hospital, Mangalore, Karnataka ..... 269  
*Shynee Paul, Jacintha Veigas*
51. Effect of Yoga Therapy on State and Trait Anxiety in Perimenopausal Women: A Non-Randomized Controlled Study ..... 273  
*Abhishek Chaturvedi, Asha Kamath, Gayathry Nayak,, Anjali Rao*
52. A Clinical Study of Complicated Inguinal Hernia with Special Reference to Its Management..... 279  
*Pulin Ch Kumar, Paul Pratik*
53. A Comparative Study of Medical Termination of Pregnancy Act, 1971 with Recent Medical Termination of Pregnancy (Amendment) Bill, 2020 Through Judicial Pronouncement..... 284  
*Pyali Chatterjee*
54. Effect of Kangaroo Mother Care on Physiological Parameters of Low Birth Weight Babies Admitted in NICU..... 290  
*Pratibha Thakur, Jyoti Sarin, Yogesh Kumar*
55. Perception of Medication error among Interns and Staff Nurses in a Selected Hospital at Mangaluru- A Mixed Method Approach ..... 298  
*Pavithra K, Latha S, Gincy Joseph, Sujatha.R, Jyothi Rao*
56. Knowledge of Antenatal Mothers Regarding Human Milk Banking ..... 305  
*Philomena Fernandes, Sabitha Nayak*



57. A Study on Occupational Health Psychology of Employees in IT Sector in Ahmedabad City ..... 313  
*Pranav Saraswat*
58. Acupressure– A Review with a Current and Future Prospective in Dentistry ..... 320  
*Dharnappa Poojary, Diksha Singh, Rubina Anjum, Dieu Thuy Dao, Shailesh Kudva*
59. Does Cerclage wiring with Intramedullary Nailing in Subtrochanteric Fractures Improve the Final Outcome? ..... 326  
*Rajendra Annappa, Surendra Umesh Kamath, Sunil Lakshmpura Krishnamurthy, Sharan Mallya, Krithika Kamath, Pooja Kundapur Suresh*
60. Effect of Acupressure on Anxiety among Patients Undergoing Hemodialysis in Selected Hospitals of Ambala, Haryana: A Randomized Controlled Trial..... 332  
*Jimmy Dharwal , Srinivasan.P, Kanika, Jyoti Sarin*
61. Self Esteem and Peer Group Relationship of Adolescent Children in Single Parent Families ..... 339  
*Anjaly Mohan, Priya V*
62. Skin Cancer Classification Using Dermoscopic Images based on Ranklet Transform, Co-occurrence Features and Random Forest Classifier ..... 344  
*Chithra Devi M*
63. Melanoma Skin Cancer Classification Using Deep Learning Convolutional Neural Network..... 351  
*S. Mohan Kumar, J. Ram Kumar, K. Gopalakrishnan*
64. Cluster Analysis for MRI Brain Tumor Segmentation ..... 356  
*M. Rajmohan, M. Abraham, D. Sahaya Lenin, P. Pandiaraj*
65. Effect of Posture on Electrical Axis of Heart During Different Phases of Breathing in Normal Subjects 362  
*H. Vishnu Priya, S. Krishnan, Prem B*
66. Effectiveness of Guided Imagery on Stress and Coping among Wives of Alcoholics- A Quasi Experimental one Group Pre-Test Post-Test Research Design ..... 367  
*Aarti, Srinivasan.P, Manpreet Sharma, Jyoti Sarin*
67. Predicting the Existence of Brain Tumor in Mri Images by Applying FCNN..... 375  
*Sylvester Ranjith F, Parveen Sultana H*
68. Effect of Video based Teaching on Knowledge and Attitude regarding ADHD of Children among Primary School Teachers ..... 381  
*Vijyeta Bhasin, Srinivasan P., Uma J. Deaver, Jyoti Sarin*
69. Illegality and Infirmities in Implementation of ‘Ex-Servicemen Contributory Health Scheme: Public Audit Findings and Other Irregularities - An Analytical Study ..... 389  
*Bhupal Singh, Asha Verma*
70. Attitude of Dental Faculty on Admissions to Dental Colleges through National Eligibility cum Entrance Test (NEET) - A Knowledge, Aptitude and Perspective Survey ..... 394  
*Saloni Kachhara, Deepak Nallaswamy, Subha M*

## VI

71. Difference in the Academic Performance of NEET and NON-NEET batch- A Cohort Study At Saveetha Dental College..... 401  
*Saloni Kachhara, Deepak Nallaswamy, Subha M*
72. Effect of NEET based Selection Process on the Academic Outcome of Students Pursuing Dentistry - A Cohort Study at Saveetha Dental College ..... 407  
*Saloni Kachhara, Deepak Nallaswamy, Subha M*
73. Medical Device Prototype for Planter Intrinsic Muscles: A Scientific Note ..... 412  
*Amit Sharma, Priyanshu V Rathod*
74. Fire Safety Related Challenges Faced by Existing Hospitals: A Review..... 419  
*Abdul Hakim Choudhary, Mohammad Kausar, Sidhartha Satpathy, D. K. Sharma*
75. Body Mass Index, Modified Bishop Score and Transvaginal Sonographic Measurement of the Cervical Length as Predictors of Successful Induction of Labour by Misoprostol ..... 426  
*Basma Mohamed, Omaima Idris, Noura El-Nassery, Mazen Abdel-Rasheed, Osama Azmy*
76. In Potential Siliko Simulation of Clorogenic Acid in *Coffea canephora* to Transferring Macrophage Polarization of M1 in Tuberculosis Infection ..... 432  
*Christina Destri, Jusak Nugraha, Muhammad Amin, Djoko Agus Purwanto*
77. Molecullar Docking of Epigallocatechin-3-gallate (EGCG) on Keap1-Nrf2 Complex Protein in Photoaging Prevention ..... 439  
*Damayanti, Cita Rosita Sigit Prakoeswa, Djoko Agus Purwanto, Anang Endaryanto, Siswandono*
78. The Effect of Buzz Group Modification Method on Exclusive Breastfeeding Against Self Efficacy in Pregnant Women: A Quasi Experiment..... 446  
*Febyana Dwi Cahyantia, Lailatun Nimah, Retnayu Pradaniea*
79. Tobacco Smoke and Pregnancy Outcome: Literature Review ..... 452  
*Haerani Harun, Anwar Daud, Veni Hadju, Ridwan Amiruddin, Anwar Mallongi, Rosmala Nur*
80. Identifying and Revealing Active Compound from Green Tea (*Camellia sinensis*) for Curing Systemic Lupus Erythematosus by Acting as CASPASE 1 Inhibitor ..... 457  
*Herin Mawarti, Jusak Nugraha, Djoko Agus Purwanto, Joewono Soeroso*
81. Herpes Virus, Causes of Infections and Preventive Methods..... 464  
*Huynh Tan Hoi*
82. Association between Inactive-Gymnastics and Active-Gymnastics Elderly towards Cognitive Functions Measured by The Mini-Mental State Examination (MMSE) ..... 470  
*Muhammad Hamdan, Raini Wisnujono, Yudha Haryono, Abdulloh Machin, Ichwanuddin*
83. The Politics of Judicial Law in the Development of the National Health Law ..... 476  
*Irfan Nur Rachman, Arief Hidayat, and Lita Tyesta*
84. Pattern of Fatal IntraAbdominal Injuries in Autopsy Cases- A 3 Year Retrospective Study..... 481  
*Khaja Azizuddin Junaidi, Kashif Ali*
85. ARM Diagnosis with Distal Colostography on Anorectal Malformations..... 486  
*Naely Rahma, Bambang Seprijanto*



86. Multiplanner Measurement to the Clicked Tempromandibular Joint (Condylar Process and Articular Dick) with Conbeam Computed Tomography..... 491  
*Nameer Fadhel, Manar Abd Alrazaq Hassan, Nour Abd Alrazaq Hassan*
87. Performance of the Health Cadres in Children’s Growth and Development Monitoring Program after Training in the Working Area of Public Health Services of Abiansemal II, Badung, Bali ..... 498  
*Ni Wayan Armini, Gusti Ayu Marhaeni, I Gusti Ayu Surati, I Putu Sairaoka*
88. The Effect of Re-unification Education on Empathy and Multicultural Competence of Nursing-College Students ..... 505  
*Myoungsuk Kim, Gie-Ok Noh, MJ Park*
89. Assessment of Health Status of Children with Cancer who Undergo Chemical Therapy..... 511  
*Kareem Ghadhban Sajem*
90. Effects of Onion Extract on Hepar Histopatology in Alloxan-Induced Diabetic Rattus Novergicus ..... 517  
*Ni Komang Aprilina Widi Suputri, Ajik Azmijah, Retno Bijanti, Made Mahaguna Putra*
91. Inclusive and Sustainable Healthcare Delivery-A Public Private Participatory Model ..... 525  
*Nimble O J, A.V.Chinnasamy*
92. Factors Analysis Related to the Completeness of Providing Basic Immunization in Infant Aged 12 Months ..... 531  
*Hannik Rahmaningrum, Harmayetty, Deni Yasmara, Ilya Krisnana*
93. The Effect of Soot Particulate towards Vascular Cell Adhesion Molecule-1 (VCAM-1) Expression in the Mechanism of Cardiovascular System Disruption ..... 538  
*Edmond Leonard, Muhammad Aminuddin*
94. The Role of Universal Health Coverage in Supporting National Family Planning Program: A Comparative Study ..... 544  
*Erni Rosita Dewi, Muhammad Ardian Cahya Laksana, Nur Anisah Rahmawati, Alifia Candra Puriastuti, Budi Prasetyo*
95. A Study to Assess the Level of Knowledge on Ill Effects of Mobile Usage among Adolescents in Selected College at Kancheepuram District, Tamilnadu, India ..... 550  
*Renuga S, Alfred Sam D, Dinesh.J, Keerthi.G, Parasuraman P, Vijay S, N.Thivya*
96. Learning of Patient Identification in Patient Safety Programs Through Clinical Preceptor Models..... 553  
*Roymond H. Simamora*
97. Effectiveness of Structured Teaching Programme on Pulmonary Rehabilitation among Patients with Chronic Obstructive Pulmonary Disease..... 557  
*S.Eswari, Pushpakala K.J*
98. Nicotine Adds Risk Factors to the Cardiovascular System and Increases Mortality and Sudden Cardiac Arrest ..... 563  
*Salah Abd- Al kader Omran; Abstract*
99. The Effect of Abuse of Some Anabolic Steroids on Hormonal and Testicular Function in Male Rats .... 569  
*Salah M.M. Al Chalabi Rasha F. Abdul-Lattif and Haylim N. Abud*

## VIII

100. Study of a Hormonal Assay in PCOS Patients with Type 2 DM and their Correlation with Inhibin B.... 575  
*Huda Hameed Hassan, Saaad Muhssen Ghazi Aufaira Shaker Nasif*
101. Estimation the Scavenging Activities of Ascorbic Acid, Uric Acid, Gallic Acid and GSH to DPPH Radical ..... 581  
*Ali M.A. Al-Kufaishi*
102. Histological Investigations for Cordia Myxa During the Treatment of Gastritis in Local Rabbits..... 587  
*Hussein Bashar Mahmood, Ghassan A Dawood, Ali Fayadh Bargooth*
103. Frequency of Aspirin Misuse Among Hypertensive Patients in Babylon Province..... 591  
*Zahraa Fattah Ghani, Oday Jasim Alsalihi , Mustafa Shakir Mahmood*
104. Estimation of Antioxidants Activity Through DPPH Inhibition Levels in Patients with Chronic HPV 16 Cervicitis ..... 598  
*Ali M. A. Al-Kufaishi, Lamia A. M. Al-Mashhedy, Bushra Jaber Al-Rubaie*
105. Estimation of Some Genetic and Physiological Variables of Iraqi Desert Snake *Cerastes gasperettii* ... 603  
*Samir M. Khalaf, Haitham L. Abdulhadi, Banan R. Dabdoub, Luay H. Ali*
106. Evaluation of Soluble PD-1 and PD-L1 in Iraqi Type 2 Diabetes Mellitus (T2DM) Patients with Chronic Toxoplasmosis ..... 609  
*Farah E. Mohammed, Ali N. Yaseen, Muhammed A. H. Aldabagh*
107. Clinical Variants of Rosacea in Iraqi Patients ..... 616  
*Ahmed Abdulhussein Kawen, Hussein Abbas Al-Sultany*
108. Assessment of MR-ProADM and N-Terminal B-Type Natriuretic Peptide of Serum Levels in Patients with Heart Failure. .... 621  
*Ahmad abd alraheem Ibrahim Dahy; Walaa Al-Jedda, Abbas Al-Sharifi*
109. Effects of Two Different Doses of Vitamin B2 and a Single Dose of Vitamin B12 Against Cyclophosphamide Induced Nephrotoxicity..... 627  
*Waleed K. Ghanim, Nada N. Al-Shawi, Muhsin S. G. Al-Mozieel*
110. Investigating the Effect of *Lymnaea auricularia* (snail) Powder on Different Species of Pathogenic Bacteria ..... 634  
*Sally Hani Abdul-Khaliq, Nebrass Faleh Chachain, Raghad Abdulatif Abdurazaq*
111. Effects of Simvastatin and/or Metformin Administration on Lipid Profile and Reproductive Function in Adults Male Rats ..... 640  
*Muhsin S.G. Al\_Mozie'el, Abbas A. Khudhair, Noora S. Ghalib*
112. Parkinson's Disease Follow Up Self-Assessment Scale..... 647  
*Kifah K. Al- Ubaidy, Aiyar Shakir, Basim Abdulelah Ali*
113. Dental Caries among Mental Patients in Kerbala-Iraq in 2019 ..... 654  
*Yaseen, Nabeel, Al Haydari, Amer, Al Mousawi, Ali*
114. Treatment of Iraqi People with Hyperkinetic Movement Disorders by Tetrabenazine in Relation to Genetic Polymorphism of CYP450 2D6 ..... 660  
*Zainab A. Abbood , Shatha H. Ali Nawfal M. Sheaheed*

115. New Record of the Genus <i>Hydrotaea</i> Robineau-Desvoidy, 1830 (Diptera, Muscidae) from Kerbala City, Iraq.....	667
<i>Haider Naeem Al-Ashbal, Rafid Abbas Al-Essa, Hanaa H. Al-Saffar</i>	
116. Effect of Aerobic Training on Selected Cardiopulmonary Parameters in Myocardial Infarction Patients with Stroke .....	673
<i>Zeezy Soliman Eraky, Nesreen Ghareb El-Nahas, Naguib Mohamed Salem, Samir Abdelfattah El-gazar, Ahmed Ali</i>	
117. Effects of Perceived Health Condition, Gerotranscendence, and Wisdom on Successful Aging of Elders .....	681
<i>Hee Kyung Kim</i>	
118. Association of Terminal Complement Complex (TCC), Prostaglandin (PG <sub>2</sub> ) among Patient with First Episode Psychosis (Case-Control Study) .....	688
<i>Rana Fadhil Obaid, Rasha Fadhel Obaid, Sumeiya Mahdi al Har</i>	
119. Perception of Medical Health College Students Toward Mental Health.....	695
<i>Wiwik Widiyawati, Ah Yusuf, Indra Fajar Ibnu</i>	
120. The Correlation between the Characteristic of Reflux Based on 24 Hours-Multichannel Intraluminal Impedance- Ph Monitoring with the Quality of Life of Refractory Laryngopharyngeal Reflux Patients .	701
<i>Muhammad Amsyar Akil, Risma Sari Ayu Hasroni, Abdul Kadir, Fardah Akil</i>	
121. Tympanogram and Audiogram Presentation after Tympanomastoideotomy Surgery Using Musculus Temporalis Fascia Profunda Graft and Composite Graft .....	708
<i>Sandrianto Lande, Riskiana Djamin, Sutji Pratiwi Rahardjo</i>	
122. Risk Factors of Lung Tuberculosis Occurrence in the Working Area of Kaluku Bodoa Health Center Makassar City .....	714
<i>Stang, Anwar Mallongi, Indra Dwinata, Sumarni</i>	
123. Difference of Predisposing Factors with Notification Pulmonary TB through Rapid Molecular Test and Specimen Transportation Method of TB Health Centre Staff .....	720
<i>Tukiman, Syarifah, Hiswani</i>	
124. The Influence of Duration, History of Contact and BMI on the Incidents of Pulmonary TB in patients with DM .....	725
<i>Sorimuda Sarumpaet, Evawany Aritonang, Syarifah</i>	
125. Analysis Relationship of the Pulmonary TB Prisoners with the Prevention Measures in Jail In Province of Sumatera Utara .....	729
<i>Lina Tarigan, R. Kintoko Rochadi</i>	
126. The Influence of Distance from Health Facility, Family Number at Home and TB History in Starting Treatment of MDR-TB in Medan.....	736
<i>R. Kintoko Rochadi, Erna Mutiara</i>	
127. The Influence of Education, Existence of Sufferers, and Ventilation with TB Incidence in Batak Etnics in Pematang Bandar Health Centre.....	740
<i>Alam Bakti Keloko, Lina Tarigan</i>	

**X**

128. Proximate Characteristics and Nutritional Value of White Anchovy Flour ..... 744  
*Hendrayati, Theresia Dewi KB, Laras Budyghifari, Adriyani Adam*
129. Distribution of RNA M. Leprae Household Contact in Endemic Area Indonesia ..... 750  
*A. Rizki Amelia*
130. Analysis of Environmental Risk Factors and Treatment Efforts Malaria Import Patients in Puskesmas in the Work Area of District Health Center of Segeri, Pangkep Regency 2019 ..... 757  
*Mugfira Mayangsari Putri, Hasanuddin Ishak, Indar, Anwar Mallongi*
131. Formulation and Effectiveness Test of Matoa Stem (*Pometia Pinnata*) Skin Extract Cream Combination of Honey on *Staphylococcus Aureus* Bacteria..... 763  
*Norma*
132. Relationship between Level of Knowledge of Childbearing Age Women About Cervical Cancer and Behavior of Preventing Cervical Cancer in Mayamuk District, Sorong Regency ..... 770  
*Sunaeni, S.ST, M.Keb*
133. The Affectivity of Knee and Hip Muscle Strengthening Exercise to Improve Muscle Strength, Balance, Pain, and Functional Activity of People with Osteoarthritis ..... 775  
*Djohan Aras, Fatimatu Zahrah Syarif, Natalia Toding Padang, Nurhikmawaty Hasbiah, Herdin Rusli, Ita Rini*
134. Quinone Oxidoreductase 2 Serum Level that affecting the Psychotic Disorders of Methamphetamine Abusers ..... 782  
*Dany H. Ludong, A. Jayalangkara Tanra, Mochammad Hatta, Sonny T. Lisal, Ismail Fikri, Reza Nasution, Tri Supartini*
135. Application Pis (Indonesia Wellness Progsam) PK Model with Decision and Matriarchal Patriarchal Family of Compliance on the Family of the Suffering of Disease TB Lung Health in the Work Remu City Sorong ..... 788  
*Maria Loihala*
136. Decompression Sickness Indicators in Traditional Divers in Bajo, Boalemo District ..... 794  
*Syamsiar S. Russeng, Lalu Muhammad Saleh, Muhammad Syafar Muliadi Rais*
137. The Coparation between Exclusive Breastfeeding and Infant's Development at the Age of 6 Months in Rskia Pertiwi Makassar South Sulawesi Indonesia ..... 800  
*Sundari, Andi masnilawati, Daswati, Lina Fitriani, Sitti Hadriyanti, Sumiaty, Nurlina Akbar*
138. Effects of Classical Music Therapy on Anxiety Level of Caesarean Section Mother ..... 806  
*Sumarni Marwang, Rosita Passe, Rosdianah Aswan, Nurhidayat Triananinsi, Nahira Iskandar, Fadrijah Ohorella, Sumarni Sikki*
139. Effectiveness of Baby Spa and Music Therapy on Growth and Development of Baby..... 811  
*Sri Handayani, Anwar Mallongi*
140. The Role of Kamoro Traditional Leaders in Communities Empowerment and Health in Mimika District ..... 817  
*Vince Tebay, Anwar Mallongi*

141. Effect of Brown Algae Extract <i>Sargassum</i> sp on Malondialdehyde Levels in White Rats ( <i>Rattus Norvegicus</i> ) Pregnant Wistar Strains.....	822
<i>Dahniar, Suryani As'ad, Nasrudin A.Mappeware, Gemini Alam, Budu, Rosdiana Natzir, Burhanuddin Bahar</i>	
142. Factors Corresponded to Health Service Utilization of Chronic Disease Management Program (Prolanis) Patient in Health Center Lateri Ambon City Post-Earthquake .....	828
<i>Ervina Imelda Souhaly, Muhammad Alwy Arifin, Darmawansyah, Amran Razak, Anwar Mallongi, Syamsuddin Wadi, Muh. Yusri Abadi</i>	
143. The Influence of Occupational Safety and Health on Job Satisfaction and Organizational Commitment of Hospital Nurses in Makassar City .....	834
<i>Andi Niartiningsih, Irwandy, Masyitha Muis</i>	
144. Influence of Iur Cost to Patient Satisfaction through Customer Value patients BPJS Hospital in South Sulawesi Province .....	840
<i>Marwah Thaha, Amran Razak, Indar, Fridawat Rivai</i>	
145. Health Education Influence the Maybrat's Women Early Cancer Cervical Detection.....	847
<i>Yowel Kambu, Simon Lukas Momot</i>	
146. Snowball Education Method Effect the Family Support for Plwha Art's Adherence.....	852
<i>Oktovina Mobalen, Yowel Kambu: Absract</i>	
147. Analysis the Influence of Job Embeddednes and Work Engagement on Improving Employee Performance in Rsud Haji of South Sulawesi Province in 2020 .....	857
<i>Noviani Munsir, Irwandy, Syamsuddin</i>	
148. Study of Tobacco Smoke and Pregnancy Outcome .....	864
<i>Haerani Harun, Anwar Daud, Veni Hadju, Ridwan Amiruddin, Anwar Mallongi, Rosmala Nur</i>	
149. Environmental Factors and Use of Protective Personal Equipment for the Prevention of Covid-19 in 3 Large Cities in Indonesia (Jakarta, Surabaya and Makassar).....	869
150. The Influence of Body Image towards Self-Esteem, Self-Compassion and Psychological Well-Being in Female Exerciser .....	876
<i>Namora Lumongga Lubis, Hasnida, Anwar Mallongi</i>	
151. A qualitative Study of Accessibility Health Services among Communities on Small Islands in Makassar City .....	882
<i>Alfiah Ramadhani Amran, Muhammad Alwy Arifin, Muhammad Syafar</i>	
152. Environmental Pollution and Health Problems Due to Forest Fires with Co2 Parameters .....	888
<i>Anwar Mallongi, Rusydi Indra, Muh. Kamil Muh. Arief, M. Fais Satrianegara</i>	
153. The Effect of Giving Date Palm Juice on the Duration of the First Stage of Labor in Sele Be Solu Hospital, Sorong City .....	893
<i>Ariani Pongoh, Niken Kumala Budi, Sri Ayu Dawam</i>	

## XII

154. Food Management System and Satisfaction Level of Students of Pesantren Tebuireng Jombang, East Java ..... 899  
*Mustamir Kamaruddin Anwar Mallongi*
155. Macronutrient Intake of 6-11 Months Old Infant on Mothers Obtaining Moringa Leaves and Iron Supplements ..... 907  
*Sumiaty, Abdullah Tahir, Bahar Burhanuddin, Jafar Nurhaedar, Hadju Veni, Syafar Muhammad, MasyitaMuis, Sri Sumarmi*
156. The Effect of Moringa Oleifera on the Life Outcome of Pregnant and Breastfeeding Mothers: Literature Review ..... 914  
*Nur Ulmy Mahmud, Tahir Abdullah, Arsunan, A.A, Burhanuddin Bahar, Veni Hadju, Muhammad Syafar*
157. Analysis of Drug Logistics Planning at Medical Management Agency in Ambon City Health Office (Qualitative study) ..... 920  
*Jakobis Lewier, Darmawansyah, Muhammad Alwy Arifin, Sukri Palutturi, Anwar Mallongi, M. Furqan, Dian Saputra Marzuki*
158. The Influence of Individual Characteristics on the Performance of Nutrition Program in Ambon City Public Health Center ..... 926  
*Horib, Darmawansyah, Sukri Palutturi, Amran Razak, Yahya Thamrin, Rahmatia Yunus, Nurhayani, Anwar Mallongi*
159. Analysis of Ability and Willingness to Pay Patients in Psychiatric Clinics (Special hospital case study in Maluku Province) ..... 932  
*Mega Aziza, Darmawansyah, Indar, Muhammad Alwy Arifin, Syamsiar S Russeng, Rahmatia Yunus, Muhammad Al Fajrin*
160. Factors Corresponded to Health Service Utilization of Chronic Disease Management Program (Prolanis) Patient in Health Center Lateri Ambon City Post-Earthquake ..... 937  
*Ervina Imelda Souhaly, Muhammad Alwy Arifin, Darmawansyah, Amran Razak, Anwar Mallongi, Syamsuddin Wadi, Muh. Yusri Abadi*
161. The Effect of Work Discipline on a Employee Performance (The Health Office Case Study of Tanimbar Island) ..... 943  
*Edy Slamet Kelibulin, Sukri Palutturi, Muhammad Alwy Arifin, Indar, Yahya Thamrin, Stang, Suci Rahmadani*
162. Analysis Health Information Systems Quality on the Effectiveness of Public Health Center Officers in Ambon City ..... 948  
*Erwine Senda N Wattimena, Amran Razak, Sukri Pallutturi, Darmawansyah Muhammad Syafar, Lalu Muhammad Saleh, Suci Rahmadani*
163. Juvenile Treatment Model according to Juvenile Criminal Justice System in the LPKA (Juvenile Detention Center) Class I, Tanjung Gusta, Medan ..... 954  
*Madiasa Ablisar, Marlina*
164. Factors Related to the Existence of Aedes Aegypti Larvae in Endemic and Non Endemic Areas in Makassar City ..... 959  
*Erniwati Ibrahim, Jusnita, Syamsuar Manyullei, Anwar Mallongi*



165. Analysis of Cost Sharing on the Satisfaction of NHI Patients Not Contribution Beneficiaries (Case Study of Passo Hative Hospital in Ambon City) ..... 965  
*Yoki Stefanus, Darmawansyah, Muhammad Alwy Arifin, Indar, Syamsuar Manyullei, Ansariadi, Dian Saputra Marzuki*
166. Estimation of Some Immunological and Biochemical in the Patients with Systemic Lupus Erythematosus in Males and Females in Baghdad ..... 972  
*Dua'a Akram AL-Atabi, Bushra F. Hasan, Ali H. AL-Hafidh*
167. Impact of Food Simulants Material on Orthodontic Bond Strength after Application of Caries Infiltrant Resin (In Vitro Study) ..... 979  
*Ahmed Muhsin Yousif AL-Mayali, Mohammed Nahidh, Hayder A. Kadhim, Ali Hadi Fahad*
168. Antibacterial Activity of Selected Fractions Extract of *Coptis chinensis* Franch Rhizomes ..... 985  
*Reyadh R Al-Rashidi, Hisham Al-Shaikhli, Rusul A Alsaray, Tahrani Munusamy, Radhi K. Obaid*
169. Therapeutic Effect of Chemically Synthesized Silver Nanoparticles on Aphthous Stomatitis in Some Iraqi Patients ..... 991  
*Zahraa Neamah Abbas, Nafal NazarBahjat*
170. Evaluation of Serum Leptin, Interlukein-6 and some Biochemical Parameters in Iraq obese Adult Patients ..... 996  
*Salwa Gahzi Turki, Asmehan Adnan AL- Naqeeb, Zahid Jasim Muhammed, Wesam Hameed Ahmed*
171. Estimation The Scavenging Activities of Ascorbic Acid, Uric Acid, Gallic Acid and GSH to DPPH Radical ..... 1003  
*Ali M.A. Al-Kufaishi*
172. Frequency of Aspirin Misuse among Hypertensive Patients in Babylon Province ..... 1009  
*Zahraa Fattah Ghani, Oday Jasim Alsalihi, Mustafa Shakir Mahmood*
173. Estimation of Antioxidants Activity Through DPPH Inhibition Levels In Patients with Chronic HPV 16 Cervicitis ..... 1016  
*Ali M. A. Al-Kufaishi, Lamia A. M. Al-Mashhedy, Bushra Jaber Al-Rubaie*
174. Postoperative Hypothermia in Surgical Patients at Azadi Teaching Hospital ..... 1021  
*Anas Amer Mohammad, Mehvan Jameel Ahmed,*
175. Histological and Biometric Study of the Effects of *Fusarium Graminarum* Silver Nanoparticles on the Kidney in Male Albino Mice ..... 1028  
*Sahar A. H. AL-Sharqi*
176. Assessment Hormonal Disorders of Women in Oral and Vaginal Changes ..... 1036  
*Karama M.T AL-Nuaimy*
177. A Difficulty Chart for Estimation of Treatment Duration of Palatally Impacted Canines ..... 1040  
*Riyadh A. Ruwiaee, Dhuha A. Al-Ali, Mushriq F. Abid*
178. Histological and Enzyme Histochemical Changes of Liver Induced By the Action of Maxxthor Insecticide in Male Albino Rats ..... 1047  
*Entesar A. Essa, Sahar A.H. AL-Sharqi, Jabbar H. Yenzeel, Layla J. Mohammed*

## XIV

179. The Nature of the IL17 Cytokine Response In Rabbits Prime-Boosted With Escherchia Coli-Pseudomonas Aeruginosa Prototype Bacterin Combinations..... 1054  
*Ibrahim Ms Shnawa, Ferial Abd*
180. Effect of Hearing Impairment on Behavior and Communication of Children in Schools and Special Education Centers in Mosul City..... 1060  
*Hana A. Al-saeed Rabei M. Al-dobooni*
181. Molecular Identification of Pathogenic Klebsiella Pneumoniae Strains Producing Biofilm ..... 1068  
*Omer N. Abbas, Ahmed A. Mhawesh, Abdulwahid B. Al-Shaibani*
182. Molecular Localization of Human Papilloma Viral 16/18 DNA in Adenotomized Tissues from a group of Iraqi Patients ..... 1075  
*Taghreed F. Almahbobi; Mustafa Jaffar Hussien, Zainab A. Hamid, Shakir H. Mohammed Al-Alwany Saad Hasan Mohammed Ali*
183. Roles of Brain-Derived Neurotrophic Factor (BDNF) In Developing Jaw..... 1082  
*Noor Natic Raheem, Mohammed Faris, Athraa Y. Al-Hijazi, Ali I Alqurshi*
184. Serum and Salivary Immunoglobulins levels in Tobacco Smokers of Baghdad Governorate..... 1088  
*Shatha F. Tariq, Raghad N. Shihab*
185. Association of Retinol Binding Protein-4 and Microalbuminuria and Blood Glucose Regulation in Type 2 Diabetic Iraqi Patients..... 1094  
*Thair Lateef, Ali Abdulhussain Kasim*
186. Assessment of Nurses Knowledge Toward Neonate with Birth Asphyxia at Neonatal Intensive Care Unit in Pediatric Hospitals at Babylon Governorate ..... 1099  
*Salim Amir Yousef, Abdul Mahdi Abdul Ridah Hasan*
187. Evaluating the Concentration of Cotinine, Lead and Cadmium in Newborns with Respiratory Distress Syndrome ..... 1105  
*Hiba Hussein Ali , Ali Faris Hassan, Hayder Hussein Alzubaidi*
188. Synergistic Effect of Some Natural Substances in Combination with Antibiotics on MDR Klebsiella isolates ..... 1112  
*Mohammed Shaker Mahmoud Alani, Laith Musleh Najeeb Al Nuaimi*
189. Assessing the Response of a Sample of Iraqi Asthmatic Patients to Different Medication Regimens ... 1119  
*Ali L. Jasim, Eman S. Saleh, Mustafa N. Abd Ali*
190. Experimental Study of Prepared Killed Vaccine For S. Aureus in Local Rabbits..... 1127  
*Mohammad Hamid Kareem, Rafid Khalid Ali , Shireen Jameel Khaleel , Mustafa Salah Hasan, Eman Naji Saleh*
191. Evaluation of Serum Leptin Level in Correlation with CRP in a Sample of Iraqi Patients with Inflammatory Bowel Disease at Gastroenterology and Hepatology Teaching Hospital ..... 1133  
*Ali S. Musa Al Shammaa, Ghaith Sael Mohammed Ali Haitham Kaddouri Hussein*
192. Influence of Quality of Nursing Work Life on Nurses' Turnover Intention: the Mediating Effect of Organizational Commitment..... 1140  
*Hyoungshim Choi, Insook Kim, Yeongyi Yim, Seonae Won*

193. The Role of Aspiration and Thyroxine Suppression Therapy in Management of Benign Thyroid Nodules ..... 1147  
*Jalil Ibrahim Awaid alrubaye; Hussein Ali Abed Ahmad ; Salah Mahdi Tager*
194. Assessment of Risk Factors of Lung Cancer Patients in Babylon Governorate ,Iraq ..... 1154  
*Ali Abdullah Jasim, Basim Hussein Bahir*
195. Preparation & Characterization of Some Poly Ester-Amide as Drug Polymers..... 1159  
*Abeer Abdul RazakMohammed; ManalAzat Aziz*
196. Correlated of Some Parameters of Placenta and Umbilical Cord with the Newborn Baby ..... 1165  
*Saif Kamel Mohammed; Saad Ahmed Al-Rawi; Samira Abdul Hussein Abdullah ; Nihad Khalawe Tektook*
197. Treatment of Retained DJ(neglected DJ) in AL-Anbar Government, A Postconflict Study ..... 1171  
*Omar Mahmood Shakir; Dhia A.Kareem ; Ameel Farooq Al Shawi , Wafaa Khalel Ibrahim*
198. The Association of Raised Mid-trimester Serum Human Chorionic Gonadotrophin (hCG) and Alpha-Fetoprotein with adverse Pregnancy Outcome ..... 1179  
*Marwa Hamood Jabir, Taghreed Salah Alquzwini*
199. Evaluation of the Immune Response in Scabies Patient (Ordinary and Prisoners) Treated with Permethrin 5% ..... 1185  
*Kawther Omran Hashim, Maan Abdul Aziz Shafiq, Hazima Mossa Al-Abassi, Majid Mohammed Mahmood*
200. Association of birth Spacing with birth weight in Baghdad City ..... 1192  
*Buthaina Ateyah Rashid; Shaymaa Hadi Najm ; Aws Azmi Shakir*
201. Knowledge of Mothers Regarding Measles Control in Primary Health Care Centers in Al- Samawa City ..... 1200  
*Salwan Abdullah Naji , Khadija S. AL-Mizury, Shatha K. Atrah*
202. Correlation of Ki 67, Histopathological Features and Shape of Lesion in Skeletally Mature Osteochondroma ..... 1211  
*Wafaa Redha Mohammed Al Sabbagh, Mushtaq Talib Hussein, Ali Fadhil Hashim, Enass Abdul Kareem Dagher Al-Saadi*
203. Vitamin D Level Status and hypertension among Elderly Iraqi People in Al Hillah City ..... 1218  
*Ismael Hasan Jawad, Hasan ALwan Baiee*
204. Impact of Physical Activity Program upon Elderly Quality of Life at Al-Amara City/Iraq ..... 1223  
*Ghazwan Abdul Hussein AlAbedi, Arkan B. Naji*
205. Fear and Anxiety Disorders Related to Childbirth among Primiparous Women in Kirkuk City ..... 1229  
*Abbas Lateef Muhe-Aldeen, Ameer Salah-Aldeen Abdulrazaq, Ahmed Mohammed Jasim*
206. Effectiveness of an Educational Program on Nurses' Knowledge and Practices Concerning Nursing Care for Critically – Ill Patients at Critical Care Units in Misan Governorate Hospitals..... 1236  
*Aqeel Azeez Arrar, Suad J. Mohammed*

## XVI

207. Genotyping *Tinea Capitis* Fungi based on Barcoding ITS rDNA Marker ..... 1243  
*Falih Hasan Mohammad Alkhafaji, Hiba Jabur Sallal, Zaidan Khlaif Imran*
208. Encrypt Medical Image using CSalsa20 Stream Algorithm ..... 1248  
*Kian Raheem Qasim, Sara Salman Qasim*
209. Evaluation of Students' Self-management and Academic Achievement in the University of Baghdad 1257  
*Basima J. Jasim*
210. Risk factors for Cardiovascular Diseases among Diabetic Patients attending Al Nasiriya Diabetic and Endocrinology Center ..... 1264  
*Qasim Ali Khasal, Dheyaa Kadhim Jabbar, Fatima J Shinjar*
211. Comparative Study between the Effect of Melatonin and Hyaluronic acid on Induced Bone Defect Healing in Rabbit ..... 1271  
*Rawaa Abdul-Jabbar Mahmood, Noor Abdulkareem Razouki*
212. Knowledge and Protective Health Behaviors Concerning Risk Factors for Coronary Heart Disease among Baghdad University Students ..... 1277  
*Aqeel H. Jasim, Haider M. Majeed, Tahseen R. Mohammed*
213. Evaluation of Quality of Nursing Documentation in Surgical Wards at Baghdad Teaching Hospitals ... 1284  
*Tahseen R. Mohammed, Haider M. Majeed, Aqeel H. Jasim*
214. Knowledge of Mother Regarding Children Vaccines ..... 1289  
*Faraj H. Johni*
215. Effect of Corrective Exercises According to the Biomechanical Indicators of the Footprint of the Paraplegic ..... 1294  
*Haider Fayyadh ALamiri*
216. Effects of Caring Children with Leukemia on their Mothers' Psychosocial Status ..... 1299  
*Adraa H. Shawq, Khitam M. AL-Mousawi, Zaid W. Ajil*
217. Social Factors associated with Relapse in Psychotic Patients Attending Teaching Hospitals in AL-Furat Al-Awsat Governorates ..... 1303  
*Ali A. ALHatab, Saja H. Mohammed*
218. Linkage between Cariogenic *Streptococcus Mutans* and Atherosclerotic Plaques of Cardiovascular Disease Patients in Iraqi Population ..... 1309  
*Adil Ateyah A. A. AL-Nasrawi, Haider Ali Muhammed, Ali Kadhim Aljarah*
219. Effect of Omega-3 on Induced Cutaneous Wounds Healing in Rabbits ..... 1316  
*Falah Mahmood Hameed*
220. Use of Iraqi Castor (*Ricinus Communis*) Leaf Extract as Anti-Inflammatory in Treatment of Skin Wounds in Rabbits ..... 1321  
*Namir I. Mohammed, Jassim M. Khalaf Albozachri*
221. Assessment of Child Complications Related to Fluids and Electrolyte Disorders in Babel Hospital for Mothers and Children in AL-Hilla City ..... 1326  
*Abdul Mahdi A. Hassan*

222. The Rate of Post-Spinal Puncture Headache in Patients Undergoing Spinal Anesthesia According to the Size of Spinal Needle (G22 versus G24): Case Reference Study..... 1329  
*Ahmed Matrood Kadhim, Salman Abbas Badi, Watheq Maeh Naji*
223. The Crime of Establishing a Shell Bank – A Comparative Study..... 1335  
*Hawraa Ahmed Shakir, Israa Mohammed Ali Salim, Ammar Ghali Abdulkadhim El-Eisaw*
224. Prevalence Rate of Hepatitis C virus (HCV) and Hepatitis B virus (HBV) Infection in Iraqi Patients on Hemodialysis: Cross Sectional Study ..... 1340  
*Wisam Hatef Kareem Al-Muramdy*
225. Impact of Mass Media upon Juvenile Delinquency in Basra Central Prison and AL- Maqal Police Station ..... 1346  
*Haider Falih Jabbar, Ali Kareem Al-Juboori*
226. Evaluation of the Quality of Primary Health Care Services for Adolescents With Chronic Illness in Kirkuk City ..... 1352  
*Burhan A. Hama Hussein, Mohammed F. Khalifa*
227. Self-evaluation of Continuing Nursing Education Programs in Kirkuk Health Directorate Hospitals ... 1356  
*Hussein M. Abdulfatah Salma K. Jeehad*
228. IL-10(-1082 G/A) Gene Polymorphism in Iraqi Patients with Scabies..... 1361  
*Amerah Abdel Hadi, Alaa Jawad Hassan*
229. Assessment of Pregnant Women Knowledge and Practices Concerning Iron Deficiency Anemia at Al-Amara City/Iraq..... 1368  
*Ghazwan Abdulhussein AlAbedi, Aqeel Aziz Arar, Mustafa Salim Abdul Alridh*
230. Epidemiology of Burn Cases in Erbil Governorate ..... 1374  
*Pakistan Hamadamin Yousif, Hoshyar Amin Ahmed*
231. Changes of Some Environmental Factors in the Iraqi Coastal Waters..... 1381  
*Mohammed Faris Abbas, Sabeeh H. Al-Mayah, T. A. Khalaf*
232. Primary School Teachers' Attitudes regarding Stuttering of School Age Children at First Al-Karkh Education Directorate in Baghdad City ..... 1390  
*Rafea Qadri Meteab Al-Qaisi, Eqbal Ghanim Ali, Ali Kareem Khudhair, PhD*
233. Synthesis and Antibacterial Evaluation of some New Pyrazole Derivatives ..... 1395  
*Mohammad M.Al-Tufah, Saad Salim Jasim, Khalid A. Al-Badrany*
234. Bacteriological Study of Eye infection in Baghdad City..... 1400  
*Farah Ali Hameed*
235. Effectiveness of an Instructional Program on Hypertensive Patients' Knowledge toward Prevention of Cerebral Vascular Accident at Al-Razi Center in Al-Basra City ..... 1406  
*Khadija Mohammed Jassim, Suad Jassim Mohammed*
236. Determination the Causes of Neonatal Mortality during the Last 3 Years Ago in Al-Kut City..... 1412  
*Gossoon Juma Elywy, Mohammed Malih Radhi, Alaa M. Tuama*

## XVIII

237. Nurses Knowledge Assessment Concerning Prevention of Ventilator-Associated Pneumonia..... 1420  
*Hussein Jassim Mohammed , Nuhad Mohammed Kassi , YasharAl-Naamy, Ali F . Abdul Hussein, Raheem Malalla ABADi, R.N Kadhim Hussein Jassim*
238. Maternal Nutritional Status and Preterm Birth ..... 1426  
*Hind Abd Al-Rasoul Mughir, Basim Shanin Jasim, R.N .Kadhim Hussein Jassim*
239. Immunological Aspects of Patients Infested with Scabies in Thi-Qar Province, Southern Iraq ..... 1431  
*Zainab Abd Ali Mohammad, Nadia Ahmed Hadi, Ahmed Abdulhussein Kawen*
240. Mother's Knowledge of Initiative Breast Feeding in Relation to Neonatal Jaundice ..... 1436  
*Nuhad Mohammed Al Doori, Wafaa Ahmed Ameen , Mohommed Talib*
241. Epidemiology and Outcome of Burn Patients in the Burns Specialty Center at Al-Diwaniyah Province, Iraq, 2019 ..... 1442  
*Muhammad Kerim Jasim Albo Jumaa, Abdulameer abdulhussein Kadhim, Hassoon Oleiwi Tinah*
242. The Effect of Fixed Force Exercises by Using Different Tools in the Values of Some Bio Kinematics Variables to the Hit/Spike Skill in Volleyball for Young People..... 1448  
*Hussein Ali Kadhim, Ali Naeem Sultan, Amjad Abd Kadhim*
243. Nurses' Knowledge, Attitude and Practice Towards Preparedness of Disaster Management in Emergency of Mosul Teaching Hospitals..... 1454  
*Nasir M. Younis, Mahmoud M. Ahmed, Ahmed A. Hussein*
244. Molecular detection of Virulence Factors genes Associated with Immune Resistance in Klebsiella pneumonia ..... 1459  
*Nihad Jawad Kadhim , Hayder Shkhair Al-Janabi , Mohanad Jawad Kadhim*
245. Evaluation of Technical Quality and Procedural Errors of Root Canal Treatment Performed by Undergraduate and Postgraduate Dental Students: A Retrospective Radiographic Analysis ..... 1466  
*Ahmed H. Ali, Noor H. Fadhil, Ahmed G. Al-Marroof*
246. Studying the Problems of Attracting Attention in the Physical Education Lesson for the Preparatory Stasge from the Female Teachers Point of View ..... 1472  
*Jihan Karim Amana, Mohssen Ali Musa*
247. Study the Correlation between Serum level of Interlukin 6 and Lactate Dehydrogenase in Myeloma Patients at Stage III with Serum Creatinine and Calcium Level ..... 1477  
*Shaymaa Obaid Abdullah, Hussein Jasim Al-Harbi*
248. Direct Vision Comparison of Lip Curvature between Genders in Fully Edentulous Patients..... 1483  
*Zahraa S. Karkosh*
249. Evaluation of Nurses' Evidence-based Practice at Primary Health Care Centers in Baghdad City..... 1487  
*Ali Hadi Muosa, Mohammed Fadhil Khalifa*
250. The Effect of Competitive Antigen on Some Cytokine in Rabbits ..... 1493  
*Aseel Hashim Neama, Ibrahim M. S. Shnawa, Frial G. Abd*



251. Estimation of Vitamin D Levels in Women with Carpal Tunnel Syndrome (with and without Diabetes) ..... 1500  
*Ghadeer hamid AL-Ardhi, Adil Mohammed AL-Maamory, Ali Mohammed Abd- Alameer*
252. Hematological Study of Splenctomized Dog in Iraq ..... 1505  
*Ali Hussein Fadhil, Mohammed Assad S. Alkabi, Ihab Ghazi Mahdi AL, Shemmari, Ameer Sachet Atta AL-Saigh*
253. The Effect of Using the Cognitive Strategies on the Achievement and Practical Performance of Physiology (Modeling / Reciprocal teaching) ..... 1511  
*Miade Nazim Rashid*
254. Effectiveness of Instructional Program for Nurses' Knowledge regarding Oxygen Administration Methods at Pediatric Teaching Hospitals in Mosul City ..... 1519  
*Mohammed Ahmed Sultan Al-Wily , Afifa Radha Aziz, PhD*
255. Nurses Knowledge Assessment Concerning Prevention of Ventilator-Associated Pneumonia..... 1526  
*Hussein Jassim Mohammed, Nuhad Mohammed Kassi, YasharAl-Naamy, Ali F. Abdul Hussein, Raheem Malalla ABADi, R.N Kadhim Hussein Jassim*
256. Skill and Capacity of Women through Social Mobilization: Analysis of Urban Women Self Help Groups in Coimbatore City ..... 1532  
*Kanagaraj S, Priya V*
257. Fluorosis: An Endemic Disease ..... 1538  
*Sakshi Chaturvedi, Chakrapani Chaturvedi*
258. Family Interaction Pattern in Wive's of Alcohol Dependents..... 1542  
*Chinnu Sebastian , Suja M.K*
259. Experiencing Foster Care-Happiness and Wellbeing of Institutionalised Children ..... 1547  
*Saleena.M, Suja M.K*
260. Empathy and Interpersonal Relationship among Institutionalized Children ..... 1552  
*Jincy V.V, Suja M.K*

# Environmental Pollution and Health Problems Due to Forest Fires with Co2 Parameters

Anwar Mallongi<sup>1</sup>, Rusydi Indra<sup>2</sup>, Muh. Kamil Muh. Arief<sup>2</sup>, M. Fais Satrianegara<sup>3</sup>

<sup>1</sup>Senior Lecturer of Environmental Health Faculty of Public Health, University of Hasanuddin, <sup>2</sup>Postgraduate student of Public Health, University of Hasanuddin, Makassar, <sup>3</sup>Faculty of Medicine and Health Sciences, Alauddin State Islamic University, Makassar

## Abstract

Today, air pollution is a serious problem faced by industrial countries. The impact caused by air pollution is not only a direct impact on human health, but also can damage the environment. One of the sources of air pollution are now common is the forest fires which generate a compound emissions are carbon dioxide (CO<sub>2</sub>). Several studies in the medical literature documenting a causal link between air pollution, especially CO<sub>2</sub> and negative impacts on health after short-term exposure, especially the unknown long-term health consequences of exposure to pollution. Some studies related to fire management models and CO<sub>2</sub> emission reductions of them use the method of mapping risk of forest fires and the use of reforestation and the elimination of illegal logging is considered effective to implement.

**Keyword:** Air pollution, forest fires, carbon dioxide

## Introduction

Today, air pollution is a serious problem faced by industrial countries. Air pollution raises a very adverse impact. The impact caused by air pollution is not only a direct impact on human health, but also can damage the environment.

One of the sources of air pollution are now common is their forest fires. One of emissions contained in air pollution as a result of the forest fires are compounds of carbon dioxide (CO<sub>2</sub>).<sup>1</sup>

CO<sub>2</sub> emissions and global warming potential to be one of the considerations biggest environmental problems today. Due to the increase global population and industrial development quite rapidly result in the concentration of CO<sub>2</sub> in the atmosphere has grown an average of 2 ppm / year for the last 10 years.<sup>2</sup>

## Materials and Method

In this literature review, keywords used to get a reference to a related article is "air pollution", "forest fires" and "carbon dioxide". The scope of the literature review will be limited beginning in 2011 to the top with the goal of search engines can produce journals - journals

and references are more focused on development problems and solutions. Reference is also limited in the famous journal, namely Science Direct, because the journal can be accessed free of charge. Search results using keywords found about 6,200 research articles and 7,800 books. However, based on the criteria of the carbon dioxide, only 12 articles were reviewed,

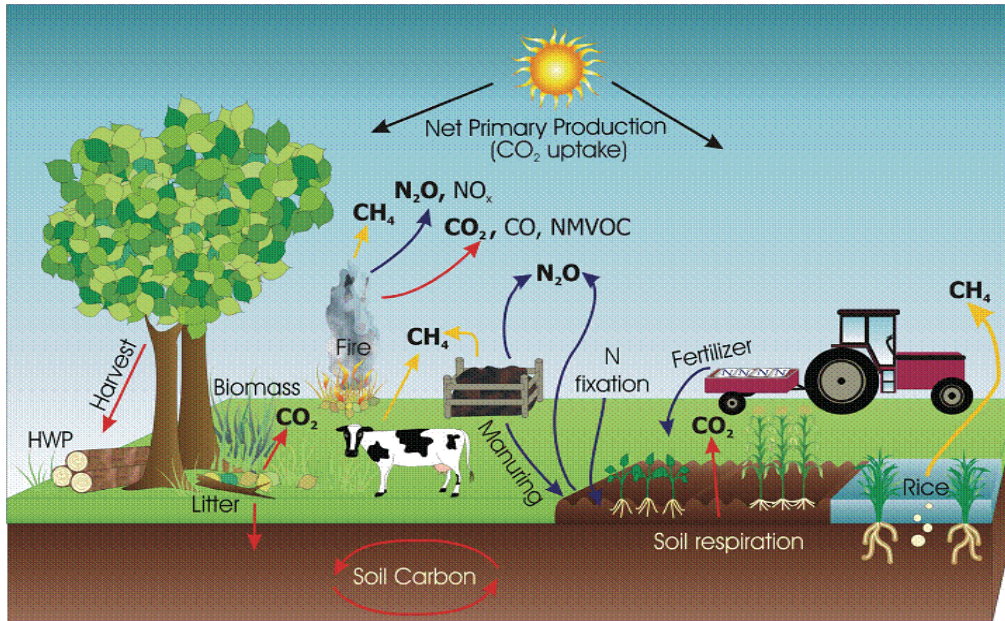
## Result and Discussion

### *Air Pollution, Forest Fire and Carbon*

Air pollution can be defined an activity in the atmosphere, where the concentration of the substance - a substance that is sufficiently high and is above the ambient value and can have an impact - the impact on humans, animals, vegetation, or material. In addition to disrupting the aesthetics, small-sized particles in the air can be inhaled into the respiratory system and cause respiratory illness and lung damage. Particles that get into the respiratory system will be set aside depending on the diameter.<sup>3</sup>

One of the sources of air pollution are now common is their forest fires. One of emissions contained in air pollution as a result of the forest fires are compounds CO<sub>2</sub>.<sup>4</sup>

CO<sub>2</sub> is actually a component compound that naturally exist in the air. Effect of CO<sub>2</sub> is called the greenhouse effect of CO<sub>2</sub> in the atmosphere which can absorb heat energy and obstruct the course of the heat energy from the atmosphere to the surface is higher.<sup>(5)</sup>



Picture 1

Cycle greenhouse gas

*Transport, transfer and accumulation of CO<sub>2</sub>*

The oceans play an important role for the distribution of this is because the CO<sub>2</sub> concentration at the level of atmospheric CO<sub>2</sub> that is controlled by the concentration of CO<sub>2</sub> in the oceans. Cycle CO<sub>2</sub> in the oceans separated in two senses, namely CO<sub>2</sub> natural and anthropogenic CO<sub>2</sub>. Since the increase of anthropogenic CO<sub>2</sub> in nature, the sea has a role as an absorber of anthropogenic CO<sub>2</sub> to maintain the balance of the Earth system. On the other hand, the increase in this concentration in the feared sea will also affect the balance mechanism existing systems in it. Therefore, the amount of CO<sub>2</sub> that accumulates in the water column and how its distribution among the oceans of the world, will continue to be examined from year to year due to increased concentrations of anthropogenic CO<sub>2</sub> in the atmosphere.<sup>6</sup>

CO<sub>2</sub> in the atmosphere is also absorbed by plants through photosynthesis berhijau leaves, but the amount of CO<sub>2</sub> available to that used by plants on the earth is not balanced anymore. The more CO<sub>2</sub> and other greenhouse gases in the atmosphere, the more infrared radiation is

absorbed, the higher the intensity of the greenhouse and consequently the temperature at the earth's surface is also higher.<sup>5</sup>

Diffusion of CO<sub>2</sub> from tissues to the bloodstream and lungs are also caused by the pressure difference of CO<sub>2</sub>. CO<sub>2</sub> pressure in tissues, veins, arteries, and alveoli. Therefore, the CO<sub>2</sub> in the network will be transported to the alveoli in the lungs. Literature and scientific documents relating to CO<sub>2</sub> inhalation exposure effects on human health and psychomotor performance, linear physiological changes in the circulatory system, cardiovascular and autonomic on exposure to CO<sub>2</sub> concentrations in the range of 500-5000 ppm. Human experimental studies explain that short-term exposure to CO<sub>2</sub> begins at 1000 ppm affect cognitive performance including decision-making and problem solving. Changes in the autonomic system for low-level exposure to CO<sub>2</sub> may involve this effect. Further research is needed on the long-term effects of exposure to low levels of CO<sub>2</sub> in the autonomous system. A number of epidemiological studies show a link between low-level exposure to CO<sub>2</sub> ranging from 700 ppm and symptoms associated with the building. Respiratory symptoms indicated in children who are exposed to indoor CO<sub>2</sub> concentrations

higher than 1000 ppm. However, in other comorbidities pollutants may be involved in these effects.<sup>6</sup>

The amount of CO<sub>2</sub> that accumulates in the water column and how its distribution among the oceans of the world, will continue to be examined from year to year due to increased concentrations of anthropogenic CO<sub>2</sub> in the atmosphere.<sup>7</sup>

#### *Impact on the environment*

Population growth and the use of fossil fuels at the same time as the main energy source in the region has led to the release of more CO<sub>2</sub> into the atmosphere with negative consequences on the environment.<sup>8</sup>

CO<sub>2</sub> is a greenhouse gas implicated in global warming trend. Snow and ice have declined closure, the ocean temperature has increased and the level of the ocean's surface also increased over the last century. Rising sea levels could submerge many areas. Extreme weather conditions are causing droughts, floods and typhoons, as well as the distribution of disease-causing organisms may occur predictability.<sup>9</sup>

#### *Health impacts caused*

Several studies in the medical literature documenting a causal link between air pollution and negative health outcomes immediately after exposure, much less is known long-term health consequences of exposure to pollution. A study using Indonesia's forests in 1997 as a natural experiment, which estimates long-term effects of air pollution on health outcomes that take advantage of the properties of longitudinal from Indonesia Family Life Survey (IFLS), by collecting individual data detail about many health outcomes, both in Discovered in 1997 and 2007. the significant negative impact of pollution, which survive in the long term. Men and older people most impacted, while the children seemed to recover almost completely from this initial shock. For the whole population,<sup>10</sup>

Judging from some of the literature and scientific documents relating to CO<sub>2</sub> inhalation exposure effects on human health and psychomotor performance. Linear physiological changes in the circulatory system, car-diovascular, and autonomous exposure to CO<sub>2</sub> concentrations in the range of 500 to 5000 ppm. Human experimental studies have suggested that exposure to

short-term CO<sub>2</sub> begins at 1000 ppm affect cognitive performance including decision-making and problem solving. Changes in the autonomic system for low-level exposure to CO<sub>2</sub> may involve this effect. Further research is needed on the long-term effects of exposure to low levels of CO<sub>2</sub> in the autonomous system. A number of epidemiological studies show a link between low-level exposure to CO<sub>2</sub> ranging from 700 ppm and symptoms associated with the building. Respiratory symptoms indicated in children who are exposed to indoor CO<sub>2</sub> concentrations higher than 1000 ppm.

However, in other comorbidities pollutants may be involved in these effects. In the context of a significant linear increase of the global ambient CO<sub>2</sub> concentrations caused by anthropogenic activities and resources, reduce CO<sub>2</sub> levels in the room through the vents to the ambient air is increased energy consumption in air-conditioned buildings. To control CO<sub>2</sub>-efficient energy in the building from the surrounding air, the rise in atmospheric CO<sub>2</sub> concentration needs to be suppressed. In the context of a significant linear increase of the global ambient CO<sub>2</sub> concentrations caused by anthropogenic activities and resources, reduce CO<sub>2</sub> levels in the room through the vents to the ambient air is increased energy consumption in air-conditioned buildings.<sup>6</sup>

#### **Handling Model That Can Be Applied**

One of the research related to overcoming the problem of forest fires by using Data Base Inventory of Forest Resources, based on four aspects topographical factors, human activities, climate and forest characteristics. A conceptual framework for mapping the risk of fire is developed by integrating Database Forest Resource Inventory. Potential risks of forest fires and map the risk zone in the Chinese heritage sites was assessed using GIS.<sup>11</sup>

Research presents the results of a study of absorption and reduction of carbon dioxide emissions with the use of ecosystem services in the nature reserve (reforestation) and the elimination of illegal logging in the state of the newly formed ijevan, located in Tavush region of the Republic of Armenia.<sup>12</sup>

#### *Resistance*

In general, the fires caused by three major factors



that fuel conditions, weather and culture, including the lack of public awareness of the importance of forest preservation. All three of the above are causing difficult implemented regulations on forest fires.<sup>4</sup>

### Success

Improvements in the estimation of the risk of forest fires and fire risk zone mapping is essential to reduce the negative impact of fires and to facilitate the planning of the protection of forested areas. The success of the method the estimated risk of forest fires and fire risk zone mappings simply and reliably to assess the potential risk of forest fires and map the forest fire zones in a place with little historical data about the fire. This method helps provide reference for decision makers to prioritize areas for conservation of cultural resources and / or culture, and enhance the practical application of fire prevention and suppression.<sup>11</sup>

Meanwhile, the results of studies related to the absorption of CO<sub>2</sub> emissions was found that forest ecosystems asylum state ijevan 440.7 metric can absorb carbon and can reduce CO<sub>2</sub> emissions each year. And the elimination of illegal logging, the number could increase carbon sequestration. As a result the amount of carbon dioxide in the atmosphere will be reduced 39.07 metric. Research on CO<sub>2</sub> reduction with reforestation system and the elimination of illegal logging are found it turns out the value of carbon sequestration forest ecosystem services by lead economic benefits will be surplus.<sup>12-16</sup>

**Ethical Clearance-** Taken from university ethical committee

**Source of Funding-** Self

**Conflict of Interest** – Nil

### References

1. Ueyama, M., Iwata, H., Nagano, H., Tahara, N., Iwama, C., & Harazono, Y.. Carbon dioxide balance in early-successional forests after forest fires in the interior of Alaska. *Agricultural and Forest Meteorology*, 2019; 275 (April), 196-207. <https://doi.org/10.1016/j.agrformet.2019.05.020>
2. Zhang, H., Bucior, BJ, & Snurr, RQ. Molecular Modeling of Carbon Dioxide Adsorption in Metal-Organic Frameworks. *Modeling and Simulation in the Science of Micro- and Meso-Porous Materials*. Elsevier Inc. 2017; <https://doi.org/10.1016/B978-0-12-805057-6.00004-1>
3. Vallero, D. *The Science of Air Pollution. Fundamentals of Air. Pollution*. 2014. <https://doi.org/10.1016/b978-0-12-401733-7.00003-7>
4. Rasyid, F. Permasalahan dan Dampak Kebakaran Hutan. *Jurnal Lingkar Widayaiswara*, 2014;. (4), 47–59.
5. Anjani, D. *Penerapan Model Ipat ( Impact – Population-Affluence – Technology ) Pada Emisi Karbon Dioksida ( Co 2 ) Di Asean*. Universitas Airlangga. 2014,
6. Azuma, K., Kagi, N., Yanagi, U., & Osawa, H. Effects of low-level inhalation exposure to carbon dioxide in indoor environments: A short review on human health and psychomotor performance. *Environment International*, 2018;. 121 (August), 51-56. <https://doi.org/10.1016/j.envint.2018.08.059>
7. Samiaji, T. Gas Co 2 Di Wilayah Indonesia. *Berita Dirgantara*, 2011; 12(2), 68–75.
8. Adams, S., & Nsiah, C. Reducing carbon dioxide emissions; Renewable energy does matter? *Science of The Total Environment*, 2019; 693, 133 288. <https://doi.org/10.1016/j.scitotenv.2019.07.094>
9. Köster, E., Köster, K., Berninger, F., Prokushkin, A., Aaltonen, H., Zhou, X., & Pumpanen, J. Changes in fluxes of carbon dioxide and methane is the caused by fire in the Siberian boreal forest with continuous permafrost. *Journal of Environmental Management*, 2018; 228 (September), 405-415. <https://doi.org/10.1016/j.jenvman.2018.09.051>
10. Kim, Y., Knowles, S., Manley, J., & Radoias, V. Long-run health consequences of water pollution: Evidence from Indonesia’s forest fires of 1997. *Economics and Human Biology*, 2017; 26, 186-198. <https://doi.org/10.1016/j.ehb.2017.03.006>
11. You, W., Lin, L., Wu, L., Ji, Z., Yu, J., Zhu, J., ... He, D. Geographical information system-based forest fire risk assessment integrating national forest inventory of data and analysis of its spatiotemporal variability. *Ecological Indicators*, 2017; 77, 176-184. <https://doi.org/10.1016/j.ecolind.2017.01.042>
12. Avetisyan, G. Assessment of carbon dioxide sequestration service: Case study of ijevan state sanctuary (Tavush ‘region of Republic of Armenia). *Annals of Agrarian Science*, 2016; 14 (3), 187-190. <https://doi.org/10.1016/j.aasci.2016.07.003>

13. Hasmi, Mallongi, A. Health risk analysis of lead exposure from fish consumption among communities along Youtefa Gulf, Jayapura. *Pakistan Journal of Nutrition* 2016; Volume 15, Issue 10, 15 September Pages 929-935
14. Kayame, R., Mallongi, A. Relationships between smoking habits and the hypertension occurrence among the adults of communities in paniai regency, Papua Indonesia. *Indian Journal of Public Health Research and Development* 2018; Volume 9, Issue 1, Pages 332-336
15. Endah Yani, R.W., Mallongi, A., Andarini, S., Prijatmoko, D., Dewanti, I.R. The effect of zinc saliva on the toddlers' nutritional status. *Journal of International Dental and Medical Research*, 2016, Volume 9, Issue 1, Pages 29-32
16. Russeng, S.S., Saleh, L.M., Virani, D., Latief, A.W.L., Mallongi, A. The investigation of the lactic acid change among employee of national electrical power plan. *Indian Journal of Public Health Research and Development* 2018; Volume 9, Issue 1, Pages 361-36