Indian Journal of Public Health Research & Development

EXECUTIVE EDITOR
Vidya Surwade
Associate Professor, Dr Baba Saheb Ambedkar Medical College & Hospital, Rohinee, Delhi

INTERNATIONAL EDITORIAL ADVISORY BOARD

1. Dr. Abdul Rashid Khan (Consulting Physician)
   Department of Public Health Medicine, Penang Medical College, Penang, Malaysia
2. Dr. V Kumar (Consulting Physician)
   Mount View Hospital, Las Vegas, USA
3. Basheer A. Al-Sum, Botany and Microbiology Deptt, College of Science, King Saud University, Riyadh, Saudi Arabia
4. Dr. Ch Vijay Kumar (Associate Professor)
   Public Health and Community Medicine, University of Buraini, Oman
5. Dr. VMC Ramaswamy (Senior Lecturer)
   Department of Pathology, International Medical University, Bukit Jalil, Kuala Lumpur
6. Kartavya J. Vyas (Clinical Researcher)
   Department of Deployment Health Research, Naval Health Research Center, San Diego, CA (USA)
7. Prof. PK Pokharel (Community Medicine)
   BP Koirala Institute of Health Sciences, Nepal
8. Sajjad Salim Issa AL-Musawi, Supervisor for Student of the Arab Board in Family Medicine
9. Prof. Dr. Ayad F. Alkaim, Professor of Surface Chemistry and Applications of Nano-materials, Babylon University, Iraq

NATIONAL SCIENTIFIC COMMITTEE

1. Dr. Anju Ade (Associate Professor)
   Navodaya Medical College, Raichur,Karnataka
2. Dr. E. Venkata Rao (Associate Professor) Community Medicine, Institute of Medical Sciences & SUM Hospital, Bhubaneswar, Orissa
3. Dr. Amit K. Singh (Associate Professor) Community Medicine, VCSG Govt. Medical College, Sirnagar – Gahrwal, Uttarakhand
4. Dr. R G Viveki (Professor & Head) Community Medicine, Belgium Institute of Medical Sciences, Belgium, Karnataka
5. Dr. Santosh Kumar Mulage (Assistant Professor)
   Anatomy, Rainchur Institute of Medical Sciences Rainchur(RIMS), Karnataka
6. Dr. Gouri Ku. Padhy (Associate Professor) Community and Family Medicine, All India Institute of Medical Sciences, Raipur
7. Dr. Ritu Goyal (Associate Professor)
   Anaesthesia, Sarwath Institute of Medical Sciences, Panchshel Nagar, India
8. Dr. Anand Kalaskar (Associate Professor)
   Microbiology, Prathima Institute of Medical Sciences, AP
9. Dr. Md. Amirul Hassan (Associate Professor)
   Community Medicine, Government Medical College, Ambedkar Nagar, UP
10. Dr. N. Girish (Associate Professor) Microbiology, VMS&RC, Bangalore
11. Dr. BR Hungund (Associate Professor) Pathology, JNM, Belgium.
12. Dr. Sartaj Ahmad (Assistant Professor),
    Medical Sociology, Department of Community Medicine, Swami Vivekananda Subharti University, Meerut, Uttar Pradesh, India
13. Dr Sumeeta Soni (Associate Professor)
    Microbiology Department, B.J. Medical College, Ahmedabad, Gujarat,India

NATIONAL EDITORIAL ADVISORY BOARD

5. Prof. Samarendra Mahapatro (Pediatrician)
   Post Graduate Institute of Medical Sciences, Rohtak, Haryana
6. Dr. Abhiruchi Gathotra (Additional Professor) Community and Family Medicine, All India Institute of Medical Sciences, Raipur
7. Prof. Deepti Pruthvi (Pathologist) SS Institute of Medical Sciences & Research Center, Davangere, Karnataka
8. Prof. G S Meena (Director Professor)
   Maulana Azad Medical College, New Delhi
9. Prof. Pradeep Khanna (Community Medicine)
   Post Graduate Institute of Medical Sciences, Rohtak, Haryana
10. Dr. Sunil Mehra (Paediatrician & Executive Director)
    MAMTA Health Institute of Mother & Child, New Delhi
11. Dr. Shailendr Handu, Associate Professor,Pharma, DM (Pharma, PGI Chandigarh)
12. Dr. A.C. Dhariwal: Directorate of National Vector Borne Disease Control Programme, Dte. DGHS, Ministry of Health Services, Govt. of India, Delhi

Print-ISSN: 0976-0245-Electronic-ISSN: 0976-5506, Frequency: Monthly

Indian Journal of Public Health Research & Development is a double blind peer reviewed international journal. It deals with all aspects of Public Health including Community Medicine, Public Health, Epidemiology, Occupational Health, Environmental Hazards, Clinical Research, and Public Health Laws and covers all medical specialties concerned with research and development for the masses. The journal strongly encourages reports of research carried out within Indian continent and South East Asia.

The journal has been assigned International Standards Serial Number (ISSN) and is indexed with Index Copernicus (Poland). It is also brought to notice that the journal is being covered by many international databases. The journal is covered by EBSCO (USA), Embase, EMCare & Scopus database. The journal is now part of DST, CSIR, and UGC consortia.

Website : www.ijphrd.com

All right reserved. The views and opinions expressed are of the authors and not of the Indian Journal of Public Health Research & Development. The journal does not guarantee directly or indirectly the quality or efficacy of any product 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)
1. The Etiological Profile of Seizures in Children in a Tertiary Care Hospital, Hapur, Uttar Pradesh .... 01
   Shweta Singh, M Agrawal, Yogesh Kumar Goel, Dayachand Verma

2. Does Pregnant Mother are aware about PMTCT of HIV? What is their Attitude and Do they Practice the Measures on PMTCT of HIV?: A Narrative Review ................................................................. 07
   Neethu Sabu, N V Muninarayanappa, Kavitha Mole P J

3. Recent Resting Habit of Adult *Phlebotomus argentipes* the Vector of *Visceral leishmaniasis* in a Kala Azar Endemic Foci of Bihar India .......................................................... 12
   Chandrima Das, Shilpa Raj, A K Mukhopadhyay

4. Substance Use Disorder - Vital Hurdle in Sustainable Development of Nigeria .......................... 18
   Jummai Fatima Muhammad, Malavika Bhattacharya

5. A Study of Urinary Uric Acid/Creatinine Ratio as an Additional Marker of Birth Asphyxia ........... 23
   Renu Yadav, Sangeeta Singhal, Gagan Agarwal

   Ravi Prakash Jha, Krittika Bhattacharyya, Rabindra Nath Mishra, Akash Mishra

7. Study to Assess the Social and Economic Impact of Alcohol in a Peri-Urban Area of Tamil Nadu .......................................................... 34
   Shankar S, Raghuram V, Elango S

8. Economics of Sustainability – A Theoretical Perspective ................................................................. 40
   S N Sugumar, S Balasekaran, S Chandrachud

   Tapan Pattanaik, Ratan Kumar Das, K Trimal Subudhi, Mahesh Chandra Sahu

10. Students’ Perception and Attitude on Education Curriculum and System in an Indian Dental School ............................................................................................................................... 50
    Madhura Sen, Kundabala M

11. Perception of Anganwadi Services in Urban ICDS Blocks in Kozhikode Corporation – A Cross-Sectional Study .......................................................................................................................... 55
    Sivakumar D, Asma Rahim, Deepika
12. Prevalence and Factors Associated with Depression among the Students of a Medical College in Kerala ................................................................. 59
   Madhusudan M, Aravind M, Arun Gopi, Ajanya V, Vinaya Pradeep, Fabeena Mangaladan U, Sakeer Hussain OC

13. Platelet-Rich Fibrin as Palatal Bandage: A Case Report ......................................................... 65
   Yamini Mannava, Sangeeta Umesh Nayak, Deepa G Kamath, Trishna Dash

14. The Exemplar of Employment Epoch in India with HRD Perspective ................................. 69
   S Thangamayan, S Chandrachud, S N Sugumar

15. Effectiveness of Structured Teaching Programme on Knowledge of Kangaroo Mother Care among Mothers ......................................................... 74
   Regina Antony, Harichandhana S, Sinu Paul

16. Indoor Air Pollution an Ignored Public Health Issue: Study to Find the Awareness and Practices Regarding Indoor Air Pollution in a Rural Setting Near Chennai ........................................ 80
   Ruma Dutta, Dinesh Raja, Timsi Jain, Gomathy Parasuraman, Prashanth R, Sivaprakasam P

17. Factors Influencing Semen Analysis in Case of Infertility ................................................... 85
   Dinesh Kumar Singh, Anju Singh, Shivendra V Singh, Paras Kharbanda

18. Awareness of Undergraduate Students Regarding Blood Donation among Non-Medical Colleges in Selected Setting ................................................................................................. 92
   Faizan Khan, Uppu Praveen, Gurpreet Kaur, Deepika, Deeksha Singh

19. Surveillance Hypertension Patients in Eastern India: Our Experience ................................ 95
   Sura Kishore Mishra, Suresh Kumar Behera, Mahesh Chandra Sahu

20. Medical Devices Access in Asian Countries: Sustainable Growth Trajectory in India .......... 101
   Sammita Jadhav, Milind Chunkhare, Jagdish Jadhav

21. HIV Risk among Labor Migrants: An In-Depth Study of the Literature ............................... 107
   Manas Ranjan Behera, Rattanathorn Intarak

22. Study of Hypertension in Elderly Patients of Both Sexes in Western Rajasthan Population ...... 116
   Hazarimal Choudhary, Veerendra Choudhary

23. Practices regarding Biomedical Waste Management among Health Care Workers of Tertiary Care Hospitals of Meerut, U.P. .............................................................. 120
   Rijul Ranjan, Pawan Parashar, Varsha Chaudhary, Arvind Shukla

24. Study of Determinants of Renewal of Health Insurance Policies ...................................... 124
   Neha Ahire, Parag Rishipathak

25. Phytochemical Analysis and Antifungal Activity of *Ganoderma lucidum* .......................... 130

26. Pattern of Cutaneous Manifestations among HIV Patients of a Tertiary Care Teaching Hospital .. 136
   Ramesh Holla, Bhaskaran Unnikrishnan, Darshan B B, Prasanna Mithra, Nithin Kumar, Vaman Kulkarni, Rohit Shenoy
27. To Study the Knowledge and Association between Self Medication and Education among People Residing in Hilly Area

Sharmishtha K. Garud, Prakash M. Durgawale, Dhirajkumar A. Mane, Satish V. Kakade

28. Low-level Laser Therapy in the Management of Diabetic Sensorimotor Polyneuropathy

Prathap Suganthirababu, Sai Sowjanya B.V., Lavanya Prathap, Kumaresan A, Chiranjeevi Jannu, Vahini devi Chandupatla

29. Expression of miR-21 and its Target Gene Bel-2 in Oral Squamous Cell Carcinoma

N Sangeetha, N Malathi, Ganesh Venkatraman, Rayala Suresh Kumar

30. Consumer Trust in E-Commerce Transaction in Delhi

Nitin Girdharwal, Salabh Mehrotra

31. Knowledge and Awareness of Handling Methyl Methacrylate Monomer among Undergraduate Dental Students

Arul Amalan, Bharath Rao K, Runki Saran, Krishnaraj Somayaji, Amith A Singh, Madhumitha Natarajan

32. A Study on Effects of Serum Calcium Levels in Relation to Ankle Joint Instability - A Case Control Study

Karpagam Krishnamoorthy, V Vijayaraghavan, J Vijayakumar

33. Impact of Service Quality on Customer Satisfaction Special Reference to Retail Outlets in Tamil Nadu

Varadarajan Rangarajan, K Thulasi Krishna

34. In Vitro Evaluation of the Cytotoxicity of Chlorhexidine Digluconate, Povidone Iodine and Phenolic Compound Mouth Washes on Chinese Hamster V79 Cell Lines

Mranali K Shetty, Bijju Thomas, Karthik Shetty, Veena Shetty, Roma M

35. Secure and Efficient Subnet Routing Protocol for MANET

Kaushal Kishor, Parma Nand, Pankaj Agarwal

36. Awareness about Privacy and Security of Patient Health Information

Pushpalatha K, Dola Saha, Nachiket Gudi, Rajesh Kumar Sinha

37. Correlation between Type of Diet and Periodontal Parameters

Harshit Atul Kumar, Neetha J Shetty

38. Nutritional Assessment in Obese Children with and Without Non-Alcoholic Fatty Liver Disease (NAFLD) in an Urban Area of Punjab, India

Pooya Goyal, BR Thapa, Neeta Raj Sharma, Jagadeesh Menon, Anmol Bhatia

39. Impact of Noise on Hearing of Individuals Working in the Temples

Anuradha Shastry, Rajesh Ranjan, Jayashree S Bhat

40. Effect of Sudarshankriya Yoga on Some Auditory Processing Abilities and Speech Perception in Noise among Middle Aged Adults

Meenakshi Gopinath, Jayashree S Bhat, Rajesh Ranjan
41. Influence of Family Structure and Gender on Oral Health Behavioral Characteristics in Siblings, a Narrative Review .......................................................... 219
   Ramprasad Vasthare, Sunaina Puri, Ravindra Munoli

42. Comparison of the Influence of Different Tooth Tapers on Retention of Metal Crowns Luted with Two Resin Cements ................................................................. 224
   Pankaj Kulkarni, Veena Hegde, Lokendra Gupta

43. When Sustainable Development Matters in Health Care Supply Chain: An analysis of Influential Factors of Waste Management .................................................. 229
   Sasanka Sekhar Mishra, Kamalakanta Muduli, Manoranjan Dash, Umesh Chandra Parida, John Pumwa

44. Mineral Trioxide Aggregate Apexification a Novel Approach for the Tooth with open Apex – A Case Report .............................................................. 237
   Vinod Jathanna, Shreya Hegde, Shivangi Vats

45. Goal Directed Physiotherapy Treatment Program for Improving Lower Extremity Function in a child with Spastic Paraplegic Cerebral Palsy. A Case Report ........................................ 241
   Kovela Rakesh Krishna, Mukesh Kumar Sinha

46. What is the Nature of the Activities Used for Children in Kindergarten? ..................................................... 245
   Saniya Sidhesh Nadkarni, Namita Narayanan, Jithin John C K, KR. Banumathe

47. Comparative Study of Carbapenem-Sensitive Acinetobacter Infection with Carbapenem-Resistant Acinetobacter Infection among Inpatients of a Tertiary Care Teaching Hospital in South India ...................................................... 249
   Mukherjee Ramita, MR Pavan, Achappa Basavaprabhu, Jeganathan Jayakumar; Bajpai Sukrit

48. Gender Differences in Quality of Life in Type-2 Diabetics with Metabolic Syndrome .......................... 255
   Sharmila JB, Thahira Banu A, Janet Mary Ann, Asirvatham, AJ

49. Study on Role of Deviance Behaviour & Its Impact on Entrepreneurship ................................................. 261
   Malathi Narayanan, Sainath Malisetty, CH. Bala Nageswara Rao

50. Serodiagnosis of Listeriosis among Pregnant women and Neonates using a Rapid Serological Assay .............................................................. 268
   Balamuruganvelu Singaravelu, Sreenivasalu Reddy, V, Geethavani Babu, Harish PV

51. A Study on Quality of Life (QOL), Stress and Coping among Wives of Alcohol Dependence Syndrome (ADS) Clients Admitted in Selected Hospitals of Udupi District .................. 274
   Tessy Treesa Jose, Renjulal Yesodharan, Asha K Nayak, Anjali K G

52. Four Vital Capacity Breaths Can Delay the Onset of Haemoglobin Desaturation Following Nasopharyngeal Oxygen Insufflation ......................................................... 279
   Sa Ribeiro, Karl N, Misquith, Julie, C R, Upadya, Madhusudan

53. Oral Health Status of 12 Years Old Children in Rural Area of District Indore, MP: A Cross Sectional Study .................................................................................. 286
   Singh Varsha, Wavare R.R, Kaur Samarjeet, Varshney Amit Mohan
54. Effect of Neuro Muscular Electrical Stimulation in Swallowing Muscle Function on Post Stroke Dysphagia  
A Kumaresan, M Manoj Abraham, Prathap Suganthirababu

55. Estimation of Random Blood Glucose from Gingival Crevicular Blood- A Cross Sectional, Diagnostic Study  
Aarthinisha V, Julius A, Mohan Valiathan, Bhuvaneshwari Birla Bose, Vidya Jayaram, Jualal Catherine Jebaraj, Krishna Prasanth

56. Comparison of Salivary Nitric Oxide Levels among Smokers and Non-Smokers in Chronic Periodontitis- A Biochemical Study  
Mani Sundar N, Julius A, Mohan Valiathan, Krishnaraj S, Bhuvaneshwari J, Hemalatha V.T, Krishna Prasanth

57. Detection of Vancomycin MIC by Agar Dilution in Clinical Isolates of MRSA Showing Reduced Zone of Inhibition by Disk Diffusion Method  
P Vamsi Muni Krishna, V Sreenivasulu Reddy, V Praveen Kumar, P Suresh

58. Effect of Intravenous Dexmedetomidine on Spinal Anaesthesia with Hyperbaric Bupivacaine in Lower Limb Orthopedic Surgeries - A Randomized Controlled Study  
Adithya Jayaprakash, Shaik Gulam Osmani, Anupama Suresh Y, Suresh Y.V

59. Evaluation of the Effect of Menopause on Saliva and Dry Mouth- A Cross Sectional Study  

60. Review on Type-2 Fuzzy in Biomedicine  
M Lathamaheswari, D Nagarajan, A Udayakumar, J Kavikumar

S Poonguzhali, Ananthi Sheshasaayee

B L Meel

63. Bestiality in Mthatha Region of South Africa: A Case Report  
Banwari Meel

64. Discrimination in the Payment of Occupational-Specific Dispensation (OSD) Scale and other Allowances in a Rural University of Eastern Cape’s Human Resource Department Malicious or Ignorance?  
B L Meel

65. Development of Word Awareness Skills in Typically Developing English Language Learners During Early Primary Grades  
Somashekara Haralakatta Shivananjappa, Shwetha Prabhu, Jayashree Sunil Bhat
<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>66.</td>
<td>Effects of Ambient PM$_{2.5}$ Exposure on Lung Function Disorder in Community around Construction Industry</td>
<td>Rina Marina, Ema Hermawati, Alvia Hamastia, Ridcho Andrian</td>
</tr>
<tr>
<td>67.</td>
<td>The Effect of Nutrition Counseling on Intake of Energy, Protein, and Nutritional Status of Chronic Kidney Disease with Haemodialysis</td>
<td>Usdeka Muliani, Roza Mulyani, Amrul Hasan, Ismi Rajiani</td>
</tr>
<tr>
<td>68.</td>
<td>Association of Physical Workload with Salivary Cortisol in Clinical Pharmacist</td>
<td>Errisa Sulfiana, Abdul Rohim Tualeka, Noeroel Widajati</td>
</tr>
<tr>
<td>69.</td>
<td>Knowledge and Attitudes of Nursing Staff in AL-Suwaira General Hospital about Cervical Cancer</td>
<td>Ahmed Kadhim Jawad</td>
</tr>
<tr>
<td>70.</td>
<td>Physical Environment of Houses as Determinants of Pneumonia among Children in Country Sides</td>
<td>Asep Tata Gunawan, Nur Hilal, Wibowo Adysapta, Lagiono, Rusmini, Ismi Rajiani</td>
</tr>
<tr>
<td>72.</td>
<td>Analysis of Factors Associated with Blood Sugar Levels in Type 2 Diabetes Mellitus Patients</td>
<td>Bertalina, Amrul Hasan, Ismi Rajiani</td>
</tr>
<tr>
<td>73.</td>
<td>Physical Environment of Home Affecting the Infection of Helminthiasis among Toddlers in Rural Areas</td>
<td>Asep Tata Gunawan, Budi Triyantoro, Agus Subagyo, Siti Mulidah, Marsum, Siti Kusumawati, Ismi Rajiani</td>
</tr>
<tr>
<td>74.</td>
<td>Knowledge and Attitudes of Academic Instructor Toward First Aid at the Technical Institute-Suwaira</td>
<td>Ammar A Okab</td>
</tr>
<tr>
<td>75.</td>
<td>The Effects Lactobacillus Crispatus Probiotics on Proliferation and Metastasis of Cervical Cancer Cell Line using 3D Cell Culture</td>
<td>Azher Adnan, Elahe Motevaseli, Esmaeil Sadroddiny</td>
</tr>
<tr>
<td>76.</td>
<td>Comparison between Echocardiography and Computerized Tomography Pulmonary Angiography in Detection of Pulmonary Hypertension in Advanced Chronic Lung Diseases</td>
<td>Atheer Adnan Fadhil, Mustafa Nema, Hayder Adnan Fawzi</td>
</tr>
<tr>
<td>77.</td>
<td>Angiotensinogen II Type I Receptor A1166C is Associated with Serum Sodium Level and Essential Hypertension in Javanese Population</td>
<td>Atik S Wulandari, Mohammad A Widodo, Teguh W Sardjono, Diana Lyrawati</td>
</tr>
<tr>
<td>78.</td>
<td>Analysis on Quality of Food Sanitation Hygiene and Escherichia Coli (E. Coli) Contamination at Restaurants around Commuter Line Stations in Central Jakarta, 2018</td>
<td>Dinda Ayu Ratnasari, I Made Djaja, Budi Hartono</td>
</tr>
<tr>
<td>79.</td>
<td>Focal Interictal Epileptiform Discharges in Idiopathic Generalized Epilepsies</td>
<td>Gheyath AlGawwam, Akram Al-Mahdawi, Seevan Ali, Hayder A Fawzi</td>
</tr>
</tbody>
</table>
80. Quantitative Fire and Explosion Risk Assessment of Fuel Tanker Truck: Preliminary Case Study at Fuel Terminal X Jakarta ................................................................. 434
   Laksita Ri Hastiti, Fatma Lestari, Indri Hapsari Susilowati

81. Smile Card as a Breakthrough to Increase Dental and Oral Hygiene Level in Primary School Students in Jakarta ............................................................................................................................................... 440
   Jusuf Kristianto, Ita Yulita, Dwi Priharti, Heru Santoso Wahito Nugroho

82. Analysis of Determinant Factors of Exclusive Breastfeeding in Indonesia: A Case of Ulakan Tapakis District ............................................................................................................................................... 444
   Marisa Lia Anggraini, Arni Amir, Hardisman Dasman

83. Effect of Strategic Foresight on the Success of Healthcare Marketing ........................................................................................................................................... 450
   Ahmed Mohammed Fahmi, Araden Hatim Khudair, Bushra Shakir Al-Shukri

84. Study of the Organic Pollution in Euphrates River, Southern of Iraq ................................................................. 456
   Ali Abdulhamza Al-Fanharawi, Ahmed Sabah Al-Jasimee

85. International Patients Safety Goals (IPSG) based on Knowledge Management of SECI (Socialization, Externalization, Combination and Internalization) on Adverse Events at Jakarta Islamic Hospital ........................................................................................................................................... 462
   Harif Fadhillah, Nursalam, Muhammad Hadi, Ferry Efendi, Rr Dian Tristiana

86. Factors Affecting the Side Effects of Anti-Tuberculosis Drugs .......................................................................................................................... 469
   Masriadi, Eha Sumantri, Sanasiah, Heru Santoso Wahito Nugroho

87. The Effects of Cold Compress and Warm Compress on β-Endorphin Levels, IL-6 and TNFα among Adolescent with Dysmenorrhea ........................................................................................................................................... 474
   Mukhoirotin, Kurniawati, Diah Ayu Fatmawati

88. Mediating Effects of Wisdom in the relation between Lifestyle Habits (LH) and Health Conservation (HC) of Middle-aged Men ........................................................................................................................................... 480
   Hee Kyung Kim

89. Association of Helicobacter Pylori and Irritable Bowel Syndrome ................................................................. 486
   Ali Talib Al-Damarchi, Ghufran Abdulelah Al-Talakani

90. Groundwater Contamination of Some Soils Near the Kefal River ........................................................................................................................................... 492
   Kifaya Hasan Qassim

91. Relationship of Patient Characteristics with Patient Satisfaction ........................................................................................................................................... 497
   Anggun Wulandari, Ester Mariana, Nyoman Anita Damayanti

92. Evaluation on Preparation of Fire Hazards in Pt. X Muncar Banyuwangi (Study on Fish Canning Company in Muncar Banyuwangi) ........................................................................................................................................... 501
   Hesti Jatnikowati, Yustinus Denny Ardyanto Wahyudono, Tjipto Soewandi

93. Association between Exclusive Breastfeeding with Health Belief Model in Working Mothers ..... 507
   Mardiana, Ave Aylatalaththova Mahabay Aryotochter, Galuh Nita Prameswari, Muhammad Azinar, Lukman Fauzi, Efa Nugroho
<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>94</td>
<td>Availability, Accessibility, and Acceptability of Health Services in Remote Indigenous Community of the Baduy Dalam Tribe</td>
<td>513</td>
</tr>
<tr>
<td></td>
<td><em>Asri Nur Maulidya, Dumilah Ayuningtyas</em></td>
<td></td>
</tr>
<tr>
<td>95</td>
<td>The Effectiveness of Applying Score System in Growth Chart to Predict Stunting and Improve Nutritional Knowledge of Pre-Schoolers’ Mother in Indonesia</td>
<td>519</td>
</tr>
<tr>
<td></td>
<td><em>Haripin Togap Sinaga, Abdul Hadi, Alfridsyah, Ichsan, Nelson Tanjung</em></td>
<td></td>
</tr>
<tr>
<td>96</td>
<td>The Relationship between Hypermobility Syndrome and Systemic Lupus Erythematosus</td>
<td>526</td>
</tr>
<tr>
<td></td>
<td><em>Mohammed H. Al-Osami, Sarah Mohammed, Waleed Ibraheem Ali, Hayder Adnan Fawzi</em></td>
<td></td>
</tr>
<tr>
<td>97</td>
<td>Mapping the Model of Ecological Vegetation as Potential Malaria Habitats in a Malaria-Endemic Region in Oesao Village, Kupang Regency, Indonesia</td>
<td>533</td>
</tr>
<tr>
<td></td>
<td><em>Ragu Harming Kristina, Sri Subekti, Yoes P. Dachlan, Santi Martini, Heru Santoso Wahito Nugroho</em></td>
<td></td>
</tr>
<tr>
<td>98</td>
<td>Barriers in Treating Patients with Acute Coronary Syndrome in Indonesia Primary Health Care: A Phenomenological Study</td>
<td>544</td>
</tr>
<tr>
<td></td>
<td><em>Kumboyono Kumboyono, Dini Prastyo Wijayanti, Titin Andri Wihastuti, Septi Dewi Rachmawati, Yulia Candra Lestari</em></td>
<td></td>
</tr>
<tr>
<td>99</td>
<td>Association between Papilledema and Guillian - Barré Syndrome</td>
<td>549</td>
</tr>
<tr>
<td></td>
<td><em>Mohammad A.S. Kamil, Aqeel K. Hatem, Adel M. Abbass, Sajidli. Alhussaini</em></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>Effect of Sensory and Tactile Stimulation to Increase Glasgow Coma Scale (GCS) Score on Stroke Clients who Have Consciousness Disorders at Abdul Moeloek Hospital, Lampung</td>
<td>556</td>
</tr>
<tr>
<td></td>
<td><em>Purbianto, Dwi Agustanti</em></td>
<td></td>
</tr>
<tr>
<td>101</td>
<td>Liver Function and Some Biochemical Parameters affected by Anabolic Androgen Steroids and Diet Supplements Consuming</td>
<td>560</td>
</tr>
<tr>
<td></td>
<td><em>Enas Abdul Kareem Jabbar, Jamela Jouda, Haider Sabah Abdulhussein, Bassad A. AL-Aboody</em></td>
<td></td>
</tr>
<tr>
<td>102</td>
<td>Relationship between Self-Concept with Women’s Premenopause Anxiety in Facing the Menopause, in Pamekasan, East Java</td>
<td>567</td>
</tr>
<tr>
<td></td>
<td><em>Yulianto, Yufi Aris Lestari, Erik Toga, Muh. Al Amin, Asef Wildan Munfadilida, Ahmadi</em></td>
<td></td>
</tr>
<tr>
<td>103</td>
<td>The Effect of Use of Edutainment on Changes in Hemoglobin Levels in Adolescents (Case Study of SMPN 4 Banjarbaru)</td>
<td>573</td>
</tr>
<tr>
<td></td>
<td><em>Nia Kania, Siti Nurhayani, Lennie Marlinae, Nida Ulfah</em></td>
<td></td>
</tr>
<tr>
<td>104</td>
<td>Relationship between Folate Receptor Alpha (FRα) with Estrogen Receptor, Progesterone Receptor, HER-2 Neu Expression in Breast Carcinoma</td>
<td>576</td>
</tr>
<tr>
<td></td>
<td><em>R A Tandjung, Djumadi Achmad, Ni Ketut Sungowati, Muhammad Husni Cangara, Rina Masadah, Berti Julian Nelwan, Prihantono Prihanton</em></td>
<td></td>
</tr>
<tr>
<td>105</td>
<td>Study of Quality of life at Worker User Train Commuter line and TransJakarta Busway Bogor - Jakarta 2018</td>
<td>583</td>
</tr>
<tr>
<td></td>
<td><em>David Kusmawan, Indri Hapsari Susilowati, Mufti Wirawan</em></td>
<td></td>
</tr>
<tr>
<td>106</td>
<td>The Effect of Sleep Hygiene and Brain Gym on Increasing Elderly Comfort and Sleep Quality</td>
<td>589</td>
</tr>
<tr>
<td></td>
<td><em>Nursalam, Fitriana Kurniasari S, Elida Ulfiana, Ferry Efendi</em></td>
<td></td>
</tr>
<tr>
<td>No.</td>
<td>Title</td>
<td>Authors</td>
</tr>
<tr>
<td>-----</td>
<td>-----------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>107.</td>
<td>Analysis of Factors Relating to Practice of Breast Self-Examination (BSE) among Women in Indonesia</td>
<td>Sirajudin Noor, Diana Hardiyanti, Nursalam, Esti Yunitasari, Rr Dian Tristiana</td>
</tr>
<tr>
<td>108.</td>
<td>Mangosteen Rind on Oral Mucositis Caused by Radio and Chemotherapy in Cancer Treatment (In Vivo Study on Rats)</td>
<td>Lanny Sunarjo, Iman Supardan, Ismi Rajiani</td>
</tr>
<tr>
<td>109.</td>
<td>Factors Related to Personal Absorbed Dose in Health Workers at Hospital’s Radiology Unit</td>
<td>Yunita Kemala Sari, Tri Martiana, Linda Dewanti</td>
</tr>
<tr>
<td>110.</td>
<td>Analysis of Factors Related to Communication Skills in Midwifery Students</td>
<td>Rekawati Susilaningrum, Sri Utami, Nursalam Nursalam</td>
</tr>
<tr>
<td>111.</td>
<td>Improving the Immune Response II-10 and Secretory Immunoglobulin A in the Elderly after Getting Synbiotic</td>
<td>Rudy Hartono, Agustian Ipa, Aswita Amir, Bambang Wirjatmadi, Ridho Pratama, Ronny Horax</td>
</tr>
<tr>
<td>112.</td>
<td>Emotional Support of Family and Depression Incidence among Elderly in Ngumpul Village, Jogoroto Sub-District, Jombang City</td>
<td>Wiwiek Widiatie, Siti Muniroh, Kurniawati</td>
</tr>
<tr>
<td>113.</td>
<td>Role of Procalcitonin in Detection of Bacterial Pneumonia</td>
<td>Suha Maher Abed, Mohammed M. Al Boraqy, Sabah Neamah AL Fatlawi Syamsul Ariffin, Fendy Suhariadi, Nyoman Anita Damayanti</td>
</tr>
<tr>
<td>114.</td>
<td>The Influence of Leadership Style and Domicile to Power Distance of Midwife Coordinators and Village Midwives in Hulu Sungai Tengah District</td>
<td>Syamsul Ariffin, Fendy Suhariadi, Nyoman Anita Damayanti</td>
</tr>
<tr>
<td>115.</td>
<td>Qualitative Study: A History of Stunting in the Massenrempulu Community of Enrekang District</td>
<td>Agustian Ipa, R. BambangWirjatmadi, Shrimarti Rukmini Devy, Rudy Hartono</td>
</tr>
<tr>
<td>116.</td>
<td>The Effect of Rosella Beverage Intervention on Lipid Profiles and Anthropometric in Obese Adult Men</td>
<td>Fariza Yulia Kartika Sari, Evy Damayanthi, Lilik Kustiyah</td>
</tr>
<tr>
<td>117.</td>
<td>Exposure of Xylene in Working Environment and Methylhippuric Acid in Informal Footwear Worker in Bogor, Indonesia</td>
<td>Ridcho Andrian Am, Ema Hermawati</td>
</tr>
<tr>
<td>118.</td>
<td>The Analysis of Risk Factors against Malaria in the Tangkiling Public Health Center, Bukit Batu District, Palangka Raya City, Indonesia</td>
<td>Untung Halajur</td>
</tr>
<tr>
<td>119.</td>
<td>Correlation between Micronutrient intake and Hemoglobin Preconception Women</td>
<td>Rahayu Yekti, Agussalim Bukhari, Nurhaedar Jafar, Abdul Razak Thaha</td>
</tr>
<tr>
<td>120.</td>
<td>Antibiotic Susceptibility Profile and Molecular Characterization of Quinolones Resistant Klebsiella Pneumonia Isolates: First Report from Iraq</td>
<td>Sawsan Mohammed Kareem, Israa M.S. Al-Kadmy, Saba S. Kazaal, Alaa N. Mohammed Ali, Tuqa jawad abduljaleel, Zahrira Mohammed waheab, Zainab ali abdulhussain</td>
</tr>
</tbody>
</table>
121. Joint Effect of Obesity and Cigarette Smoking Against Hypertension Stage 1 among Men Adults: Finding from the Indonesian Family Life Survey-5 ................................................................. 673
   Aprizal Satria Hanafi, Nurhayati A Prihartono

122. Comparison of Various Obesity Indices against the Occurrence of Stage 1 Hypertension in Indonesia ............................................................................................................ 679
   Anggun Pratiwi, Nurhayati A Prihartono

123. The Status of Lipid Peroxidation System in Erysipelas Patients on the Background of Diabetes Mellitus .......................................................................................................................... 686
   Madina Marjokhova, Marina Afashagova, Asiat Marjokhova, Maryana Nagoeva, Marina Ivanova, Marina Nalchikova, Zarema Tagirova

124. Environmental Health Risk due to Exposure to Lead in Batteries Smelter Industry- Cinangka Village, Bogor, Indonesia ........................................................................................................ 691
   Ladyka Viola, Haryoto Kusnoputranto, Bambang Wispriyono

125. Evaluation of Bone Mineral Density in Adult Epileptic Patients Treated with Valproate ........ 698
   Mohammad A.S. Kamil, Aqeel K. Hatem, Mustafa Easa

126. Policy and Role Analysis Integrated Health Education Centers for Non-Communicable Diseases Toward the Prevention and Controlling of Hypertension ...................................................... 705
   Yandrizal, Rizanda Machmud, Melinda Noer, Hardisman, Ekowati Rahajeng, Desri Suryani, P.A Kodrat Pramudho

127. Association of Apolipoprotein E Polymorphism with Cognitive Functions in Elderly ............. 711
   N. Saelan Tadjudin, Andi Jayalangkara Tanra, Andi Asadul Islam, Suryani As’ad, Muh. Nasrum Massi, Ilhamjaya Patellongi, Prihantono Prihantono

128. Designing Instrument for Early Stimulation, Detection, and Intervention for Growth and Development of Children based on Android System ........................................................................... 717
   Heru Santoso Wahito Nugroho, Sunarto, Budi Joko Santosa

129. Effectiveness of the Training Model to Increase the Knowledge, Attitude, and Practice of Traditional Birth Attendants about Early Initiation of Breastfeeding in Bogor District, Indonesia .............. 723
   Evi Martha, Hadi Pratomo, Siti N. Qomariyah
The Effect of Nutrition Counseling on Intake of Energy, Protein, and Nutritional Status of Chronic Kidney Disease with Haemodialysis

Usdeka Muliani¹, Roza Mulyani¹, Amrul Hasan¹, Ismi Rajiani²
¹Minister of Health Polytechnic Tanjungkarang, Indonesia, ²Department of Business Administration, STIAMAK Barunawati Surabaya, Indonesia

ABSTRACT

Background: Haemodialysis patients must get sufficient food intake to remain in good nutritional status, nutrition. Nutrition Counselling is an effort to accelerate the healing process and achieve optimal nutritional status. This study aims to determine the effect of dietary counseling on energy, protein, and nutritional status of Cronic Kidney Disease (CKD) patients with hemodialysis.

Method: This study included analytical research with quasi-experimental research design, which was carried out at general hospital Dr. H Abdul Moeloek Lampung Province. The number of samples was 61 people, consisting of 33 treatment groups and 28 controls. The variables examined were nutritional counseling, energy intake, protein intake, and nutritional status Independent t-test and Mann-Whitney test was employed to investigate the relationship.

Results: In the group that received the nutritional counseling intervention (treatment), poor energy intake decreased by 21.2% compared to the control of only 7.2%. For protein intake, the treatment group of unfavorable protein intake decreased by 6.1%, while the control group did not reduce. Nutritional status is not right in the treatment group while in control it increases by 7.1%. Bivariate analysis showed no significant difference between nutritional counseling with calorie intake, protein intake and nutritional status in both the treatment and control groups.

Conclusion: It is recommended that nutritional counseling is carried out more often by nutritionists to increase the respondent’s knowledge and need further research operating variables such as appetite, and the duration of hemodialysis.

Keywords: Energy Intake, Protein Intake, Nutritional Status, Haemodialysis

INTRODUCTION

Haemodialysis is a process of separating or filtering or cleansing the blood through a semipermeable membrane that is carried out in patients with chronic renal dysfunction (1). Haemodialysis is still the main kidney replacement therapy in addition to kidney transplants in some countries in the world (2). Haemodialysis patients must get sufficient food intake to remain in proper nutrition. Poor nutrition is a significant predictor of death in hemodialysis patients (3).

Patients with a chronic renal disease who suffer from malnutrition require higher protein and energy. So it is concluded that the provision of energy intake must be as needed so that the body’s tissues do not need to be broken down to produce energy (3) and a high-protein diet is intended to maintain nitrogen balance and replace the amino acids lost during hemodialysis therapy (4).

The results of previous research (5) in chronic kidney disease patients with obtained the inappropriateness in the energy intake, protein intake, and the nutritional
status. Similarly the results in another Indonesian general hospital, it is obtained the poor proportion of respondents who have poor energy intake and protein intake.

Based on the background above, researchers are interested in researching the effect of giving nutrition counseling on energy intake, protein intake and nutritional status of chronic kidney disease patients with hemodialysis in the hospital of Dr. H. Abdul Moeloek Lampung Province in 2017. The hospital was chosen as the location of the study because it was the highest referral hospital in Lampung Province, Indonesia.

**METHODOLOGY**

This research is analytical with the quasi-experimental design of pre-post-test control group design. The population in this study were all chronic kidney disease patients who underwent hemodialysis therapy at Dr. H. Abdul Moeloek Lampung Province. The number of samples was proportionally designed by two populations and met the criteria obtained by the treatment group 33 people and control group 28 people. Univariate data displayed in percentage and to determine the effect of the intervention on the nutritional status of respondents; the Mann-Whitney test was used.

**RESULTS**

Sample characteristics consisting of gender, age, and education level are summarized in the following table.

<table>
<thead>
<tr>
<th>Table 1. Sample Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Variables</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Sex:</td>
</tr>
<tr>
<td>Men</td>
</tr>
<tr>
<td>Women</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>Ages:</td>
</tr>
<tr>
<td>&lt; 40 years</td>
</tr>
<tr>
<td>40 – 60 years</td>
</tr>
<tr>
<td>&gt; 60 years</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>Educational level:</td>
</tr>
<tr>
<td>No School</td>
</tr>
<tr>
<td>Elementary</td>
</tr>
<tr>
<td>Junior High</td>
</tr>
<tr>
<td>Senior High</td>
</tr>
<tr>
<td>University</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

The table shows that men sample is 50.8%, and the majority is in the age of 40-60 years (65.5%), and the highest education level is junior high (31.1%).

The result of univariate analysis of the variables of energy intake, protein intake, and nutritional status in the two sample groups before treatment and after treatment is depicted in Table 2. The table shows that the knowledge of energy intake in the treatment group increases by 21.2% while in the control group increases by 7.2%. Also, the experience on good protein intake in the treatment group rises 6.1% while in the control group there is no increase.

Further, The nutritional status of the sample in the treatment group did not change after the intervention, while in the control group malnutrition increased 7.1%. 
Table 2. Frequency Distribution of Research Variables Before and After Treatment

<table>
<thead>
<tr>
<th>Research Variables</th>
<th>Treatment Group (n=33)</th>
<th>Control Group (n=28)</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Energy Intake</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before</td>
<td>Poor</td>
<td>31</td>
<td>25</td>
<td>93.9</td>
</tr>
<tr>
<td></td>
<td>Good</td>
<td>2</td>
<td>3</td>
<td>6.1</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>33</td>
<td>28</td>
<td>100</td>
</tr>
<tr>
<td>After</td>
<td>Poor</td>
<td>24</td>
<td>23</td>
<td>72.7</td>
</tr>
<tr>
<td></td>
<td>Good</td>
<td>9</td>
<td>5</td>
<td>27.3</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>33</td>
<td>28</td>
<td>100</td>
</tr>
<tr>
<td><strong>Protein Intake</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before</td>
<td>Poor</td>
<td>25</td>
<td>20</td>
<td>75.8</td>
</tr>
<tr>
<td></td>
<td>Good</td>
<td>8</td>
<td>8</td>
<td>24.2</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>33</td>
<td>28</td>
<td>100</td>
</tr>
<tr>
<td>After</td>
<td>Poor</td>
<td>23</td>
<td>20</td>
<td>69.7</td>
</tr>
<tr>
<td></td>
<td>Good</td>
<td>10</td>
<td>8</td>
<td>30.3</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>33</td>
<td>28</td>
<td>100</td>
</tr>
<tr>
<td><strong>Nutritional Status</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before</td>
<td>Poor</td>
<td>8</td>
<td>7</td>
<td>24.2</td>
</tr>
<tr>
<td></td>
<td>Good</td>
<td>25</td>
<td>21</td>
<td>75.8</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>33</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>After</td>
<td>Poor</td>
<td>8</td>
<td>9</td>
<td>24.2</td>
</tr>
<tr>
<td></td>
<td>Good</td>
<td>25</td>
<td>19</td>
<td>75.8</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>33</td>
<td>28</td>
<td>100</td>
</tr>
</tbody>
</table>

The effect of nutritional consultation on energy intake, protein intake, and nutritional status of samples in the treatment group and the control is observable on Table 3.

The table shows that the level of adequacy of energy intake that there is no significant difference in the level of appropriateness of energy intake between the treatment and control groups after the intervention, with a p-value of 0.595. The average percentage of energy sufficiency level after the intervention was 72.5 + 24.21% in the treatment group and 69.1 + 25.19% in the control group.

The independent t-test shows that the level of protein adequacy consumed by the respondents after intervention in the treatment group and control group indicates no significant difference (p-value 0.948) with a mean percentage of protein adequacy level after the intervention was 75.6 + 30.03% in the group treatment and 76.1 + 28.40% in the control group.

Further, before and after the intervention using the Mann-Whitney test showed that there were no significant differences in the two groups, with p-value values p= 0.789 and p= 0.954.

Table 3. Differences in Energy Intake, Protein Intake, and Nutritional Status Before and After Intervention

<table>
<thead>
<tr>
<th>Research Variables</th>
<th>Treatment (n = 33)</th>
<th>Control (n = 28)</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean ± SD</td>
<td>Mean ± SD</td>
<td></td>
</tr>
<tr>
<td><strong>Energy Intake</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before</td>
<td>56.3 ± 21.45</td>
<td>54.7 ± 15.42</td>
<td>0.740</td>
</tr>
<tr>
<td></td>
<td>72.5 ± 24.21</td>
<td>69.1 ± 25.19</td>
<td>0.595</td>
</tr>
<tr>
<td>After</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Protein intake</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before</td>
<td>66.1 ± 32.36</td>
<td>68.6 ± 18.29</td>
<td>0.723</td>
</tr>
<tr>
<td></td>
<td>75.6 ± 30.03</td>
<td>76.1 ± 28.40</td>
<td>0.948</td>
</tr>
<tr>
<td>After</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Nutritional Status</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before</td>
<td>21.84 ± 2.25</td>
<td>22.07 ± 2.77</td>
<td>0.789</td>
</tr>
<tr>
<td></td>
<td>22.67 ± 3.87</td>
<td>22.62 ± 3.91</td>
<td>0.954</td>
</tr>
</tbody>
</table>
DISCUSSIONS

Giving nutritional counseling to CKD patients with hemodialysis can increase the number of good energy intake because the CKD patients with hemodialysis must get sufficient food intake to remain in proper nutrition. Poor nutrition is a significant predictor of death in hemodialysis patients. The results of good protein intake where all samples can reach 29.5% indicate a better achievement compared to the effects of previous research (5,6).

The sharp protein intake in 31 treatment respondents increased by 6.1% before treatment, while in the control group there was no increase or decrease in good protein intake. This way, giving nutritional counseling to patients with CKD with hemodialysis also can change the number of inadequate protein intake into a better one. So it is recommended that nutrition counseling is more often done by nutritionists to increase the knowledge of patients with the hope that the protein intake can become better.

After the research, the decline in good nutritional status occurred in the control group, while the treatment group did not change the nutritional status. Thus, it can be concluded that the provision of nutritional counseling can prevent the decline in the good dietary state of CKD patients with hemodialysis, considering that patients with CKD tend to experience weight loss due to complaints of nausea and no appetite (anorexia) that often occur in patients (7).

The differences in the level of adequacy of energy intake and protein intake before and after treatment samples were analyzed by independent t-test obtaining no significant differences between treatment groups and control groups with values p-value of 0.595 for energy intake and a p-value of 0.948 at the level of protein intake. Further, the differences in the state of the nutritional status of the sample before treatment and after treatment were analyzed by test Mann-Whitney denoting there was no significant difference between treatment and control groups with p-value values p = 0.789 and 0.954 respectively.

Although the results of this study did not show a significant difference in the intervention in the form of providing nutritional counseling services to energy intake, protein intake, and nutritional status of respondents, based on univariate analysis, there was a better condition in the treatment group than the control group. The increase in good energy intake in the treatment group was 21.2%, while the rise in good energy intake in the control group was 7.2%, as well as an increase in good protein intake in the treatment group at 6.1%, while in the control group there was no increase in intake percentage good protein. In the nutritional status, the treatment group did not change the nutritional status percentage, while in the control group there was a functional decline in nutritional status from 75% before the study, to 67.9% of respondents with good nutritional status.

The success of nutrition counseling service activities is strongly influenced by patient compliance in undergoing diet therapy (7), but from various studies in Indonesia mainly shows that adherence to treatment of chronic diseases is generally low (8,9,10). Thus, further research is needed on the things that affect the success of nutritional counseling services in CKD patients with hemodialysis.

CONCLUSION

Nutrition counseling services by nutritionists for Chronic Kidney Disease (CKD) patients with hemodialysis must be improved in terms of quantity and quality of service. Considering that CKD patients with hemodialysis mostly experience the decrease in appetite, it is expected that the family will motivate and pay attention to the patient’s food intake. Further research needs to be done on other factors such as appetite, duration in hemodialysis, adherence to diet and gender therapy with nutritional status in patients for CKD patients with hemodialysis.

Ethical Clearance: Ethical clearance was obtained from the Ministry of Health Polytechnic Tanjungkarang, Indonesia. We also wish to thank all the participants who contributed to this study.

Conflict of Interest: Nil

Source of Funding: Nil

REFERENCES


