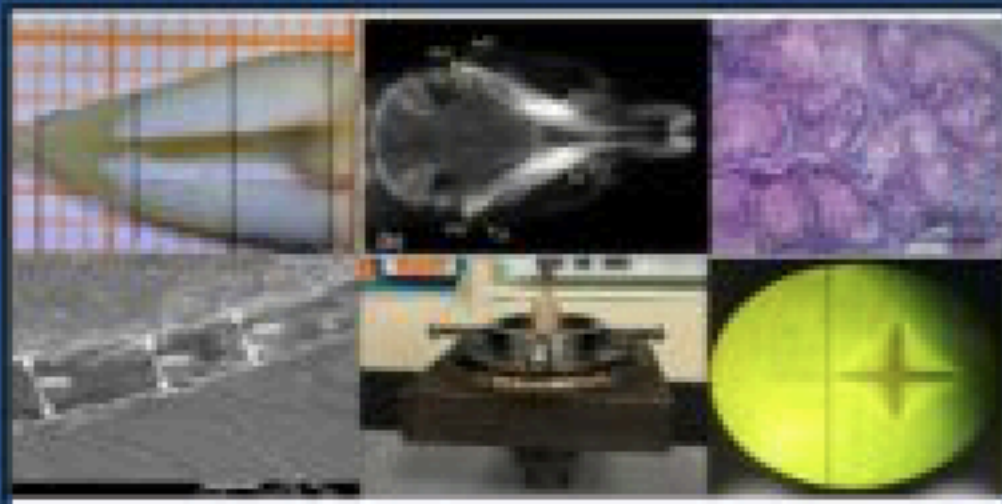


E-ISSN: 1949-101X

Journal of
International
Dental and Medical
Research



2010 - Vol. 13 - No. 1

<http://www.jidmr.com>



Editorial Board of JIDMR

Prof. Dr. Izzet YAVUZ

Editor-in-Chief and General Director

Advisory Board

Prof. Dr. Refik ULKU **Editor for Medicine**

Prof. Dr. Zulkuf AKDAG **Editor for Biomedical Research**

Prof. Dr. Ozkan ADIGUZEL **Associate Editor**

Gajanan Kiran KULKARNI (CANADA)

Betul KARGUL (TURKEY)

Diah Ayu MAHARANI (INDONESIA)

Francisco Cammarata-Scalisi (Venezuela)

Myroslav Goncharuk-Khomyn (UKRAINE)

Ferranti WONG (UK)

Zeki AKKUS (TURKEY)

Michele CALLEA (ROME, ITALY)

Zelal ULKU (TURKEY)

Moscho

Lindawt

Yasemir

Yuliya N

Nik Nori

Editorial Board

Abdel Fattah BADAWI (EGYPT)

Abdurrahman ONEN (TURKEY)

Ahmet YALINKAYA (TURKEY)

Guven BASARAN (TURKEY)

Guven ERBIL (TURKEY)

Halmah AWANG (MALAYSIA)

Nezahat AKPC

Nihal HAMAM

Nik Noriah Nik

Ahmet DAG (TURKEY)	Halit AKBAS (TURKEY)	Nicola Pranno
Ali Al-ZAAG (IRAQ)	Helioia Fonseca MARAO (BRAZIL)	Nurten AKDEP
Ali BUMIN (TURKEY)	Hilal TURKER (TURKEY)	Nurten ERDAL
Ali FADEL (EGYPT)	Huseyin ASLAN (TURKEY)	Orhan TACAR
Ali GUR (TURKEY)	Igor BELYAEV (SWEDEN)	Ozant ONCAG
Ali Riza ALPOZ (TURKEY)	Ilhan INCI (ZURICH)	Ozgur UZUN (
Ali Riza Tunçdemir (TURKEY)	Ilker ETIKAN (TURKEY)	Ozkan ADIGU
Allah Bakhsh HAAFIZ (USA)	Isil TEKMEK (TURKEY)	Rafat Ali SIDO
Alpaslan TUZCU (TURKEY)	Iain ULUKAPI (TURKEY)	Refik ULKU (T
Alpen ORTUG (TURKEY)	Jalen DEVECIOGLU KAMA (TURKEY)	Sabiha Zetel U
Armelia Sari WIDYARMAN (INDONESIA)	Kemal CIGDEM (TURKEY)	Sabri BATUN (
Ashish AGGARWAL (INDIA)	Kemal NAS (TURKEY)	Sadullah KAYI
Aysa GUNAY (TURKEY)	Kawal KRISHAN (INDIA)	Saul Martins P
Aziz YASAN (TURKEY)	King Nigel MARTYN(HONG KONG, CHINA)	Sedat AKDEN
Awroth KLAISIRI (THAILAND)	Kursat ER (TURKEY)	Seher GUNDL
Balasubramanian MADHAN (INDIA)	Levent ERDINC (TURKEY)	Selahattin ATA
Benik HARUTUNYAN (ARMENIA)	Luca TESTARELLI (ROME)	Selahattin TEP
Betul KARGUL (TURKEY)	Lucianne Cople MAIA (BRAZIL)	Serdar ERDIN
Betul URREHMAN (UAE)	Luciane Rezende COSTA (BRAZIL)	Serdar ONAT
Bugra OZEN (TURKEY)	Mansi Sai ARCHANA (INDIA)	Sergio Adriano
Carlos Meneses AGUIAR (BRAZIL)	Manoj KUMAR (INDIA)	Serhan AKMA
Cemil SERT (TURKEY)	Marcelo Rodrigues AZENHA (BRAZIL)	Sertac PEKER
Chinmana SANDEEP (INDIA)	Marcia Cancado FIGUEIREDO (BRAZIL)	Seyyed Amir Di
Christine Bettina STAUDT (SWITZERLAND)	Marco MONTANARI (ITALY)	Seyit Burhane
Cihan AKGUL (TURKEY)	Margaret TZAPHLIDOU (GREECE)	Shailesh LELE
Claudia DELLAVIA (ITALY)	Maria Elisa Oliveira dos SANTOS (BRAZIL)	Sinerik N. AYR
Diah Ayu MAHARANI (INDONESIA)	Medi GANIBEGOVIC (BOSNIA and HERZEGOVINA)	Smaragda KAI
Dinesh Rokaya (NEPAL)	Mehmet DOGRU (TURKEY)	Sossani SIDIR
Edoardo BAUNER (ROMA)	Mehmet Emin ERDAL (TURKEY)	Stefano Di CA
Emmanuel Joao N. Leal da SILVA (BRAZIL)	Mehmet Sinan DOGAN (TURKEY)	Sunil Kr. JURE
Emin Caner TUMEN (TURKEY)		Stephen D. SA

Emrullah BAHSI (TURKEY)	Mehmet Zülküf AKDAG (TURKEY)	Susumu TERE
Ertunc Dayı (TURKEY)	Meral ERDİNC (TURKEY)	Suha TURKAE
Fadel M. ALI (EGYPT)	Michele CALLEA (ITALY)	Suleyman DAİ
Fahriur ERTUĞRUL (TURKEY)	Mohamed TREBAK (USA)	Taskin GURBL
Feral ÖZTURK (TURKEY)	Mohammad Khuraheed Alam (KSA)	Ufuk ALUCLU
Feridun BASAK (TURKEY)	Mohammad SUHRON (INDONESIA)	Ugur KEKLIK
Ferrati WONG (UNITED KINGDOM)	Mohammed Mustahsen URREHMAN (UAE)	Xiong-Li YANG
Feyzi Çelik (TURKEY)	Moschos A. PAPADOPOULOS (GREECE)	Vatan KAVAK
Feyzullah Uğmak (TURKEY)	Mostafazadeh AMROLLAH (IRAN)	Yasar YILDIRI
Figen SEYMEN (TURKEY)	M. S. Rami REDDY (INDIA)	Yasemin YAĞL
Filippo BATTCELLI (ITALY)	Muhammad FAHIM (INDIA)	Yavuz SANISİ
Filiz Acun KAYA (TURKEY)	Mukadder ATMACA (TURKEY)	Yu LEI (USA)
Flavio Domingues Das NEVES (BRAZIL)	Murat AKKUS (TURKEY)	Yuri LIMANSK
Folakemi OREDUGBA (NIGERIA)	Murat SOKER (TURKEY)	Zafer C. CEHF
Francesca De ANGELIS (ITALY)	Mustafa KELLE (TURKEY)	Zeki AKKUS (T
Gastino PAOLONE (ITALY)	Mustafa ZORTUK (TURKEY)	Zühal KIRZIOK
Gajanan Kiran KULKARNI (CANADA)	Muzeyyen YILDIRIM (TURKEY)	Zurab KOMET
Gamze AREN (TURKEY)	Neval Berrin ARSERİM (TURKEY)	
Gauri LELE (INDIA)		
Gonul OLMEZ (TURKEY)		
Gülşen YILMAZ (TURKEY)		
Gülten UNLU (TURKEY)		

DENTISTRY

- EXPERIMENTAL ARTICLE
1. **Evaluation of the effectiveness of root canal obturation depending on the treatment methods**
Taras V. Furtsev, Anastasya A. Kazanovskaya, Galina M. Zeer, Elena G. Zelenkova
Pages 1-7
- EXPERIMENTAL ARTICLE
2. **Biomarkers as Bioindicators to Early Detection of Pollution Effects in Environmental and the Human Health**
Rahman Ferizi, Nora Shabani, Arben Murtezani, Ragip Shabani, Naim Haliti, Fehim Haliti, Tibor Altenberger
Pages 8-16
- EXPERIMENTAL ARTICLE
3. **The Effect of Ginkgo Biloba (Egb) Extracts on the Expression of Hsp 90, Vegf and Bdnf in the Rattus Novergicus with Lead (Pb) Exposure**
Muhammad Hamdan, Noorhamdani AS, Masruroh Rahayu, Mohammad Hasan Machfoed
Pages 17-22
- EXPERIMENTAL ARTICLE
4. **Compressive Strength Evaluation of Giomer and Compomer Storage in Different Media**
Ali A. Razooki Al-Shekhli, Isra'a Al Aubi
Pages 23-28
- EXPERIMENTAL ARTICLE
5. **Effect of Post-Polymerization Microwave Treatment on Mechanical Properties and Dimensional Change of Provisional Self-Cure PMMA**
Jamaporn Karawatthanaworrakul, Juthatip Aksornmuang
Pages 29-35
- EXPERIMENTAL ARTICLE
6. **Comparative Evaluation and Efficacy of Linezolid, Vancomycin and Ciprofloxacin on Enterococcal induced biofilm using Scanning Electron Microscopy an in vitro study**
Musab Hamed Saeed, Manu Zacharias, Krishna Prasad Shetty, Alexander M Luke, Simy Mathew
Pages 36-41
- EXPERIMENTAL ARTICLE
7. **The Effect of Canal Preparation using 2Shape, ProTaper GOLD and ProTaper Next File Systems on the Fracture Resistance of Obturated Roots**
Hadeel Rushdi Khdairah, Hikmet A. Al-Gharrawi
Pages 42-45
- EXPERIMENTAL ARTICLE
8. **Zinc Supplementation in Cytokine Regulation During LPS-induced Sepsis in Rodent**
Martono T Utomo, Subijanto M Sudarmo, Ketut Sudiana
Pages 46-50
- EXPERIMENTAL ARTICLE
9. **Role of Fascin in Xenografted Tumorigenesis in Nude Mice: A Histological Study**
Xianglan Zhang, Young Sun Hwang
Pages 51-56
- EXPERIMENTAL ARTICLE
10. **In Vitro Antifungal Effect of Biodentine™ Against Candida Albicans**
Donika Bajrami, Miranda Stavileci, Agime Dragidella, Zana Sejfiija
Pages 57-60

- EXPERIMENTAL ARTICLE**
- 11. Expression of Il-1 β in Periodontitis Post Oral Administration of Papaya Seed Extract**
Ratih Pusporini, Ahmad Basori, Agung Krismariono
Pages 61-66
- EXPERIMENTAL ARTICLE**
- 12. Beverages Immersion Effect on Compomer and Giomer Microhardness**
Ali A. Razooki Al-Shekhli, Isra'a Al Aubi
Pages 67-72
- EXPERIMENTAL ARTICLE**
- 13. Effect of Stichopus Hermanni to Remodeling Maxillary Suture Expansion on Craniofacial Structure and Teeth**
Noengki Prameswari, Henry Sebastian, Rahma Ariesti, Kristin Gaby Rosari, Kenny Rama Widya, Ela Amelia, Fatimah Batul, Fenny Felia, Flavia Pratamaningdyah, Pambudi Rahardjo, Lisdiana Mardanus, Sarianofern, Emy Khoironi
Pages 73-79
- EXPERIMENTAL ARTICLE**
- 14. Accuracy of Digital Periapical Radiography and Cone Beam Computed Tomography for Evaluation of Root Canal Configuration in Human Mandibular first Premolars**
Phiangfah Kongkiatkool, Peraya Puapichartdumrong, Weeraya Tantanapornkul, Thosapol Piyapattamin, Kessiri Wisithphrom
Pages 80-85
- EXPERIMENTAL ARTICLE**
- 15. Enamel polishing after orthodontic bracket debonding using two different protocols and two different adhesives**
Hussein A. Alnajjar, Hayder A. Kadhim
Pages 86-90
- EXPERIMENTAL ARTICLE**
- 16. Acute Toxicity Test of Liquid Smoke of Rice Hull (*Oryza sativa*) on Mice (*Mus Musculus*)**
Ira Arundina, Tantiana, Indeswati Diyatri, Meircurius Dwi Condro Surboyo, Rachma Adityasari
Pages 91-96
- EXPERIMENTAL ARTICLE**
- 17. Root Canal Preparation using Hyflex EDM/CM VS Revo S in Curved Root Canals, a Comparative in-vitro Study**
Maryam Kuzekanani, Ali Abbasi Sardari
Pages 97-100
- EXPERIMENTAL ARTICLE**
- 18. Comparison of Reverse Torque in Different Types of Implant Screw Systems**
Tahir Karaman, Onur Evren Kahraman
Pages 101-105
- EXPERIMENTAL ARTICLE**
- 19. Comparative Evaluation of Canal Preparation Time by Using Three Different Shape Memory Files –An In-Vitro Study**
R.Rajakeerthi, M.S. Nivedhitha
Pages 106-110
- EXPERIMENTAL ARTICLE**
- 20. Irrigation Solution Pattern in Root Canal Treatment (Irrigation Solution Pattern in Root Canal between Negative Pressure System by Endovac and Sonic Activation by Eddy System)**
Dian Agustin Wahjuningrum, Raymond Kandow, M Rulianto, Kevin Prayogo
Pages 111-115

- EXPERIMENTAL ARTICLE
- 21. The Efficacy of D-Race and Different NiTi rotary Instruments in the Removal of Root Canal Filling Materials**
Mustafa Tariq Mutar, Iman Mohammed Al-Zaka
Pages 116-121
- EXPERIMENTAL ARTICLE
- 22. Inhibition of Streptococcus Mutans Growth Induced by the Extract of Citrus Aurantifolia Peel**
Jeffrey Jeffrey, Mieke Hemiawati Satari, Dikdik Kurnia, Sunarjati Sudigdoadi
Pages 122-127
- EXPERIMENTAL ARTICLE
- 23. Coronal Leakage of two Different Root Canal Sealers**
Tringa Kelmendi, Ferit Kocani, Blerim Krasniqi, Arsim Kurti, Blerim Kamberi
Pages 128-133
- EXPERIMENTAL ARTICLE
- 24. A High Sucrose Diet Affects Calcium Levels and the Number of Osteoblasts in the Wistar Rat Extraction Socket**
Christian Khoswanto
Pages 134-137
- EXPERIMENTAL ARTICLE
- 25. Antibody Induced by Porphyromonas Gingivalis FimA-PVXCP DNA Vaccine Inhibit Host Cell Invasion and Enhance Phagocytosis**
Jantipa Jobsri, Nattachai Saiwarin, Thanit Prasitsak, Warayut Chotprakaikiet, Kusuma Jamdee, Niratcha Chaisomboon
Pages 138-143
- EXPERIMENTAL ARTICLE
- 26. Hyperbaric Oxygen Therapy Effect on Androgen Receptor and Superoxide Dismutase in Insulin-Resistant Polycystic Ovary Syndrome**
Budi Santoso, Widjiati, Ahmad Syaifuddin Zuhri, Firas Farisi Alkaff
Pages 144-148
- EXPERIMENTAL ARTICLE
- 27. Marginal Fit of Metal Copings Fabricated from Digital and Conventional Impression Methods: an In Vitro Study**
S Simna, M Sheejith, Sukumaran Anil
Pages 149-154
- EXPERIMENTAL ARTICLE
- 28. Effectiveness of Photodynamic Inactivation with Exogenous Photosensitizer Curcuma longa Extract Activated by Laser Diode 403 nm on Staphylococcus aureus**
Suryani Dyah Astuti, Amiliyatul Mawaddah, Aulia Mt Nasution, Amalia F Mahmud, Nurul Fitriyah, Idha Kusumawati, Abdurachman, Putri S. Puspita, and Suhariningsih
Pages 155-161
- CLINICAL ARTICLE
- 29. Analysis of Accessory Canals as Important Anatomical Structures in the Anterior Maxilla with Cone Beam Computed Tomography**
Zurab Khabadze, Ferdaus Taraki, Oleg Mordanov, Saida Abdulkerimova, Yusup Bakaev, Mariam Shubitidze, Shamil Solimanov, Shamil Nazhmudinov
Pages 162-165

- CLINICAL ARTICLE
- 30. Comparison of educational methods between using leaflets and audiovisuals in order to increase knowledge on the oral cancer among high school students in Jatinangor, West Java, Indonesia**
Winy Yohana, Astsania Hikmah Alfath, Sri Susilawati, Riana Wardani
Pages 166-169
- CLINICAL ARTICLE
- 31. Effects of Impacted Lower third Molar Removal on Alveolar Bone Height and Periodontal Parameters on Adjacent Second Molar**
Wan Nur Alwani Wan Abdul Aziz, Azlan Jaafar, Ahmad Dzulfikar Samsudin
Pages 170-174
- CLINICAL ARTICLE
- 32. Description of Salivary Secretion and Number of Facultative Anaerobic Bacterial Colony in Female Smokers**
Yuyun Qurrota A Yunina Rahmi, Sri Tjahajawati, Hening Tjaturina Pramesti
Pages 175-179
- CLINICAL ARTICLE
- 33. Immunohistochemical Evaluation of Bcl-2 in Mucoepidermoid Carcinoma and Adenoid Cystic Carcinoma of Salivary Glands**
Mustafa Mohammed Abdulhussain, Ali Sami Mohsen
Pages 180-187
- CLINICAL ARTICLE
- 34. Analysis of Beta-Crosslaps (B-Ctx) and Mandible Trabecular Parameters in Menopausal Women Using Cone Beam Computed Tomography (Cbct)**
Silviana Farrah Diba, Azhari, Farina Pramanik, Sri Tjahajawati
Pages 189-193
- CLINICAL ARTICLE
- 35. Pattern of Mandibular Third Molar Impaction in Malaysia Population and Their Association with Gender, Age and Race**
Mohammad Subhi Shareif, Sharon Paul, Nurul Fatimah Che Ghani, Ismail Muhamad Fareez
Pages 194-200
- CLINICAL ARTICLE
- 36. Cytogenetic Profile and Main Comorbidities of School-Aged Children and Adolescents with Down Syndrome in the Northwestern Algeria**
Houari Hamdaoui, Amaria Aouar, Djamel Belkhatir, Abdellatif Moussouni, Zakarya Moqaddem, Sarra Khater
Pages 201-208
- CLINICAL ARTICLE
- 37. Dental Students Perception Towards Changes Implemented in Clinical Teaching Strategies of Conservative Dentistry and Endodontics**
Mohammad M. Hammad, Mariam M. Al-Abdallah, Ahmad M. El-Ma'a'ita, Susan N. Hattar
Pages 209-215
- CLINICAL ARTICLE
- 38. Interdisciplinary Collaboration: Screening of Systemic Blood Flow at a Dental Appointment \ Russia**
Victoriya N. Naumova, Dmitriy V. Mikhalchenko, Julia A. Makedonova, Tatyana V. Kolesova, Larisa N. Denisenko
Pages 216-222

CLINICAL ARTICLE

- 39. Correspondence between Dental and Skeletal Maturity Parameters Among Patients with Different Sagittal Relationships at the end of Puberty Period**

Myroslav Goncharuk-Khomyn, Ebru Akleyin, Igor Zhulkevych, Yaroslav Nahirnyi, Pavlo Brekhlichuk, Yuriy Mochalov, Ivan Melnychuk, Liudmyla Horzov, Olesia Stoika
Pages 223-228

CLINICAL ARTICLE

- 40. The relationship between sex and age on dental arch change in the reverse twin block appliance on dental study model measurements: A randomized clinical trial**

Osama Bahaa Albajalan, Nawres Oraibi Alazzawi, Nor Ashikeen Mukti, A.R. Samsudin
Pages 229-235

CLINICAL ARTICLE

- 41. Comparison the Cost-Effectiveness of Reducing Dentin Hypersensitivity Between Brushing and Massage with Desensitizing Toothpaste Method and Dentinal Tubule Sealant Application Method**

Ronnayut Chansamat, Rutchanoo Chansamart, Patcharaphol Samnieng
Pages 236-240

CLINICAL ARTICLE

- 42. Anesthetic efficacy of three different Volumes of 4% Articaine for extraction of maxillary posterior teeth – A randomized trial**

Mahmoud Shalash, Noha M. El Adl, Aalaa S. Emara
Pages 241-245

CLINICAL ARTICLE

- 43. Evaluation of the Use of Platelet-Rich Fibrin in Socket Preservation in Patients with Chronic Periodontitis**

Iyad Alsayed, Ali Abousulaiman, Mohammed Monzer Alsabbagh
Pages 246-251

CLINICAL ARTICLE

- 44. Oral Health Related Quality of Life Among Adults Attending Periodontal Clinic at Lium Kuantan**

Juzaily Husain, Farah Natashah Mohd, Abdul Hadi Said, Munirah Yaacob
Pages 252-257

CLINICAL ARTICLE

- 45. A Study of Information and Communication Technology Competencies for Learning of Dental Students at Naresuan University, Thailand**

Tipruthai Prayoonwong, Nattan krodkaew, Phachara Siriraphonroj, Sirikorn Saedan, Hatayrat Meejit
Pages 258-269

CLINICAL ARTICLE

- 46. Children's Birth Weight and Their Current Body Mass Index in Relation to Early Childhood Caries**

Nor Azwani Mohd Shukri, Nazalikka Lokman, Norashikin Mustafa, Roszanadia Rusali, Nor Asilah Harun
Pages 270-274

CLINICAL ARTICLE

- 47. Peri-Implant Marginal Bone Changes and Soft Tissue Conditions Around Single Implants with Laser-Microgrooved Collar Placed in Regenerated Extraction Sockets and in Native Bone: 2-Year Results of RCT**

Guarnieri Renzo, Dario Di Nardo, Maurilio D'Angelo, Marco Seracchiani, Gabriele Miccoli, Luca Testarelli
Pages 275-282

- CLINICAL ARTICLE
- 48. Clinical Resolution of Periodontitis Among Diabetic Patients under Medical-Dental Coordinated Care: A Preliminary Study in Kuantan**
Munirah Yaacob, Tin Myo Han, Razida Ismail, Sorayah Sidek, Padmini Hari, Mohd Aznan Md Aris, Iskandar Firzada Osman, Mahendran Thuraiappah, Fa'iza Abdulla, Than Tun Sein, Roslan Bin Saub
Pages 283-289
- CLINICAL ARTICLE
- 49. A Retrospective Evaluation of Requirements and Causes of Dental General Anesthesia in Pediatric Dentistry**
Ahmet Aras, M. Sinan Dogan
Pages 290-294
- CLINICAL ARTICLE
- 50. Prevalence of Root Caries among Patients Attending RAKCODS Hospital**
Md Sofiqul Islam, Hiba JI Abu Jarad, Dhabyeh alshehhi, Mohammad Nassar, Smriti Aryal AC, Muhammed Mustahsen Rahman
Pages 295-300
- CLINICAL ARTICLE
- 51. Evaluation of Selection Criteria for Patients Indicated for Fixed Orthodontic Appliance Treatment**
Ammar S. Kadhum, Dheaa H. Al-Groosh, Dhiaa J. Aldabagh, Akram F. Alhuwaizi
Pages 301-305
- CLINICAL ARTICLE
- 52. Perceived Sources of Stress and Stress Coping Strategies among Junior Dental Students at Ajman University**
Sundus A. A. Al Omar, Al-Moutassem Billah Khair, Nisha Shantakumari, Mawada Abdelmagied, Karrar M. H. Hadi
Pages 306-314
- CLINICAL ARTICLE
- 53. Effect of obesity on the levels of salivary matrix metalloproteinase-8 (MMP-8) In chronic periodontitis patients**
Usman Rashid, Siti Lailatul Akmar Zainuddin, Zurairah Berahim, Ahmad Azlina, Basaruddin Ahmad, Haslina Taib
Pages 315-320
- CLINICAL ARTICLE
- 54. Efficiency of BTX-A in the Alleviation of Hemifacial Pain**
Mohammed Rhael Ali, Elham Hazeim Abdulkareem
Pages 321-326
- CLINICAL ARTICLE
- 55. The Relationship between the Salivary pH, Flow Rate, and the Number of Oral Streptococci in Elementary School Age Children**
Dudi Aripin, Anne Agustina Suwargiani, Riana Wardani, Sri Susilawati, Tadeus Arufan Jasrin, Warta Dewi, Inne Suherma Sasmita
Pages 327-331
- CLINICAL ARTICLE
- 56. The Effectiveness of Reducing Dentin Hypersensitivity Between Brushing and Massage with Desensitizing Toothpaste Method and Dentinal Tubule Sealant Application Method**
Ronayut Chansamat, Rutchanoo Chansamart, Patcharaphol Samnieng
Pages 332-336

CLINICAL ARTICLE

57. Effectiveness of An Educational Workshop in Improving Knowledge on Dental Trauma among Rugby Players

Amy Kia Cheen Liew, Dalia Abdullah, Mohamad Aflah Lokeman, Muhammad Azril Fitri Kamaruddin, Muhammad Khiratti Mat Zainal, Eason Soo
Pages 337-345

CLINICAL ARTICLE

58. The Relationship between Oral Health Attitude (HU-DBI) Score and Caries Experience (DMFT) Score among First Year Dental Students in USIM, Malaysia.

Nazirah Ab Mumin, Haslinda Ramli, Syatirah Najmi Abdullah, Asfizahrasby Mohd. Rasoul, Azlan Jaafar, Haslina Rani
Pages 346-350

CASE REPORT

59. Effect of Periodontal Treatment of Patient with Orthodontic Fix Appliance- long Term Follow-up, Case Report

Zana Sllamniku-Dalipi, Fatmir Dragidella, Shefqet Mrasori, Metush Disha, Kastriot Meqa, Visar Bunjaku
Pages 351-354

CASE REPORT

60. Endodontic Management of Mandibular First Molar with Radix Entomolaris and Weine Type II Root Configuration: A Case Report

Bernard Iskandar, Dwi Nugroho Juanda
Pages 355-358

REVIEW

61. Physical and Chemical Conditions for the Long-Term Functioning of Restorations with a Zirconia Framework

Zurab Khabadze, Oleg Mordanov, Georgy Davreshyan, Anzhela Adzhieva, Omargadzhi Magomedov, Shamil Solimanov, Shamil Nazhmudinov
Pages 359-363

REVIEW

62. DEF6 Expression and Regulation in Cancer, Chronic Inflammatory Diseases and Autoimmune Diseases: A Review

Nyi Mas Siti Purwaningsih, Khor Goot Heah, Hong-Jian Zhu, Mazuan N.M. Rosdy, Effat Omar
Pages 364-371

REVIEW

63. Chemical Oral Health care and Aspiration Pneumonia (AP) in Elderly Patients: A Systematic Literature Review

Nilobon Aiemyen, Thanida Pothidee, Praweena Sopapornamorn, Pastraporn Payukaparp, Chaipat Luangnam, Songsak Suksan, Pichit Preechasummakul, Patcharaphol Samnieng
Pages 372-378

REVIEW

64. In Vitro and In Vivo Studies of Ganoderma lucidum in Cancer

Khor Goot Heah, Syairah Nabila Bt Suhaimi, Nur Rawaidah Bt Mohd Shobri, Hong-Jian Zhu, GRA Froemming
Pages 379-383

REVIEW

65. Oral Dryness of Elderly Patients with Dementia

Pattara Sukhumanphaibun, Supaporn Sangouam
Pages 384-387

MEDICINE

EXPERIMENTAL ARTICLE

66. Serotyping of Helicobacter Pylori Antibody Reflected on Human Health

Valon Morina, Rahman Ferizi, Fatmir Cakaj, Mohamed Fawzy Ramadan

Pages 388-394

CLINICAL ARTICLE

67. Risk Factors as an Indicator of Non-Complications Spontaneous Preterm Birth: a Study in Eight Hospitals

Sriyana Herman, Budi Santoso, Hermanto Tri Djoewono, Agus Sulistyono, Hari Basuki,

Muhammad Miftahussurur

Pages 395-399



UNIVERSITAS AIRLANGGA

FAKULTAS KESEHATAN MASYARAKAT

Kampus C Mulyorejo Surabaya 601115 Telp.031-5920948, 5920949 Fax 031-5924618

Laman : <http://www.fkm.unair.ac.id>; E-mail: info@fkm.unair.ac.id

SURAT KETERANGAN

Nomor : 3148/UN3.1.10/KP/2023

Yang bertandatangan di bawah ini :

Nama : Dr. Santi Martini, dr. M.Kes
NIP : 196609271997022001
Pangkat/Golongan : Pembina / Gol. (IV/a)
Jabatan : Dekan

Dengan ini menerangkan bahwa :

Nama : Dr. Hari Basuki Notobroto, dr., M.Kes
NIP : 196506251992031002
Pangkat/Golongan : Pembina (Gol. IV/a)
Jabatan : Lektor Kepala

Telah melaksanakan penelitian dengan judul sebagai berikut :

No.	Judul Karya Ilmiah	Tahun Pelaksanaan
1	Exploring Midwives' Need and Intention to Adopt Electronic Integrated Antenatal Care (C-14)	2018
2	Risk Factors as an Indicator of Non-Complications Spontaneous Preterm Birth: a Study in Eight Hospitals (C-19)	2020
3	Independency Models of Nursing self-care for Ischemic Stroke Patient (C-23)	2015
4	Indicators of Husband's Role in Pregnancy and Maternity Care (C-27)	2017
5	Container Crane Operator Ergonomics Analysis PT. X Port Of Tanjung Perak, Surabaya (C-40)	2015
6	Influence of the village head leadership-based self-efficacy and personal mastery to total visits of children under 5 years to health (C-42)	2016
7	Relationship of Environmental Condition, Container and Behavior with the Existence of Aedes aegypti Mosquito Larvae in an Endemic Area of Dengue Hemorrhagic Fever, Makassar (C-43)	2016
8	Relationship Early Initiation of Breastfeeding with Exclusive Breastfeeding: A Case-control Study (C-48)	2016
9	Comparison of Results of Measurement Hand Dynamometer with Lactat Acid Blood Plasma for	2016

	Muscle Fatigue Level Indicator Hand Computer Operator (C-52)	
10	Enhancement HIV Health Literacy at Servant of God in Providing Support for Individual at Risk of HIV for Following VCT in Province of NTT (C-55)	2017
11	The Effect of Work Position on Fatigue on the Arm Muscles of Computer Operator (C-59)	2016
12	Warm Pad Reduces Anxiety, Somatic Pain, Strain Pain, Perineal Rupture and Postpartum Blood Volume in Normal Delivery (with Normal Baby Weight Range) (C-65)	2018
13	Hubungan Jumlah Kunjungan ANC dan Stigmatisasi dengan Keikutsertaan Ibu Hamil dalam Tes HIV setelah Konseling oleh Petugas Kesehatan (Di Wilayah Kerja Puskesmas Turi Lamongan) (C-101)	2016
14	Faktor yang Berhubungan dengan Perilaku Ibu Rumah Tangga Melakukan Pemeriksaan Payudara Sendiri (Sadari) (K4) (C-102)	2017
15	Influence of prenatal class to the practice of P4K (Birth Planning and Prevention of Birth Complication) (C-103)	2016
16	Rendahnya Keikutsertaan Pengguna Metode Kontrasepsi Jangka Panjang Pada Pasangan Usia Subur (C-104)	2014
17	Analisis Hubungan Kunjungan Neonatal, Asfiksia dan BBLR dengan Kematian Neonatal (C-106)	2014
18	Pemodelan Regresi Logistik Backward pada Faktor Risiko Kanker Serviks di Yayasan Kanker Wisnuwardhana Surabaya (C-107)	2015
19	Dukungan Informasi tentang Menstruasi kepada Anak Usia Sekolah Dasar (C-108)	2015
20	Pengaruh Aktivitas Seksual Pranikah, Ketaatan Beragama dan Sosial Ekonomi terhadap Kehamilan Remaja di Kecamatan Saptosari Gunungkidul (C-109)	2016
21	Pengaruh Pengetahuan, Kontrol Diri terhadap Perilaku Seksual Pranikah di Kalangan Remaja SMK di Surabaya (C-111)	2016
22	Premarital Sexual Behavior among Papua Women: a Qualitative Research (C-114)	2019
23	The Effect of Organizational Culture and Readiness to Change on Organizational Entrepreneurship: The Role of Competence (C-122)	2021
24	Determinants of Acute Respiratory Infections Among Child Under Five Years in Surabaya (C-131)	2018

Adapun penelitian tersebut layak dilakukan dan menghasilkan output yang sangat baik, meskipun belum ada *Uji Ethical Clearance* karena merupakan penelitian observasional.

Demikian surat keterangan ini kami buat untuk dapat dipergunakan sebagai persyaratan pengusulan Jabatan Fungsional Guru Besar.

Surabaya, 24 April 2023
Dekan

Dr. Sani Martini, dr. M.Kes
NIP. 96609271997022001



Risk Factors as an Indicator of Non-Complications Spontaneous Preterm Birth: a Study in Eight Hospitals

Sriyana Herman¹, Budi Santoso^{2*}, Hermanto Tri Djoewono², Agus Sulistyono², Hari Basuki³,
Muhammad Miftahussurur⁴

1. Reproductive Health Post Graduate School, Faculty of Medicine, Universitas Airlangga, Surabaya, Indonesia.
2. Department of Obstetrics and Gynecology, Faculty of Medicine, Dr. Soetomo Teaching Hospital, Universitas Airlangga, Surabaya, Indonesia.
3. Department of Statistic, Faculty of Public Health, Universitas Airlangga, Surabaya, Indonesia.
4. Gastroentero-Hepatology Division, Department of Internal Medicine, Faculty of Medicine-Institute of Tropical Disease, Universitas Airlangga, Surabaya, Indonesia.

Abstract

To determine the indicator and identify risk factors for noncomplicated spontaneous preterm birth

A case-control study analysis on 276 mothers after spontaneous preterm and aterm birth were eight hospitals in Indonesia.

Among 28 risk factors, we found six most significant risk factors including a novel indicator, Edinburgh Postnatal Distress Scale (OR 6.66, CI 95%:1.36-32.56, $p < 0.001$ for a severe score > 13 and OR 6.15, CI 95%:2.06-18.34, $p < 0.001$ for moderate score 10-12). The difference with previous publications, the number of children especially primipara had a significant risk to occur preterm birth (OR 3.77, CI 95%:1.79-7.92, $p < 0.001$), in addition to multipara (OR 7.01, CI 95%:3.06-16.05, $p < 0.001$). We also determined that the mother have weightlifting work > 5 hr/day (OR 5.41, CI 95%:2.33-13.54, $p < 0.000$), low social economy status (OR 2.70, CI 95%:1.40-5.19, $p < 0.003$) and Mid Upper Arm Circumference < 23.5 cm (OR 3.71, CI 95%:1.30-10.53, $p < 0.014$) were the indicators. The highest OR to occur preterm birth was a history of ever 1-2/ > 2 times preterm birth (OR 16.26, CI 95%:1.71-154.37, $p < 0.015$).

We revealed the six indicators of risk factors for a spontaneous preterm birth that may help decision-making in determining an early intervention that measures in both early treatments.

Clinical article (J Int Dent Med Res 2020; 13(1): 395-399)

Keywords: Indicator, Non-complication, Preterm birth, Risk factors, Spontaneous.

Received date: 19 May 2019

Accept date: 02 September 2019

Introduction

Preterm birth according to WHO is birth that occurs between gestational ages of 28 weeks to less than 37 weeks (259 days) which was calculated from the first day to the last menstrual period in the 28-day cycle.¹ Preterm birth is the main causes of infant mortality and the second cause of death after pneumonia in children under five years and still a problem in the worldwide including Indonesia related to the prevalence, perinatal morbidity, and mortality.²

Indonesian preterm birth incidence ranks are the five largest from 184 countries in 2010⁵ that can be reflected roughly by the incidence of low birth weight infants (LBW). LBW in Indonesia in 2013 was 10.2%⁶, and in 2015 amounted to be 13.03%⁷, while the results of the 2015 Intercensal Population Survey (SUPAS) showed that IMR in Indonesia was 22.23/1,000 Life Birth (LB), a number that reached the 2015 MDGs target of Ministry of Health Republic of Indonesia (23/1,000 LB). It is concordance with the realization of the performance of the East Java Provincial Health Office 2015 and 2016 that the number of IMR was 24.00/1000 LB and 23.60/1000 LB, respectively (East Java Health Office, 2016). However, the next analysis based on the distribution of IMR in East Java Province by Regency/City for the last five years, East Java had the highest average IMR from 2012-2016 compared to other Regencies/Cities.⁸

*Corresponding author:

Prof. Budi Santoso,
Department of Obstetrics and Gynecology, Faculty of Medicine,
Dr. Soetomo Teaching Hospital, Universitas Airlangga,
Surabaya, Indonesia
Jl. Mayjen Prof. Dr. Moestopo 47 Surabaya 60131, Indonesia
E-mail: budi.santoso@fk.unair.ac.id

Prevention of health risks in pregnant, maternity and birth need to be carried out by early detection and monitor what causes maternal and infant mortality from physical examination and laboratory.⁹ Therefore, every pregnant must be able to easily access health facilities for getting services according to standards, including the detection of possible diseases associated with a negative impact on maternal health. As an important component in health services; the history, laboratory and physical examination results are used to determine diagnosis, administer medication, monitor treatment outcomes and determine prognosis. Thus, it is expected that all the results examination are correct and accurate will contribute to reducing maternal mortality during pregnancy, maternity, and birth.¹⁰ While morbidity rates, especially preterm birth can be reduced by prevention such as early and accurate predictions, interventions to eliminate risk factors and delay the occurrence of birth with the tocolytic administration, corticosteroids for fetal lung maturation, and prophylactic antibiotics.¹¹

Materials and methods

An observational analysis was used in this study which determines the risk factors for preterm birth based on the results of clinical examinations. We designed as a case-control study by using primary and secondary data.¹³ We included subjects were preterm birth mothers (28-37 weeks) which had medical records in eight hospitals including Soewandhi Hospital, Universitas Airlangga Hospital, Islam Jemur Sari Hospital, Sidoarjo Hospital, Madiun Sogaten Hospital, Jombang Hospital, Gresik Hospital, and Ngawi Hospital.

The inclusion criteria were preterm birth mothers (28-<37 weeks), preterm birth mothers less than 6 hour-3 days after childbirth, maternal age between <20 and >35 years, spontaneous single pregnancy without complications, healthy body and having a Mother and Child Health (MCH) record book. While, the exclusion criteria were Birth with complications or abnormalities and the instrument used in this study was a data collection sheet in the form of a questionnaire. A multivariate logistic regression model was used to count the odds ratios (OR). All determinants with P values of <0.25 were include together into the full logistic regression model, and the model

was diminished by excluding variables with P values of >0.25. The OR and CI 95% were used to determine the risk. A P value of <0.05 was accepted as statistically significant.¹⁴ The SPSS statistical software package version 18.0 (SPSS, Inc., Chicago, IL) was used for all statistical analyses.

Results

Sociodemographic Characteristics

We included 276 respondents consisted 129 mothers of spontaneous preterm birth and 147 mothers with aterm birth from eight hospitals in East Java. Among 28 variables, 18 variables eligible to become candidates in the multiple logistic regression analysis including <20 or >35 years of maternal age (63,22.8%, p <0.011), education <high school was (114,41.3%, p.0.012), occupation of maternal as housewife was (157,56.9%, p <0.105), number of children i.e first children and >2 people was (105,38.1% and 81,29.3%, p <0.001), pregnancy period <2 years (148,53.6%, p <0.436), weightlifting work <5 hours/day (214,77.5%, p <0.001), unsmoking mother (236,85.5%, p <0.014), EPDS with light score 0-9 was (238,86.2%, p <0.001), fetus moves >4 times/half hour (216, 78.3%, p <0.002), total sleep time 7-8 hours/day (149,54.0%, p <0.001), number of visits during pregnancy >4 visits (248, 89.9%, p <0.001), mothers who did not have a history of premature (256,93.55%, p <0.000), good socio-economic (182,65.9%, p <0.001), a son in previous pregnancy (143,51.8%, p <0.218), height >145 cm totaled (266,96.4%, p <0.001), BMI <18.5/> 35 Kg/m² by (145,52.5%, p <0.001), MUAC >23.5 cm totaled (235,85.1%, p <0.001), fundus uteri weight was not suitable for gestational age was (275,99.9%, p <0.001), Fetal heart rate was normally normal p <0.238, and more mothers who did not undergo bacterial vaginosis examination were (267, 96.7%, p <0.007).

Indicators

Multivariate analysis determined the risk factors for spontaneous preterm birth without complications. Among 18 variables, only 6 significant variables eligible as an indicator of the risk of preterm birth including the number of children with value p <0.001 for first children (OR 3.77, CI 95%: 1.79-7.92) and >2 children (OR 7.01, CI 95%: 3.06-16.05), weightlifting work >5 hr/day value (OR 5.41, CI 95%: 2.33-13.54, p

<0.001), EPDS value $p < 0.001$ for Heavy score >13 (OR 6.66, CI 95%: 1.36-32.56) and Moderate score 10-12 (OR 6.15, CI 95%: 2.06-18.34), social economy status (OR 2.70, CI 95%: 1.40-5.19, $p < 0.003$), history of ever 1-2/>2 times preterm birth (OR 16.26, CI 95%: 1.71-154.37, $p < 0.015$), and MUAC <23.5 cm (OR 3.71, CI 95%: 1.30-10.53, $p < 0.014$).

Discussion

In this study, we found that EPDS include the indicator to occur preterm birth for a big score >13 and Moderate score 10-12, although in other studies EPDS was only become a risk factor. The EPDS is very good to use for 1-16 weeks postpartum women that have used these screening tools to be reliable and sensitive in detecting depression, contains what postpartum women feel during the previous seven days by choosing one of four responses that are felt closest to them at the time. Which was developed by a study in 214 pregnant women was assessed every two months of gestation. They found that higher depression scores in early pregnancy are proven to predict anxiety and higher stress values in late pregnancy.¹⁵ In other research, they found that EPDS identified early in the postpartum period such that secondary preventive interventions may be implemented in refugee, asylum-seeking, non-refugee immigrant, and Canadian-born women.¹⁶ Stress scores that increase during mid-pregnancy predict higher anxiety scores at the end of pregnancy. This shows that the level of symptoms of depression, anxiety, and stress varies with increasing gestational age. Increasing depression early in pregnancy is very important, not only predicts symptoms of depression but also increases anxiety and stress in late pregnancy, so early emotional health screening is very important to prevent abnormalities during pregnancy.¹⁷

The number of children for first children (primiparous) and >2 children (multipara) were also included as an indicator. Maybe it is related to the amount of parity was one predisposing factor that occurs prematurely and possibly affects the state of maternal health in pregnancy. It was primiparous to mothers to have a greater incidence of preterm birth by 9.5% compared to multiparous mothers by 7.5% or the mother age by 20-40 years old in single pregnancy to have risk preterm birth by 51% compared to

multiparous mothers by 20%.¹⁸ This due because in fact that multiparous mother will found more information to prevent the risk that occurs in the next pregnancy on the based experience of the previous pregnancy, so it can reduce risk in subsequent pregnancy. The gestational distance showed that the short interval between last pregnancy with subsequent pregnancies (<6 months) has been a double risk factor for the risk of preterm birth in subsequent pregnancies¹⁹ and the optimal pregnancy distance between the last pregnancy and the previous pregnancy was 18-23 months.⁴

In this study, we found was the highest of OR value is a history of previous preterm birth, this due supporting in several studies that mothers who have a history of previous preterm labor are risk factors for threatening preterm labor by 17.8 times greater than mothers who do not have a history of previous preterm birth in Indonesia.²⁰ And in the same similar study that mothers who have a history of 1 time preterm labor at 23-27 weeks' gestation have a higher risk of recurring preterm labor in the second pregnancy at 22.1 times. While mothers who have a history of 2 preterm labor will experience a third risk of recurring preterm labor at 21-31 weeks of gestation by 57%, while 32-36 weeks of gestation at 33%¹² and 34-36 6/7 weeks gestation to risk 9 times to have a late preterm birth on multiple gestation.²¹ In Indonesia, preterm birth causes a large and significant impact on health costs, both directly and indirectly. Direct impacts include draining parents' health, financial, emotional and psychological resources. The indirect impact that occurs is the burden on the community for long-term care for sequelae due to prematurity and loss of livelihood of parents who are forced to stop working to care for their children.¹¹

Mothers who had been weightlifting work during pregnancy were more at risk for preterm birth than those who did not.²² In other research conducted also shows that first-trimester pregnant women who work with high physical workload were two times to risk for preterm birth (gestational age 33-36 weeks) and very preterm birth (22-32 weeks gestational age).²³ This was because maternal workload can be affected by stress levels, depression, and maternal anxiety caused by several types of maternal work at work the place.²⁴ In the third trimester, workload >42 working hours/week, >6 standing hours/day and

exposed to pesticides related to preterm birth and physically demanding jobs, long periods of time and night workers also have the potential for preterm birth.⁴

MUAC correlated with maternal energy and protein intake had a significant positive correlation with body weight, body length, leg length, infant's head circumference and chest circumference, i.e calorie intake and protein intake in women who give birth to premature babies²⁵ and the risk of preterm birth was higher in mothers who have MUAC ≤ 250 mm and show 1,2 times to risk less nutrition.²⁶ This due because the mothers had BMI < 18.5 Kg/m² to risk 1.2-1.6 times, over 25-29.99 Kg/m² to risk 0.8 times, or obesity BMI > 35 Kg/m² also increase around 1.5-1.8 times to risk preterm birth than body weight normal women.^{27, 28}

The numbers of samples in this study were relatively low, certainly becomes the limitation in this study. Recently, we are continuing surveys to add the sample numbers and expand to other islands. In addition, we included mothers from 8 hospitals in six cities/suburban east java with postpartum spontaneous preterm birth. Therefore, our results cannot be generalized across Indonesia.

Conclusions

The highest prevalence of mothers with spontaneous preterm birth was found in Jemur Sari Hospital and the lowest was in Madiun Hospital. The characteristics of maternal risk factors from 18, only 6 has significant risk factors.

Acknowledgements

The authors wish to thank and acknowledge, first; The Kementerian Riset, Teknologi dan Pendidikan Tinggi Indonesia (Kemenristekdikti RI) for generously supporting this project, second; to thank for of all midwife from Soewandhi hospital, Universitas Airlangga hospital, Islam Jemur Sari hospital, Sidoarjo hospital, Madiun Sogaten hospital, Jombang hospital, Ibnu Sina Gresik hospital, and Ngawi hospital on the support of the volunteers and data collection team.

AUTHOR CONTRIBUTIONS

Conception and design of study; Sriyana

Herman, Budi Santoso, Hermanto Tri Joewono, Agus Sulistyono, acquisition of data; Hari Basuki, Sriyana Herman, analysis and interpretation of data; Hari Basuki, Sriyana Herman, M. Miftahussurur, drafting the manuscript; Sriyana Herman, Budi Santoso, Hermanto Tri Joewono, Agus Sulistyono, revising the manuscript critically for important intellectual content; the manuscript; Sriyana Herman, Budi Santoso, Hermanto Tri Joewono, Agus Sulistyono, approval of the version of the manuscript critically to be published; Sriyana Herman, Budi Santoso, Hermanto Tri Joewono, Agus Sulistyono, Hari Basuki, M. Miftahussurur.

Declaration of Interest

The authors had no conflict of interests regarding with respect to the authorship and/or publication of this paper.

References

1. WHO. WHO Recommendations on Interventions to Improve Preterm Birth Outcomes. WHO Recommendations on Interventions to Improve Preterm Birth Outcomes. WHO Guidelines Approved by the Guidelines Review Committee. Geneva: WHO; 2015:5-7.
2. Erez O. Preterm Birth. Croatia: InTechOpen; 2013:10-12.
3. Osterman MJK, Kochanej K, MacDorman MF, Strobino DM, Guyer B. Annual summary of vital statistics: 2012-2013. *Pediatrics* 2015;135: 1115-25.
4. Berghella V. editor. Obstetric Evidence Based Guidelines. 3rd ed. Philadelphia: CRC Press; 2017:192-195.
5. Purisch SE, Gyamfi-Bannerman C. Epidemiology of preterm birth. *Seminars in perinatology* 2017;41(7):387-91.
6. Riskesdas. Riskesdas (Riset kesehatan dasar). Jakarta: Badan Penelitian dan Pengembangan Kesehatan Kementerian Kesehatan Indonesia; 2013:10-13.
7. BPS. Profil kesehatan ibu dan anak. Jakarta: Badan Pusat Statistik; 2015:124-130.
8. BPS Jawa Timur. Angka Kematian Bayi (AKB) Penduduk Jawa Timur Menurut Kabupaten/Kota 2012-2016. Surabaya: BPS Jawa Timur; 2016:125-128.
9. KeMenKes. Profil Kesehatan Indonesia Tahun 2015. Jakarta: Kementerian Kesehatan RI; 2015:104-116.
10. KeMenKes. Buku Saku Pelayanan Ibu di Fasilitas Kesehatan Dasar dan Rujukan (Pedoman Bagi Tenaga Kesehatan). Jakarta: Kementerian Kesehatan RI; 2013:21-36.
11. Health Technology Assessment Indonesia. Prediksi Persalinan Preterm (Hasil Kajian HTA Tahun 2009). Jakarta: HTA Indonesia; 2010:4-7.
12. Robinson JN, Norwitz ER. Preterm Birth: Risk Factors, Intervention for Risk Reduction, and Maternal Prognosis. *Uptodate Magazine*. Available at <https://www.uptodate.com/contents/preterm-birth-risk-factors-interventions-for-risk-reduction-and-maternal-prognosis>. Accessed April 17, 2017.
13. Kuntoro. Metode Sampling dan Penentuan Besar Sampel. Surabaya: Pustaka Melati; 2015:129-131.
14. Sastroasmoro S, Ismael S. Dasar-Dasar Metodologi Penelitian Klinis. 5th ed: Sagung Seto; 2014:158-161.
15. Cox JL HJ, Sagovsky R. Detection of postnatal depression. Development of the 10-item Edinburgh postnatal depression scale. *Br J Psychiatry* 1987;150:782-786.

16. Dennis CL, Lisa M, Donna S, Anita JG. Prevalence, continuation, and identification of postpartum depressive symptomatology among refugee, asylum-seeking, non-refugee immigrant, and Canadian-born women: results from a prospective cohort study. *Arc Womens Health* 2016; 19:959-967.
17. Rallis S. SH, McCabe M, & Milgrom J. A prospective examination of depression, anxiety and stress throughout pregnancy, School of Psychological Sciences. *Women and Birth* 2014; 27:36-42.
18. Langhoff JR, Kesmodel U, Jacobsson BO, Rasmussen S, & Vogel I. Spontaneous preterm delivery in primiparous women at low risk in Denmark: population based study. *BMJ* 2006;332:937.
19. Nosarti C MR, & Hack M. Neurodevelopmental outcomes of preterm birth from childhood to adulthood life. New York: Cambridge University Press; 2010:3-5.
20. Hidayati L. Faktor Risiko Terjadinya Persalinan Prematur Mengancam di RSUD Dr. Soetomo Surabaya. Surabaya: Universitas Airlangga; 2016:70-73.
21. Lu L, Qu Y, Tang J, Chen D, Mu D. Risk factors associated with late preterm births in the underdeveloped region of China: A cohort study and systematic review. *Taiwanese journal of obstetrics & gynecology* 2015;54(6):647-53.
22. Schuler G, Cavalli A, Tanaka T. Relationship between maternal physical Activities and preterm birth. *Environmental Health and Preventive Medicine* 2001;6:74-81.
23. Escriba AV, Hoyos SP, Josephe Y, & Cubizolles S. Physical load and psychological demand at work during pregnancy and preterm birth. Washington: *Int Arch Occup Environ Health*; 2001;74:583-588.
24. Araya BM, Diaz M, Paredes D & Ortiz J. Association between prematur birth and its subtypes and maternal sociodemographic characteristics during the post-transitional phase in a developing country with a very high human development index. *Public health* 2017;147:39-46.
25. Awasthi Shally, M. Chauhan, M. Pandey, S. Singh, U. Singh. Energy and protein intake during pregnancy in relation to preterm birth: a case control study. *Indian Pediatrics* 2015;52:489-92.
26. Shah R, Mullany LC, Darmstadt GL, Mannan I, Rahman SM, Talukder RR, et al. Incidence and risk factors of preterm birth in a rural Bangladeshi cohort. *BMC pediatrics* 2014;14:112.
27. Oyston C, Groom K. Management of a woman with a previous spontaneous preterm birth. *Obstetrics, Gynaecology and Reproductive Medicine* 2016;26(4):101-7.
28. Baron R, Velde SJT, Heymans MW, Klomp T, Hutton EK, Brug J. The Relationship of Health Behaviour and Psychological Characteristics with Spontaneous Preterm Birth in Nulliparous Women. *Maternal and Child Health Journal* 2016;21(4):873-82.