

Research Article

[Evaluation the Effect of Pulmicort Inhalation on Children with Acute Asthma Attack](#)

Ahmad Bahrami, Shabahang Jafarnejad, Hamidreza khoshnezhad Ebrahimi, Seyedeh Mahsa Mahmoudinezhad Dezfouli, Rozhin Pahlevani.

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[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2020.9.132

Research Article

[Elevated serum levels of Interleukin-13 and Interleukin-17A in Pediatric Asthma](#)

Sawsan M. Jabbar AL-Hasnawi, Abeer Thaher Naji AL-Hasnawi.

SRP. 2020; 11(9): 229 - 223

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2020.9.37

Research Article

[Protein Isolation from Sponge Niphates sp. as an Antibacterial and Antioxidant](#)

Warsidah, Masrianih, Mega Sari Juane Softiana, Ikha Safitri, Ajuk Sapar, Anthoni B. Aritonang, Yuges Saputri Muttalib, Dzul Fadly.

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Review Article

[Matrix Metalloproteinase-1 \(MMP-1\) Expression and Density of Collagen Fibers following Application of Haruan Fish \(Channa striata\) Extract in Inflamed Pulp](#)

Juni Jekti Nugroho, Andi Sumidarti, Mufliha Siri, Muhammad Husni Cangara, Nurhayaty Natsir, Maria Tanumihardja, Noor Hikmah, Asrianti.

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[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2020.9.02

Research Article

[Did Servant, Digital and Green Leadership Influence Market Performance? Evidence from Indonesian Pharmaceutical Industry.](#)

Khaerul Fahmi, Temmy Kurniawan, Yoyok Cahyono, Afen Sena, Suhadarliyah, Popong Suryani, Agus Sugianto, Dahlia Amelia, Musnaini, Shofta Amin, Husni Hasbullah, M.

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Syariful, A

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[Comparative Study for Complications of Otoplasty between Patients under Ten Years and above Ten Years Old](#)

Ahmed Miri saadoon, Ali Abd-Almer Jwad and Riyadh K. Madloun.

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Research Article

[Effect Standardization in Ethical Aspects Extraction from Spongeson: Hysteronotus Inhibitor of \$\alpha\$ -Amylase and \$\alpha\$ -Glucosidase](#)

Research Article

[Effect of Diabetic Ketoacidosis on Some Biochemical and Immunological Variables](#)

Oqbah Abdul Halim, Qasim Khlaif Abdullah, Asmaa wajah jumaa.

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Research Article

[The Effect of Benzo \[A\] Pyrene on Changes in the Profile of CD11B + IL1 +, CD11B + IL17 +, CD4 + CD25 + in Mice \(MUS MUSCULUS, L\) after Getting Parami](#)

Suwoyo, Lumastari Ajeng Wijayanti, Dwi Estuning Rahayu.

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[Mechanisms for Managing Medical Institutions in Times of Crisis](#)

Anastasia Barzylovykh, Bubalo Volodymyr, Nesterenko G. Valentyna, Rogachevskiy Oleksandr, Chornyi Oleg.

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Research Article

[Platelets Profile Changes in Patients with COVID 19](#)

Safaa jawad kadhem, Ahmed Hasan Raheem, Hassan Salim aljumaily, Ahmed Abdul Haleem Al shammari, Ameer Kadhim Al-Humairi, Ali Baay.

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Research Article

[Wives' Perceptions of Husbands with Erectile Dysfunction in Indonesia: The Fulfilment Pattern of the Wife's Sexual Partner Who Experiences Erectile Dysfunctio](#)

Abd. Nasir, Susilo Hariyanto, Nuruddin, Iswatun, Supatmi, Nuh Huda.

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Research Article

[The Value of Standing X-ray in Detecting Physiological Spondylolisthesis in Patients with Single Disc Prolapse with Normal Intensity MRI Findings](#)

Najat Adel Hashim, Raad Jawad Kadhim.

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Research Article

[Effect of Career, Organizational Commitment on Turnover Intention through Mediation of Organizational Culture: Evidence from Indonesian Companies](#)

Nico Alexander Vizano, Wiwik Utami, Sigmin Johanes, Aty Herawati, Havis Aima, Achmad H Sutawijaya, Agus Purwanto, Joko Supono, Puji Rahayu, Aris Setiyani, C Catu.

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Research Article

[Social Network for Drug Circulation in Sidenreng Rappang Regency, Indonesia](#)

Rahmat Pannyiwi, Andi Agustang, Tahir Kasnawi, Andi Tenri Pada, Ahmad Yani, Sadli Syam.

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Review Article

Research Article

Potential Impact of micro RNA-146a Gene Polymorphisms in Oxidative Stress of Diabetic Mellitus Type 1

Fulla Abd Alsattar Alriyahee, Noora M. Hameed, Israa Harjan Mohsen, Mona N. Al-Terehi.

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Research Article

Testing the Role of Competence and Supervision of Job Satisfaction and Its Impact on Teacher Performance

Danang Hidayatullah, Anis Eliyana, Hamidah, Tutu Sariwulan, Agung Dharmawan Buchdadi.

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Effectiveness of Finger Held Relaxation on the Decrease in Intensity of Pain in Patient of Post-Sectio Caesarea in RSUD Sorong Regency

Ariani Pongoh, Adriana Egam, Rizqi Kamalah, Anwar Mallongi.

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Locator or Ball Attachment Systems for Mandibular Implant Overdentures: A Systematic Review

Muhammad Ikkal, Acing Habibie Mude, Irfan Dammar, Vinsensia Launardo, Ian Afifah Sudarman.

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Atomic Spectroscopy Technique Employed to Detect the Heavy Metals from Iraqi Waterbodies Using Natural Bio-Filter (Eichhornia crassipes): Thera Dejla as a C

Ghalib Adrees Atiya Ali, Mohammed Nsaif Abbas.

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The Effect of Substitution of Purple Sweet Potato Flour and Tempeh on Organoleptic Quality of MP-ASI Biscuit

Radeny Ramdany, Yulia Rachmawati, La Supu, Anwar Mallongi.

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The Effect of Transformational Leadership on Employee Job Satisfaction with the Meditation of Trust to Supervisors

Bambang Raditya Purnomo, Anis Eliyana, Windra Alfatah Surya.

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Research Article

Study the IL6 (C174G) Promoter SNP and Correlation with Physiological Growth Hormone and TNFA levels in Iraqi Subjects with Psoriasis

Shaimaa H. Ali, Rawaa S. A. AL-Azawi, Hamzah H. Kzar.

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Review Article

[A Review of Enterotoxigenic Escherichia coli Infection in Piglets: Public Health Importance](#)

Erwan Budi Hartadi, Mustofa Helmi Effendi, Hani Plumeriastuti, Eka Dian Sofiana, Freshindy Marissa Wibisono, Akvyan Rafi Hidayatullah.

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Research Article

[Effect of Compensation and Organization Commitment on Turnover Intention with Work Satisfaction as Intervening Variable in Indonesian Industries](#)

Nico Alexander Vizano, Wiwik Utami, Sigmin Johanes, Aty Herawati, Havis Aima, Achmad H Sutawijaya, Agus Purwanto, Joko Supono, Puji Rahayu, Aris Setiyani, C Catu.

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[The Effect of Compensation Strategy Implementation on Knowledge Sharing through Affective Commitment and Psychological Contracts](#)

Afzil Ramadian, Anis Eliyana, Hamidah, Agung Dharmawan Buchdadi, Randa Rakawuri.

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[New Paradigm for the Life Skills Development of Children and Youth in Elementary Education Schools in the Rural Highland of Omkoi District, Chiang Mai, Thailand](#)

Priyanut Wutti Chupradit, Pariwit Vitayacheeva, Rattaphol Prommas, Mujalin Prasannarong, Savitree Thummasorn, Sopida Apichai, Waranya Chingchit, Pachpilai Chaiwumkronglek, Chanakarn Kumkun, Utumma Maghanemi, Kwanchai Rattanasathien, Natnakorn Kumfang, Thirasak Uppamaithichai, Supat Chupradit.

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[Moderating Role of IT Adoption and Mechanism of Dynamic Capabilities on Indonesian Pharmaceutical Firms Performance](#)

Juhriyansyah Dalle, Sandu Siyoto, Nita Dwi Astika, Danes Jaya Negara, Teddy Chandra, Khairul Anam.

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[The Prevalence of Temporomandibular Joint Disorders in Young Violin Players in Two Orchestras in Indonesia](#)

Ike Damayanti Habar, Andi Adytha M.I.R, Mohammad Dharma Utama, Bahruddin Thalib, Acing Habibie Mude, Muhammad Ikbal, Eri Hendra Jubhari.

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[mHealth Interventions for Cancer Care and Support A Systematic Literature Review](#)

Samar Zuhair Alshawwa, Rasha Assad Assiri.

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Research Article

Tourism and Original Local Government Revenue in Indonesia Tourism Provinces: The Java Island Experience

Yustisia Kristiana, Rudy Pramono, Theodosia C. Nathalia, Vasco Adato H. Goeltom.

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Cytotoxicity Test of Tithonia diversifolia Leaf Extract on Bone Marrow Mesenchymal Stem Cell (BMSC) of Rats Using MTT Assay Method

Hani Plumeriastuti, Agesti Veva Kalista, Budiastuti; Mustofa Helmi Effendi.

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Boosting Organizational Commitment Through Visionary Leadership and Work Life Balance

Heni Kesumayani, Anis Eliyana, Hamidah, Maruf Akbar, Karuniana Dianta Sebayang.

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Review Article

IN-VITRO EVALUATION OF THE ANTICANCER ACTIVITY OF Cu(II)AMINA(CYSTEINE)DITHIOCARBAMATE

Desy Kartina, Abdul Wahid Wahab, Ahyar Ahmad, Rizal Irfandi, Prihantono, And Indah Raya.

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Review Article

THE ROLE OF FAMILIES CARING FOR PEOPLE WITH MENTAL DISORDERS THROUGH FAMILY RESILIENCE AT EAST JAVA, INDONESIA: STRUC

Ah Yusuf, Sitti Sulaihah, Hanik Endang Nihayati, M. Suhron, Hari Basuki N, Mundakir, Esti Yunitasari.

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Chen, I-Ju,

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Observational Learning and Word of Mouth Against Consumer Online Purchase Decision during the Pandemic COVID-19

Juliana, Rudy Pramono, Arifin Djakasaputra, Innocentius Bernarto.

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[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2020.9.106

Research Article

The Role of Organizational Justice Dimensions: Enhancing Work Engagement and Employee Performance

Marisi Pakpahan, Anis Eliyana, Hamidah, Agung Dharmawan Buchdadi, Titis Ratih Bayuwati.

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[An Empirical Examination of the Effect of TQM Practices on Hospital Service Quality: An Assessment Study in UAE Hospitals](#)

Ahmad Aburayya, Muhammad Alshurideh, Amina Al Marzouqi, Osama Al Diabat, Alanood Alfarsi, Roberto Suson, Mohammad Bash and Said A. Salloum.

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Review Article

[The Impact of Motivation Mediation and Its Effect on the Level of Education and Work Facilities on Employee Performance \(Case Study of Education Office, Wes](#)

Agussalim M, Novi Yanti, Hisar Sirait.

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[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2020.9.148

Review Article

[A Review of the Opportunistic Pathogen *Citrobacter Freundii* in Piglets Post Weaning : Public Health Importance](#)

Akryan Rafi Hidayatullah, Mustofa Helmi Effendi, Hani Plumeriastuti, Freshindy Marissa Wibisono, Erwan Budi Hartadi, Eka Dian Sofiana.

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Review Article

[DISPARITIES OF THE USE OF HORMONAL AND NON-HORMONAL CONTRACEPTIVE DRUGS IN URBAN AND RURAL AREAS IN INDONESIA AND](#)

Agustina Abuk Seran, Myrtati Dyah Antaria, Setya Haksama, Ema Setijaningrum, Agung Dwi Laksono, Anita Dewi Prahastuti Sujoso.

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[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2020.9.12

Research Article

[Antidiabetic Activity of Papaya Leaf Extract \(*Carica Papaya L.*\) Isolated with Maceration Method in Alloxan-Induces Diabetic Mice](#)

Tridiganita Intan Solikhah, Boedi Setiawan, Dilian Ramdana Ismukada.

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[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2020.9.109

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[Health Care Professional Attitude and Motivation During COVID-19: A Case of Health Sector of Oman](#)

Ismail AlAbri, Rusinah bte Siron.

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[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2020.9.149

Research Article

[Develop Leadership Style Model for Indonesian Teachers Performance in Education 4.0 Era](#)

Anissa Lestari Kadiyono, Rezki Ashriyana Sulistiobudi, Ikhfan Haris, Mohd Khaidir Abdul Wahab, Idan Ramdani, Agus Purwanto, Abdul Mufid, Muhammad Rikza Muqtad, Susila Sumartiningasih.

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[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2020.9.52

Review Article

[EMPOWERMENT OF JUNIOR HIGH SCHOOL STUDENTS IN PREVENTION EARLY-AGE MARRIAGE IN GUNUNG KIDUL DISTRICT](#)

Masruroh Masruroh, Soetrisno Soetrisno, Mahendra Wijaya, Sapja Anantanyu.

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[The Effect of Transformational Leadership on Employee Creative Self Efficacy with Creative Role Identity as a Mediation Variables](#)

Barika, Anis Eliyana, Hamidah, Agung Dharmawan Buchdadi, Rengga Zulfiansyah Lakspakarti.

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Research Article

[Cytotoxic Effect of Essential Oil from Cinnamon \(Cinnamomum burmannii\) Bark on Rat Bone Marrow Mesenchymal Stem Cells: In Vitro Study](#)

Budiastuti, Niken Dwi Lestari, Mustofa Helmi Effendi, Arimbi, and Hani Plumeriastuti.

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[Privacy Preserving Data Publishing for Heterogeneous Multiple Sensitive Attributes with Personalized Privacy and Enhanced Utility](#)

Jayapradha. J, Prakash. M, Yenumula Harshavardhan Reddy.

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[Management's Initial Thought in the Industrial Era 4.0 and Millennialization, Is It Still Relevant?](#)

Rosa Rilantiana, Anis Eliyana, Djoko Suprayetno, Kresno Eka Mukti.

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Research Article

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[Bioactivity of Amomum Compactum Soland Ex Maton \(Java Cardamom\) as a Natural Antibacterial](#)

Tyagita Hartady, Roostiita Lobo Balia, Mas Rizky Anggun Adipurna Syamsunarno, Sabri Jasni, Bambang Pontjo Priosoeryanto.

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[Improving White Box Testing Using Bi ? Directional Symbolic Analysis and Test Case Slicing](#)

P. Velmurugan, S. Ganesh Kumar

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[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2020.9.152

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[Effect of Protecting Proteins from Degradation in the Rumen on Single Volatile Fatty Acid of Al Awassi Lambs](#)

Dr. Ibrahim S. Jasim.

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[Beef, Pork, or Lamb? Comparative Study Between 3 Kinds of Red Meat Consumption in the USA toward the Number of COVID Cases](#)

Maslichah Mafruchati.

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Short Communication

[ANALYTIC STUDY OF ENDODONTIC WORKING LENGTH VARIATION OF MAXILLARY CANINE IN BASRAH GOVERNORATE](#)

Zainab Abdulkareem Maktoof, Zahraa Mazin Al-Hawwaz, Hiyam Salah Ahmed.

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>> Abstract >> PDF DOI: 10.31838/srp.2020.9.18

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[Effect of Protecting Proteins from Degradation in the Rumen on Rumen Fermentations of AlAwassi Lambs](#)

Dr. Ibrahim S. Jasim.

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Review Article

[nCD64, mHLA-DR: Sensitive Diagnostic Markers of Infection in Term Infants Receiving Antibiotic Treatment](#)

Nguyen Thi Ngoc Tu, Le Thanh Hai, Truong Thi Mai Hong, Pham Thu Hien, Le Thi Ha, Doan Thi Mai Thanh.

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Research Article

[Overview of Metabiotics and Probiotic Cultures During Fermentation of Molasses](#)

V.S. Popov, N.V. Vorobyeva, G.A. Svazlyan, N.M. Naumov, O.A. Gryaznova.

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[The Protective Effect of Omega3 Against Amikacin- Induced Nephrotoxicity in Rats](#)

Afrah Thiab Hlail, Hadeel Rashid Faraj, Wafa S. Abdulredha.

SRP. 2020; 11(9): 110 - 117

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[Dynamics of Immune Status in Myofibrillar Myopathy with the T341P DES Mutation](#)

Viacheslav Yurievich Pauls.

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>> Abstract >> PDF DOI: 10.31838/srp.2020.9.116

Research Article

[Develop Model of Transactional, Transformational, Democratic and Authorocratic Leadership Style for Indonesian School Performance in Education 4.0 Era](#)

Irjus Indrawan, Evanriosa, Ramsah Ali, Indra, Ramadan, Muh. Hanif, Ihsan Harun, Lathifah Hanum, Agus Purwanto, Abdul Mufid, Siti Nurkayati, Mochammad Fahlevi, S.

The Effect Of Virtual Nutrition Education for The Improvement of Mother's Knowledge About Complementary Feeding: Randomized Control Trial

Nadimin, Aswita Amir, Sitti Rahmah, Sirajuddin.

SRP. 2020; 11(9): 825 - 829

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Synthesis of Heterocyclic Nitrogen Compounds using Cyclohexene Derivative with Various Primary Amines

Hamid J. Mohammad, Israa I. Salih, Rabeah T. Mahmood.

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[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2020.9.21

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The Oxidative Stress Induced by the Vapours of Electronic- Hookah on Mice Liver Tissues

Rasha Shaker Nima, Dhifaf Zeki Aziz.

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[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2020.9.59

Review Article

The Intervention of the Pirfenidone with Pericyst Layer Building of the Hydatid?? Cyst

Yousif Tawfeeq, Ahmed A. Mohammed, Yassir Mustafa Kamal.

SRP. 2020; 11(9): 1091 - 1099

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2020.9.156

Research Article

In Vitro Antiviral Activity of Morin Compound against Dengue Virus Type 1 in Vero Cells

Anisa Maharani, Teguh H. Sucipto, Harsasi Setyawati, Yovilianda M. Untoro, Novia F. Sholihah, Siti Churrotin, Ilham H. Amarullah, Puspa Wardhani, Aryati, Soegeng Soe.

SRP. 2020; 11(9): 830 - 833

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2020.9.118

Research Article

Effect of Stick Sweet Cherry (Prunus aviam) on the Reproductive System of Male Mice

Wasnaa H. Mohammed, Hamssa E. Abdul-Wahed, Zahraa A. Sharba.

SRP. 2020; 11(9): 130 - 134

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2020.9.22

Research Article

Relative Indicators and Predictive Ability of Some Biological Variables on Cardiac Neural Activity for Volleyball Players

Mohammed Nader Shalaby, Marwa Ahmed Fadl.

SRP. 2020; 11(9): 834 - 840

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2020.9.119

Review Article

Investigate the Strategy of Using Pharmacogenetics and Pharmacometabonomics to the Personalization of Ticagrelor Antiplatelet Therapy.

Mohammed Ahmed Akkaij, Abubakar Sha'aban, Nur Aizati Athirah Daud, Mei Li Ng, Baharudin Ibrahim.

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EEG Chan

Huda Abd.

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[Effects of Cinnamon and Their Beneficial Content on Treatment of Oxidative Stress](#)

Oras Khalis yaseen, Mustafa Taha Mohammed.

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Incidence of

Harith Fat.

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Research Article

[Vitamin D3 for Health and Muscle Functions of Athletes](#)

Mohammed Nader Shalaby, Mona Mostafa Abdo Sakoury, Salman Mohammed Harthi, Faleh Mohammed Alshalawi, Marwa Mohammed Alhaji, Zahraa Hassan Alshaikh, ...

SRP. 2020; 11(9): 851 - 854

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2020.9.122

Research Article

[Exploration of the Relationship Between Interleukin 37 and Folic Acid in Type 2 Diabetic Patients](#)

Anwar A. Hussain, Khalid F. Al-Rawi, Aseel Khalid Hameed.

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[The Correlation of Google Trends as an Alternative Information Source in the Early Stages of COVID-19 Outbreak in Indonesia](#)

Elly Usman, Ricvan Dana Nindrea.

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Performance Achievement of Nutritional Programs in Mulyorejo Public Health Center, Surabaya, Indonesia in 2018

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ABSTRACT

Introduction: Performance of nutritional programs in Public Health Center is the important component to evaluate for the better performance of health service.

Methods: This study aims to evaluate performance of nutritional programs in Mulyorejo PHC in 2018. Evaluating process were used secondary data that provided by nutrition unit in this PHC. Descriptive study was conducted from November to December 2019. Data were interpreted as two groups; those are nutritional problem indicators and nutritional program performance indicators. **Results:** The main findings of this research are some of nutritional program performance indicators in Mulyorejo PHC still become problem of public health due to below the cut off value fixed by Ministry of Health, such as scope of under-five years age with exclusive breastfeeding (79.3%), six-month age with complete exclusive breastfeeding (79.3%), supplementation in pregnant women with chronic energy deficiency (21.2%), under-five years ago that already have health control card or oftend called as Kartu Menuju Sehat (75%), under-five years ago that gain weighed (68.5%), and vitamin A supplementation in post-partum women (67%).

Conclusion: Mulyorejo PHC still need to improve and gain the scope of some nutritional program that still become problem of public health. Regularly evaluation can gain and improved program achievement, this should be conduct in every PHC owing to the different geographical area, number of populations, number of human resources, and another different setting.

Keywords: Nutritional program, Mulyorejo, public health center, program performance indicators

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INTRODUCTION

Malnutrition defined as the condition of the deficiencies of nutrition, excess of nutrition, and unbalance individual intake of nutrients¹. Malnutrition addressed three groups of conditions, those are undernutrition, overweight or obesity, and micronutrient-related malnutrition². Three crucial indicators were used to estimated term of undernutrition are wasting (low weight-for-height), stunting (low height-for-age), and underweight (low weight-for-age)³. Micronutrient-related malnutrition can be refer to micronutrient excess and micronutrient deficiencies- including mineral and vitamins⁴. Other than that, overweight and obesity are impact that results from imbalanced diet intake, this conditions can be high risk factor of metabolic and non-communicable disease such as stroke, diabetes, heart disease, and some cancers⁵. Malnutrition is an important issue in public health due to the long-term effect and risk factors of death in women in pregnant, infants, children, and adolescents⁶. Recently data published by WHO estimates that 1.4 billion of adolescents were overweight or obesity, 462 million were underweight, and 45% of deaths were caused by undernutrition condition. In addition, 47 million of

children under-five years age shows wasted, 14.3 million shows severely wasted, 144 million shows stunted, and 38.3 million shows overweight or obesity. Interestingly, increasing number of overweight and obesity on childhood were also reported. Majority, malnutrition on under-five years age occurs in low and middle-income countries⁷. Since 2012, World Health Assembly have been proposed six points of global nutritional goals that estimate can be reach on 2025, consists of reduction worldwide's number of stunting on under-five years age as many as 40%, reduction of women with anemia during reproductive age as many as 50%, reduction of low-birth weight as many as 30%, increasing in number of exclusive breastfeeding on the first six months up to 50%, no increase number of overweight-children, maintenance of childhood wasting up to less than 5%^{8,9}. Long-term effect of malnutrition can lead to 3.5 million of silent deaths worldwide, and also causing 35% of morbidities on under-five years age¹⁰. Children and toddler with malnutrition more slower on physical growth and neurodevelopment than normally children in the same age¹¹. Lack ability of social skills, problems with their behavior, lower of IQ (intellectual quotient), vulnerable and greater risk to

infectious disease also known as the effect of malnutrition¹².

Additionally, malnutrition during pregnancy tend to be a risk factor of poor nutritional status in under-five years age and nutritional anemia during pregnancy^{13,14}. Indonesia is one of developing countries in Asia. Identified as a middle-income country bring the challenges for nutritional improvement in Indonesia. Notably, UNICEF report shows that 3 of 10 children under-five years ago were stunted, and same reports shows 1 of 10 children were wasted. In other case, overweight and obesity also still in high, with the percentage shows 20% in primary-school aged children and 15% in adolescents. Acute malnutrition also frequently reported, with the number two millions¹⁵.

UNICEF have been pushing Indonesian Government for the improvement of nutritional status. Since 2015, Indonesian Ministry of Health have been provoked regularly surveillance of nutritional status on under-two years age, under-five years age, pregnant women, and teenager/adolescent. This regularly surveillance often called as Pemantauan Status Gizi (PSG), and become a responsibility in each Public Health Centre (PHC). Mulyorejo as one of PHC in Indonesia, residing in Surabaya, had been conducted this program, but report about its performance of achievement still yet to publish. Thus, this study aims to evaluate the performance achievement of nutritional programs in Mulyorejo PHC regarding to the improvement of this program.

MATERIALS AND METHODS

This study using secondary data collected from health worker, specifically in nutritional unit, Mulyorejo PHC. Decriptive study were conducted from November to Desember 2019. Data were classified into two major programs, nutritional problem indicators and nutritional program performance indicators. Nutritional problem indicators were breakdown into seven indicators, consist of underweight of five-years age percentage, stunting of five-years age percentage, wasting of under-five years age percentage, women teenager with anemia percentage,

women on pregnant with anemia percentage, pregnant women with chronic energy deficiency percentage, and infant with low-birth-weight percentage. While, nutritional program performance indicators consist of various scope—including under-five years ago with exclusive breastfeeding, sixth-month age with complete exclusive breastfeeding, iron supplementation on pregnant women, supplementation on pregnant women with chronic energy deficiency, supplementation on underweight babies, supplementation on teenager women with anemia, infant that get early breastfeeding initiation, under-five years ago that weighed, under-five years ago that already have health control card or often called as Kartu Menuju Sehat, under-five years ago that gain weighed, under-five years ago that yet gain weighed, vitamin A supplementation on under-five years age, vitamin A supplementation on post-partum woman, household that consume salt consist of yodium, and wasting toddlers that get toddler’s care. Those kinds of indicators were adopted from Indonesian Ministry of Health Guidelines on Nutritional Surveillance. Frequencies table had been made, then data were compared with the indicator from MOH, to shows whether the indicators that still become problem in this PHC. This study already approved by Ethical Committee of Faculty of Medicine, Universitas Airlangga with the number No.309/EC/KEPK/FKUA/2019.

RESULTS

In this study, we found that Mulyorejo PHC had been reach the target of all nutritional problem indicators. However, some performance of nutritional program indicators still yet to reach target, such as number of under-five years age with exclusive breastfeeding, under-five years ago that wasting and get additional nutrition, under-five years ago that get early breastfeeding initiation, number of under-five years ago that weighed, number of under-five years ago that gain their weigh, and vitamin A supplementation on under-five years age. Detail of the nutritional performance achievement were shown in table 1.

Table 1. Detail of nutritional problem indicators and nutritional program performance Indicators

Nutritional Problem Indicator

No.	Indicator	Performance Achievement %	Target %	Conclusion
1	Underweight on under five-years age percentage	2.45	<10	Not problem of public health
2	Stunting on under five-years age percentage	0.49	<20	Not problem of public health
3	Wasting on under five-years age percentage	4.8	<10	Not problem of public health
4	Women teenager with anemia percentage	0	<5	Not problem of public health
5	Pregnant women with anemia	0	<10	Not problem of public health
6	Pregnant women with chronic energy deficiency (CED)	5.7	<10	Not problem of public health
7	Infant with low birthweight	0	<10	Not problem of public health

Nutritional Program Performance Indicators

1	Under-five years ago, with exclusive breastfeeding (EBF)	79.3	80	Problem of public health*
2	Six-month age with complete exclusive breastfeeding (EBF)	79.3	80	Problem of public health*
3	Fe-1 (iron) supplementation in maternal	103	90	Not problem of public health
4	Fe-3 (iron) supplementation in maternal	91.8	90	Not problem of public health
5	Supplementation in pregnant women with chronic energy deficiency (CED)	21.2	50	Problem of public health*
6	Supplementation on underweight babies	100	100	Not problem of public health
7	Supplementation on teenager women	100	15	Not problem of public health
8	Infant that get early breastfeeding initiation	100	41	Not problem of public health
9	Under-five years ago, that weighed	90	60	Not problem of public health
10	Under-five years ago, that already have health control card or often called as Kartu Menuju Sehat	75	100	Problem of public health*
11	Under-five years ago, that gain weighed	68.5	80	Problem of public health*
12	Under-five years ago, that yet gain weighed	50	40	Not problem of public health
13	Under-five years ago, that get vitamin A tablet	95	90	Not problem of public health
14	Vitamin A supplementation in post-partum women	67	90	Problem of public health*
15	Household that consume salt consist of yodium	90	90	Not problem of public health
16	Wasting toddlers that get toddler's care	100	100	Not problem of public health

DISCUSSION

Public Health Centre (PHC) or often called as Puskesmas is one of several public health services in Indonesia. Based on the statute from Indonesian Ministry of Health, number 43-year 2019, PHC have three main functions, as a trigger for health development, community empowerment, and the first level of health service center. Evaluation the efficiency of health programs in PHC should be conducted each year and reported to the Ministry of Health, so that further intervention or analysis can be given. Every PHC have different characteristics regarding to the different population and geographical area. Mulyorejo PHC have three regions, those are Mulyorejo district, Manyar district, and Kejawan Putih district. Number of populations was varying in every district, Mulyorejo had the biggest number of inhabitant (17,161 inhabitants), followed by Manyar Sabrangan (16,656 inhabitants), and Kejawan Putih (6,700 inhabitants). During 2018, Mulyorejo PHC have been conducted various nutritional programs that divided into two major groups, nutritional problem indicators and nutritional program performance indicators.

This study was highlighted some of nutritional program performance indicators that still under the target and need to be improved in next year. Those programs classified as problem for public health regarding to the excess value more than cut off that fixed by Indonesia Ministry of Health

a. Under-five years ago, with exclusive breastfeeding
National target of EBF in under-five years age was 80%, but in Mulyorejo PHC still need to be gain as many as 0.7% to reach the target. Monitoring, promoting, and supporting of exclusive breastfeeding in every public health center can be conduct by health workers through regularly visiting. Exclusive

breastfeeding (EBF) means that under-five years ago that receives breast milk as source of food, without other solids or liquids, except of water with function as oral rehydration solution (ORS), vitamins, syrups or drops, minerals, or other form of medicines¹⁶. World Health Organization (WHO) recommended exclusive breastfeeding during first 6 months of life, and can be continued up to 24 months of age, companied by other solids or liquids food¹⁷. Studies shows EBF can give many impacts for infant and also mother. Breast milk contains important required nutrients that can protects against gastrointestinal and respiratory infections also can minimize the risk of being overweight and obese in adolescence and childhood. Higher intelligent quotient (IQ) has been known as side impact of exclusive breastfeeding. In line with that, mothers also get some beneficial, such as protection from ovarian and breast cancer¹⁸. Another country has been provoked provided comfort place for mother, such as Nigeria that launched Baby Friendly Hospital Initiative (BFHI) under supervision of UNICEF and WHO. Recently study shows multifactor can influence EBF, including knowledge of mother, socio-demographic, and labour¹⁹. Health promotion for mother take an important role to promote the beneficial of EBF²⁰.

b. Six-month age with complete exclusive breastfeeding (EBF)

National target for the perecentage of six-month age with complete EBF has been fixed on 80%, similar with the perecentage of under-five years with EBF. This point should be a consideration in Mulyorejo PHC, because yet to reach the target. Exclusive breastfeeding is more recommended than partial

breastfeeding, especially to gain immunity of toddlers. Recent studies show that mortality and infection in toddlers group with EBF was lower compared with neonates that partially breastfeed¹⁷. Knowledge of each mother about the benefit of EBF for their infants also a predictor for the successfulness of EBF²¹. Another study reveals that the duration of EBF can be affected by level of maternal and less paternal²². Most of mothers that partially breastfeed have lower knowledge specifically about health benefits of breastfeeding compared with mother that completely exclusive breastfeed²³.

c. Supplementation for pregnant women with chronic energy deficiency (CED)

Supplementation for pregnant women with CED is absolutely important in order to minimize negative impact either for mother or babies. Pregnant women with chronic energy deficiency (CED) known as malnutrition condition in pregnant woman that caused by lack of energy for long period of time. Multiple factors that negatively related with CED are infectious disease that lead to severe illness, having toddlers below two years age, and breastfeeding. While education, marital status, income, food diversity, high maternal age, and socio-economic status shows positive effect^{10,24}. Data analysis shows in Mulyorejo PHC, only 21.2% of women with CED that get supplementation. Meanwhile, minimum national target indicates 50% of them must get supplementation in order to prevent negative impact of CED. Previous study shows that CED can be a risk factor of having Low-Birth Weight (LBW) and poor health condition of babies²⁵. Another outcome of CED also be considered, such as birth asphyxia²⁶ and poor anthropometric measures²⁷.

d. Under-five years ago, that already have health control card or often called as *Kartu Menuju Sehat*

Indonesia has been provided health control card or often called as *Kartu Menuju Sehat* that must be brought by mother when visiting public health center²⁸. This card filled with the biodata of baby, weight body, height body, supplementation history, vaccination history, and other related information with public health service²⁹. Indonesia as an archipelago country, with the number of islands is about 17,504 islands, and different health facility level because of decentralization system can give impact on the distribution of this card³⁰. The number of babies that already have KMS must be reported regularly every month. National target that must be reached in every public health center is all babies have this card (100%), but report from Mulyorejo public health center shows only 75% of the babies that have this card. This phenomenon should become an evaluation for health workers and also for mother of babies to gain their willingness and fulfill administration process.

e. Under-five years ago, that gain weighed

Frequency of weighing of under-five-years age must be recorded in health card/ *Kartu Menuju Sehat*. This historical note can help medical workers to understand what kind of problem in under-five years age, and also classified them based on nutritional status, whether they malnutrition or not³¹. High skill medical workers to conduct weighing based on guidelines from WHO Training Course on Child Growth Measurement³² and qualified measurement

tools must be provided in order to minimize bias results. Number of visiting public health for the health maintenance yet to be established, but its recommended to monitor together with immunization schedule, and additional visit can be conducted in first month and nine months of age (since one to two weeks of birth, at one month age, two, four, six, nine, 12, 18, 24 months, three years, four years, and five years)³¹. Early detection of abnormal growth can accelerate therapy that will be given by medical workers, so that negative impact such as less productivity and lower earnings³³. Based on guidelines from Indonesia Ministry of Health²⁹, if body weight of baby didn't gain during two times of measurement, it should be a consideration and identified the causation of it. From this study, the number of under-five years age that gain weighed still yet to reach the target. National target must be 80% of baby gain weighed, while in Mulyorejo PHC still 68.5%. Monitoring of weight body is a regular program in every PHC, as an effort to minimize wasted children, as proposed by the global Sustainable Development Goals (SDGs) to reduce wasted children below 5%³⁴.

- f. Vitamin A supplementation in post-partum women
Vitamin A is a fat-soluble substance that important for biological activity and support human metabolism. Animal liver, whole milk, egg yolk, and dairy products was the common sources of vitamin A, while yellow vegetables and fruit are rich of provitamin A carotenoids³⁵. Many beneficial of consuming vitamin A in recommended dosage, for human body, such as growth and physical development, maintenance of epithelial cells, immune booster, normal vision, and gene expression³⁶. In line with that, vitamin A deficiency (VAD) can result severe morbidity, children mortality, and blindness. VAD can be diagnosed by observe characteristic of eye sign³⁵. Infant was born with low vitamin A stores and strongly dependent on external sources, in this case is breastmilk. In some situation, breastmilk produced by mother also low contain of vitamin A, therefore, vitamin A supplementation is recommended³⁷. Vitamin A supplementation coverage for post-partum woman in Mulyorejo PHC still yet to reach the target and need to gain up to 23% to reach national target.

CONCLUSION

Improvement on some nutritional programs in Mulyorejo PHC still need to be done, to gain coverage of program, those are scope of exclusive breastfeeding, supplementation in pregnant women with chronic energy deficiency (CED), under five-years ago that already have health control card, under five-years ago that gain weighed, and vitamin A supplementation in post-partum women.

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CONFLICT OF INTEREST

The authors declare no conflicts of interest.

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