

e-ISSN 2721-9453 p-ISSN 2086-7689

Science Midwifery

Editor-in-Chief: D. K. Keliat

Available online at www.iocspublisher.org Institute of Computer Science (IOCScience)

SERTIFIKAT

Kementerian Riset dan Teknologi/ Badan Riset dan Inovasi Nasional



Petikan dari Keputusan Menteri Riset dan Teknologi/ Kepala Badan Riset dan Inovasi Nasional Nomor 148/M/KPT/2020 Peringkat Akreditasi Jurnal Ilmiah Periode II Tahun 2020 Nama Jurnal Ilmiah

Science Midwifery

E-ISSN: 27219453

Penerbit: Institute Of Computer Science

Ditetapkan sebagai Jurnal Ilmiah

TERAKREDITASI PERINGKAT 4

Akreditasi Berlaku selama 5 (lima) Tahun, yaitu Volume 7 Nomor 1 Tahun 2018 sampai Volume 11 Nomor 2 Tahun 2023



Barabang P. S. Brodjonegoro

Editorial Team

Editor in Chief

Dr. dr. D. K. Keliat, Spa, (Scopus Profil), Medan, Universitas Sumatera Utara, Inedonesia

Associate Editors

- Dr. Leila Mohammadinia, Ph.D., MS, BS, (Scopus Profil) School of Management and Information Sciences, Shiraz University of Medical Sciences, Shiraz, Iran
- Dr. Malakeh Zuhdi Malak, Ph.D., (Scopus Profil) Associate Professor in Community Health Nursing, Al-Zaytoonah University of Jordan, Amman
- Dr. Satyanarayan Labani, (Scopus Profil) National Institute of Cancer Prevention & Research, Noida, India
- Joko Gunawan, S.Kep.Ns MN, Ph.D., (Scopus Profil) Chulalongkrong University, Thailand,
- Prof. Aytac GUDER, PhD., (Scopus Profil) Department Of Medical Services and Techniques, Vocational High School of Health, Giresun University, Turkey
- Prof. Eileen Savage, (Scopus Profil) School of Nursing and Midwifery, University College Cork, Ireland
- Prof. Francesco Carelli, FD, MD, MSc., (Scopus Profil) Professor at University of Milan, Rome and Bari for Undergraduate Students and Specializing Doctors and Masters, Italy
- Prof. Magda Moawad Mohamad Mohsen, PhD., (Scopus Profil) Professor of Community Health Nursing, Faculty of Nursing, Menoufia University, Egypt
- Prof. Urmila Bhardwaj, (Scopus Profil) Principal, Rufaida College of Nursing, Jamia Hamdard, New Delhi
- Prof. Yau Sui Yu, PhD., (Scopus Profil) Associate Professor, School of Nursing and Health Studies, Open University of Hong Kong, Hong Kong
- Prof. Denise Fassett, BHS.RN.MN.PhD, (Scopus Profil) Faculty Of Health, Departement Nursing and Midfiwifery, University of Tasmania, Australia
- Prof. John Christian Fox, MD, RDMS, FAIUM, (Scopus Profil) School Of Medicine, University Of California, Irvine, US
- dr.Leo Simanjuntak, SpOG, (Scopus Profil), Medan, Universitas Sumatera Utara, Inedonesia Prof Dr H Aslim Sihotang, SPM-KVR, (Scopus Profil), Medan, Universitas Sumatera Utara, Inedonesia
- Naety, SST., M.Keb, (Google Scholar Profil) Medan, Universitas Darma Agung, Indonesia
- Efi Satriana, SST, M.Kes, (Google Scholar Profil), Akademi Kebidanan Sehati, Medan, Indonesia
- Ns. Sumandar, S.Kep, M.Kes, (Google Scholar Profil) STIKes Al-Insyirah Pekanbaru, Riau, Indonesia
- Riny Apriani S.Kep., Ns., M.Kep., (Google Scholar Profil) STIKES Binalita Sudama Medan, Sumatera Utara, Indonesia

Copy Editor

- Ade Setiawan Sembiring, (Scopus Profil), Agency for Meteorology Climatology and Geophysics, Jakarta, Indonesia
- Suprianto Panjairan, (Scopus Profil), Institute of Computer Science (IOCS), Sumatera Utara Indonesia
- Fitrian, Riski Muhamad, (Scopus Profil), Institute of Computer Science (IOCS), Sumatera Utara Indonesia
- · Aditiya Pakpahan, (Scopus Profil), Institute of Computer Science (IOCS), Sumatera Utara Indonesia
- Firta Pandjaitan, (Google Scholar Profil) IARN Copyeditor, Indonesia
- · Sonya Pasaribu, (Google Scholar Profi) IARN Copyeditor, Indonesia

Technical Support

· Hengki Tamando, Institute of Computer Science (IOCS), Sumatera Utara Indonesia

Articles

The Relationship Of Age, Education, Knowledge, And Occupation Of Mothers To The Implementation Of Exclusive Breastfeeding In The City Of Binjai In 2022

Ilvira Ulpa Ismail, Joserizal Serudji, afriwardi Page : 2477-2483

PDF bit https://doi.org/10.35335/midwifery.v10i4.690 bit Abstract views : 214 times | bit PDF : 159 times

Prevalence And Characteristics Of Gestational Diabetes Mellitus At X Hospital West Jakarta For The Period Of January 2021 - April 2022

Devi Patricia Kwan, Ricky Susanto Page : 2484-2489

: https://doi.org/10.35335/midwifery.v10i4.677
 Mi Abstract views : 197 times | PDF : 121 times

Factors Related Of Anemia In Adolescence Girl

Rizky Vaira, Merlin Karinda, Muflihah
 Page : 2490-2495
 PDF
 1 https://doi.org/10.35335/midwifery.v10i4.696

Abstract views : 180 times | PDF : 122 times

Hiv/Aids Knowledge And Sex Behavior Among Junior High School Students

Maria Mencyana Pati Saghu, Verayanti Albertina Bata, Grasiana Florida Boa, B. Dian Novita, Maria Manungkalit
 Page : 2496-2502
 PDF

https://doi.org/10.35335/midwifery.v10i4.699
 Abstract views : 175 times | PDF : 89 times

Factor Determinant Implementation Vaccines for the Elderly

Elzina Dina De Fretes, Tri Juniarti Page : 2503-2509

PDF thttps://doi.org/10.35335/midwifery.v10i4.700 Abstract views : 70 times | PDF : 48 times

Efforts to empowerment the Community and Health Involunters Related to Non-Communicable Diseases (PTM) through Strengthening Posbindu

Hariyono, Ni Luh Ayu Megasari, Andri Setya Wahyudi Mage : 2510-2517

PDF Constraints://doi.org/10.35335/midwifery.v10i4.702 Abstract views : 86 times | PDF : 58 times Potential of Inflammatory Biomarkers as Diagnostic Tools for Paediatric Inflammatory Multisystemic Syndrome related to SARS-CoV-2: Literature Review

Nia Maylani Hutagaol, Ivan Santiago Page : 2518-2527

PDF

: https://doi.org/10.35335/midwifery.v10i4.703
 Mi Abstract views : 96 times |
 PDF : 56 times

Rehabilitation Framework for HIV/AIDS Clients in the Public Health Field Practice of Nursing Students: A Case Study

Sukatemin, Budi Joko Santosa, Zakirullah Zakirullah, Syaifoel Hardy Page : 2528-2736

PDF

https://doi.org/10.35335/midwifery.v10i4.705
 Abstract views : 106 times | PDF : 73 times

Compliance Profile of Pulmonary Tuberculosis Patient Treatment Stage in Consuming Anti Tuberculosis Drugs (ATD) at Lubuk Buaya Health Center Padang

Rinita Amelia, Nilas Warlem , Dessy Abdullah, Satria Andhika Page : 2737-2746

PDF Contemporal interpretation in the second state of the second

Fabrication of Tannic Acid coated Polyglactin Surgical Suture to Prevent Bacterial Infection

Bakti Wahyu Saputra, Amelia Sendang Husin, F. D. Erika Setyajati, Vincentia Krisnina Prasetyo, Skolastika, Jeffry Julianus, Damiana Sapta Candrasari, Agustina Setiawati Page : 2747-2753

PDF b : https://doi.org/10.35335/midwifery.v10i4.704 M Abstract views : 109 times | PDF : 89 times

Relationship Between Sleep Quality and Incidence of Acne Vulgaris in Students of the Faculty of Medicine, Baiturrahmah University Batch of 2020

Irma Primawati, Leonny A Ningsih, Mashdarul Ma'arif Mage: 2754-2759

PDF bit https://doi.org/10.35335/midwifery.v10i4.711 bit Abstract views : 205 times | bit PDF : 213 times

Effect of Progressive Muscle Relaxation on Blood Pressure and Sexual Quality of Life in Hypertensive Patients

Faradilla Miftah Suranata, Cut Mutiya Bunsal, Helly M. Katuuk M Page : 2760-2766

Download PDF

Experiences of Violence and Treatment Of Aggression That Nurses Experience And See By Nurses In The Workplace: Literature Review

Iyus Yosep, Rohman Hikmat, Meideline Chintya, Nanda Amilia, Widya Nurwulan, Ai Mardhiyah Page : 2767-2776

PDF Contemporary Contemporary

Application of Expert System With Forward Chaining Method in Detecting Infectious Diseases in Children

Mauliza Mauliza, Mutammimul Ula, Ilham Saputra, Rosya Afdelina, Muhammad Ikhsan Page : 2777-2785

Download PDF i https://doi.org/10.35335/midwifery.v10i4.714 M Abstract views : 190 times | Download PDF : 156 times

Analysis of the image of stigma against covid-19 sufferers

🦆 Adri Idiana 📝 Page : 2786-2793

PDF b : https://doi.org/10.35335/midwifery.v10i4.718 Abstract views : 76 times | PDF : 49 times

Analysis of the Factors Affecting the Nutritional Status and Health of the Elderly During the Covid-19 Pandemic

Anita, Nurlaili Ramli Page : 2794-2801

PDF

: https://doi.org/10.35335/midwifery.v10i4.720
 Mi Abstract views : 480 times | PDF : 158 times

The Effectiveness of Nutrition Education on the Improvement of Iron Intake, Protein and Hemoglobin Levels Towards Zero Stunting At Amanah Deli Serdang Private Junior High School in 2022

Sri Lasmawanti, Maya Ardilla Siregar, Maria Haryanti Butarbutar Page : 2802-2808

PDF thtps://doi.org/10.35335/midwifery.v10i4.721 Abstract views : 83 times | PDF : 57 times

The Challenges of Early Initiation of Breastfeeding in Post Sectio Caesarea Patients

Anita, Lia Lajuna, Nurlaili Ramli
 Page : 2809-2816
 PDF
 https://doi.org/10.35335/midwifery.v10i4.722

Abstract views : 163 times | PDF : 105 times

Inhibitory Test of Dayak Onion Extract (Eleutherine palmifolia) (L) Merragainst Gram Negative and Gram Positive Bacteria

Ni Made Susilawati, Meliance Bria, Neiny P Foekh M Page : 2817-2821

PDF bittps://doi.org/10.35335/midwifery.v10i4.723 bittps://doi.org/10.35335/midwifery.v1000 bittps://doi.org/10.3535/midwifer

The Effect of Maintenance Behavior of Orthodontic User's Dental And Mouth Cleanliness with Dental Hygiene Status in SMAN 1 Darul Imarah (Darul Imarah Public High School 1) Aceh Besar Regency

Cut Ratna Keumala, Sisca Mardelita, Andriani Mage: 2822-2828

PDF bittps://doi.org/10.35335/midwifery.v10i4.724 bittps://doi.org/10.35335/midwifery.v100 bittps://doi.org/10.3535/midwifery.v100 bittps://doi.org/10.3535/midwifery.v100 bittps:/

Analysis of Factors Affecting Community View on Covid-19 Vaccination

Salmiani abdul manaf, Irnawati
 Page : 2829-2835
 PDF
 1 https://doi.org/10.35335/midwifery.v10i4.725
 Abstract views : 92 times | PDF : 36 times

Factor analysis of the incidence of ARI in Toddlers during the Covid-19 Pandemic

Kartinazahri Mage : 2836-2842

PDF bittps://doi.org/10.35335/midwifery.v10i4.727 bittps://doi.org/10.35335/midwifery.v1000 bittps://doi.org/10.3535/midwifer

Implementation of Clean and Healthy Lifestyle Behavior with Children's Nutritional Status the During Covid-19 Pandemic

Cut Yuniwati, Fithriany Page : 2843-2850

PDF i https://doi.org/10.35335/midwifery.v10i4.726 Abstract views : 146 times | PDF : 112 times

Analysis of the Impact of Covid-19 on Pregnant Women on Preparation for Childbirth

Irnawati, Salmiani Abdul Manaf Page : 2851-2857

PDF bit https://doi.org/10.35335/midwifery.v10i4.728 bit Abstract views : 163 times | bit PDF : 69 times Determinants of Stunting in Children Under Five in Rural Areas

Eva Purwita
Page : 2858-2865
PDF
: https://doi.org/10.35335/midwifery.v10i4.729
Abstract views : 276 times | PDF : 102 times

Analysis of Immunization Services During The Covid-19 Pandemic

Fithriany, Cut Yuniwati
 Page : 2866-2872
 PDF
 : https://doi.org/10.35335/midwifery.v10i4.730
 Abstract views : 158 times | PDF : 88 times

Family Planning Counseling Capacity in Improving Family Knowledge During the Covid-19 Pandemic

Putri Santy
Page : 2873-2880

PDF : https://doi.org/10.35335/midwifery.v10i4.731 Abstract views : 86 times | PDF : 44 times

Long working relationship with Nurses' Level Of Nowledge About Diabetes Mellitus Management In Hospital St. Elisabeth Semarang

象 Maria Karolina Selano, Rina Dwi Pangesti, Freaty Ayu Agustina, Laurentius Denis Satria 📝 Page : 2881-2886

Download PDF

Analysis of the impact of the Covid-19 pandemic on people's mental health

Nurlaili Ramli; Anita Anita Page : 2887-2893

PDF Contemporal interpretation in the second state of the second

The relationship of the use of mask with the event of acute respiratory tract infection (ARI) in Rice Miller workers in Peukan Bada District, Aceh Besar

Nasrullah, Sofia, Kartini Page : 2894-2899

PDF Contemporal interpretation in the second state of the second

Literature Review the Relationship of Family Environment with Smoking Behavior in Adolescents

Ghozali Ghozali, Hanifah Tanjung, Rusni Masnina Page : 2911-2920

PDF

M Abstract views : 112 times | PDF : 86 times

The Relationship Between Cigarette Smoke Exposure With Acute Respiratory Infections (ARI) And Stunting In Bima 2022

Nurul Qamarya, Zahratul Hayati M Page : 2921-2927

PDF

https://doi.org/10.35335/midwifery.v10i4.732
 Abstract views : 131 times | BPDF : 86 times

Knowledge With The Attitude Of Acceptance Of The Covid-19 Vaccine In Tuminting Subject, Manado City

象 Faradilla Miftah Suranata, Rahmat Hidayat Djalil, Julfiani Sampurna 📝 Page : 2928-2934

PDF Contemporal interpretation in the second state of the second

Premarital Sexual Behavior of Boarding Students in Makassar City

Andi Chaerul, Yusriani, Andi Nurlinda M Page : 2935-2941

PDF

https://doi.org/10.35335/midwifery.v10i4.738
 Abstract views : 258 times | PDF : 103 times

Relationship of Knowledge and Attitude with Mother's Actions on Stunting Incidents in Wali Ate Village

Karolus Wulla Rato Page : 2942-2947

PDF Download

 : https://doi.org/10.35335/midwifery.v10i4.698

 Mi Abstract views : 166 times | PDF Download : 109 times

Knowledge Difference Between Before and After Gonorrhea Counseling through Audiovisual Media on the Faculty of Medicine Students, Tarumanagara University Batch 2021

Luthfiani Sarah Sophia, Irene Dorthy Santoso Page : 2948-2953

PDF

: https://doi.org/10.35335/midwifery.v10i4.742
 Abstract views : 122 times | PDF : 68 times

Efficacy of Hydrotherapy Soak Feet in Lowering Blood Pressure of Hypertension Sufferers in Dauhwaru Village, Jembrana

I Putu Sudiartawan, I Made Dwi Mertha Adnyana Page : 2954-2962

PDF

thtps://doi.org/10.35335/midwifery.v10i4.715
 Abstract views : 326 times | PDF : 214 times

Priapism in Chronic Myeloid Leukemia: A Rare Case

Rifqi Nuriy, Ayu S. Iswandari, Dukut Sarwandi H.A. Page : 2963-2971

PDF

: https://doi.org/10.35335/midwifery.v10i4.678
 Mi Abstract views : 81 times | PDF : 52 times

Inhibitory test of Dayak onion extract (eleutherine palmifolia) (L) merragainst gram negative and gram positive bacteria

Ni Made Susilawati, Meliance Bria, Neiny P Foekh Page : 2972-2976

PDF Contemporal interpretation inte

Overview of workers hand skin hydration levels on tofu maker at the tofu factory in Matraman district, East Jakarta

Fitri Rahmawati, Linda Julianti Wijayadi, Sari Mariyati Dewi N M Page : 2977-2984

PDF : https://doi.org/10.35335/midwifery.v10i4.746 Abstract views : 128 times | PDF : 64 times

Correlation of anemia in pregnancy and low birth weight in public health centers

象 Rony Sibuea, Sarma Nursani Lumban Raja 📝 Page : 2985-2991

PDF Contemporal interpretation in the second state of the second

Factors Affecting the Success of Treatment in Drug Sensitive Pulmonary Tuberculosis Patients at the Rimba Jaya Health Center Merauke Regency

Frengky Apay, Rohmani Rohmani Mage : 2992-3000

PDF Contemporal interpretation in the second state of the second The Relationship of Risk Factors With The Incidence Of Postoperative Nausea And Vomiting In Patients who underwent surgery with General Anesthesia at Rsi Siti Rahmah

象 Anita Darmayanti, Oka Yughana, Bun Yurizali 📝 Page : 3001-3010

PDF

https://doi.org/10.35335/midwifery.v10i4.739
 Abstract views : 121 times | BPDF : 77 times

Prevalence And Intensity Of Ascaris lumbricoides Infection In Children Of Oemasi Village, Kupang District, East Nusa Tenggara Province, Indonesia

Meliance Bria, Novian Agni Yudhaswara, Ni Made Susilawati M Page : 3011-3016

PDF C : https://doi.org/10.35335/midwifery.v10i4.749 M Abstract views : 117 times | PDF : 103 times

The Effect of Social Support on Clean and Healthy Life Behavior in Fishing Communities in Karampuang Village, Mamuju Regency

Sri Ayuningsih, Yusriani, Fairus Prihatin Idris M Page : 3017-3024

PDF Contemporal interpretation in the second state of the second

Description Of Mother's Knowledge In Prevention And Acceleration Of Stunting Reduction In Mandiri Midwife Practices, Medan Helvetia District In 2022

Nazri Nasution Page : 3025-3030

PDF : https://doi.org/10.35335/midwifery.v10i4.754

🛍 Abstract views : 94 times | 🔤 PDF : 51 times

Relationship of factors in determination of work fatigue in bengkalis district health service employees in the time of covid-19 pandemic

Danil Sahputra, Endang Purnawati Rahayu, Mitra, Oktavia Dewi, Herniwanti Page : 3031-3035

PDF

i https://doi.org/10.35335/midwifery.v10i4.755
 Abstract views : 75 times | PDF : 60 times

Knowledge of Dental Brushing From the Status of Dental Hygiene of Students of 1 Public Elementary School Banda Dua Pidie Jaya District

Intan Liana, Reca Page : 3036-3040

PDF Contemporary Determinant Factors Related to the Successful Smooth Delivery Process in the West Aceh District

Yushida Yushida, Cut Nurhasanah, Nurdahliana Page : 3041-3046

PDF Contemporal interpretation in the second state of the second

Relationship between Chronic Energy Deficiency and Compliance with Taking Fe Tablets with the Incidence of Anemia in Pregnant Women at Kuala Simpang City Health Center Aceh Tamiang

Lina, Arbaiyah, Meliani Sukmadewi Harahap Page : 3047-3052

Management of Acute Hypertensive Emergencies on CKD

Riki Nova, Dessy Abdullah Page : 3053-3059

PDF i https://doi.org/10.35335/midwifery.v10i4.747 M Abstract views : 415 times | PDF : 176 times

Anxiety Levels In Menopausal Women

Ima Sukmawati, Yuyun Rahayu, Elis Noviati Page : 3060-3064

PDF : https://doi.org/10.35335/midwifery.v10i4.707 Abstract views : 89 times | PDF : 81 times

The Relationship Of Mothering Pattern With The Social Development Of Mentally Retarded Children

yuyun rahayu, Ima Sukmawati, Suhanda, D.Yunita Nafisah Faoziah Page : 3065-3068

PDF Contract views : 53 times | Contract views : 53 times | Contract views : 53 times | Contract views : 51 times | Contract views : 53 times

The Relationship of Adolescent Knowledge About The Three Basic Threats Of Adolescent Reproductive Health (Triad Krr) With Adolescent Attitudes To Reproductive Health In Smk Negeri 1 Tuhemberua

Jernihati Krisniat Harefa Page : 3069-3073

PDF : https://doi.org/10.35335/midwifery.v10i4.761 Abstract views : 70 times | PDF : 60 times The effectiveness of health promotion using social media on adolescent knowledge about Covid-19 in the work area of Health Center Batu Panjang, Rupat District, Bengkalis Regency

象 Nanda Tri Cahtiya, Hastuti Marlina, Novita Rany 📝 Page : 2900-2910

PDF Contemporal interpretation in the second state of the second

Factors Affecting Behavior for Preventing Covid-19 Infection When Working on Employees During A Pandemi at Puskesmas Balai Agung, Sekayu District in 2021

Rizka Muliani, Ririn Noviyanti Putri, Heru Listiono, Sutriyati, Nurrahmah Romadhona Page : 3074-3081

PDF b : https://doi.org/10.35335/midwifery.v10i4.598 Abstract views : 54 times | PDF : 40 times

The Phenomenon of Refusing Covid-19 Booster Vaccination in Muara Sentosa Subdistrict, Sei Tualang Raso District Tanjungbalai City In 2022

Nurul Lidya Ayu, Otniel Ketaren, Evawani Martalena Silitonga Page : 3082-3090

PDF Contemporal interpretation in the second state of the second

Relationship Between Maternal Age, Education, and Parity in The Incidence of Spontaneous Abortion in Bali

I Made Wira Supanji, Anak Agung Raka Budayasa, Pande Ayu Naya Kasih Permatananda, Putu Nita Cahyawati, Anak Agung Sri Agung Aryastut
Page : 3091-3095

PDF bit https://doi.org/10.35335/midwifery.v10i4.710 bit Abstract views : 104 times | bit PDF : 71 times

The Role of Herbal Plant Essential Oils in the Treatment of Acne Vulgaris

Kelvin, Linda Julianti Wijayadi Page : 3096-3103

PDF Contemporal interpretation in the second state of the second

The Role of Essential Oils on Improving Elderly Skin Hydration

Linda Julianti Wijayadi, Kelvin Kelvin M Page : 3104-3111

PDF

thttps://doi.org/10.35335/midwifery.v10i4.769
Abstract views : 267 times | PDF : 143 times

Nasa-TLX and Sofi Methods as a Tool for Measuring Students' Mental Load and Failure During Online Learning Basic Neurology Physiotherapy Courses

臭 Ida Aryani Pasaribu, Yeni Vera, Sulaiman, Ruri Aditya Sari M Page : 3112-3121

PDF Download 🚯 : https://doi.org/10.35335/midwifery.v10i4.774 Abstract views : 91 times | PDF Download : 110 times

The Effect Of Giving Carrot Juice On Menstrual Pain In Young Women

臭 Aida Fitria, Marisa Marisa M Page : 3122-3126 PDF t https://doi.org/10.35335/midwifery.v10i4.768 Abstract views : 313 times | BPDF : 163 times

Best Practices for Accelerating Healthy Environmental Policy from Organisation and Government Institutions in Indonesia

ይ Tamaulina Sembiring, Irma Rachmawati Maruf, B.M.A.S. Anaconda Bangkara, Kholis Ernawati , Endang Fatmawati M Page : 3127- 3136

PDF 10 : https://doi.org/10.35335/midwifery.v10i4.767 Abstract views : 94 times | BPDF : 52 times

The Role of Village Midwives in Reducing Stunting Rates in Children Under Two Years Old (BADUTA)

臭 Shinta Oktarina, Idawati Idawati, Yuliana Yuliana M Page : 3137-3142

PDF thttps://doi.org/10.35335/midwifery.v10i4.777 Abstract views : 63 times | PDF : 51 times

The Effect Of Cupping On Blood Pressure In Hypertension

臭 Santoso Budi Rohayu , Ketut Wahyudi, Sampari Gerbab IHA M Page : 3143-3148

PDF thttps://doi.org/10.35335/midwifery.v10i4.778 M Abstract views : 173 times | BPDF : 133 times

Relationship of Nutritional Status and Development in Toddlers Aged 1-5 Years

臭 Niken Grah Prihartanti, Mudhawaroh, Septi Fitrah Ningtyas M Page : 3149-3155

PDF thttps://doi.org/10.35335/midwifery.v10i4.753 Abstract views : 83 times | PDF : 59 times

Mother's Behavior and Knowledge in Preventing Stunting Through Breastfeeding Complementary Feeding to Children Aged 6-24 Months

Sudarianti, Rini Susanti, Ruri Aditya Sari Page : 3156-3163

PDF bit https://doi.org/10.35335/midwifery.v10i4.782 bit Abstract views : 86 times | bit PDF : 96 times

Sociodemography, Knowledge of Maternal Circumcision and Its Correlation to the Implementation of Baby Girl Circumcision in Securai Selatan Village, Babalan District, Langkat Regency

Rini Susanti, Sudarianti, Alfi Laili, Ruri Aditya Sari Mage: 3164-3170

PDF Contemporal interpretation inte

Covid Task Force Performance Reviewed from Perceived Stigma and Knowledge about Covid-19 with Infectious Anxiety as Intervening Variables

Sukma Yunita, Mestika Rija Helti, Sumiatik, Ruri Aditya Sari M Page : 3171-3179

PDF : https://doi.org/10.35335/midwifery.v10i4.780 Abstract views : 49 times | pPDF : 40 times

Comparison of Hemoglobin Levels of Nasopharin Cancer Patients Before and After Radiation in Radiotherapy Installations RSUD Prof. Dr. Margono Soekardjo

Ermi Susi Yanti, Tantri Analisawati Sudarsono, Arif Mulyanto, Linda Wijayanti
 Page : 3180-3183
 PDF
 https://doi.org/10.35335/midwifery.v10i4.701

Abstract views : 44 times | PDF : 37 times

Description of Patient Satisfaction Levels in the Aspects of Facilities, Empathy, and Assurance for Dental Health Services at the Bandung Dental Health Clinic during the Adaptation of New Habits in the Era of the Covid-19 Pandemic

Dewi Sodja Laela, Anggina Sekar Fatharani, Nurul Fatikhah, Sekar Restuning M Page : 3184-3191

PDF Contemporal interpretation inte

Correlation of Knowledge and Compliance of Implementing 5m Health Protocols in the Post-Covid-19 Pandemic Period

Dahlia Arief Rantauni, Ellyzabeth Sukmawati Page : 3192-3196

PDF Contemporal interpretation in the second state of the second

Cauda Equina Syndrome

EI-Varel Baby Berlianzsa, Rosha Aulia Fadhilah Hafidz M Page : 3197-3202

PDF

https://doi.org/10.35335/midwifery.v10i4.790
 Abstract views : 147 times | PDF : 51 times

The Effect Of Massage Effleurage Therapy Towards Reduction Of Mental Pain In Adolescent Women At Sma Negeri 09 Medan In 2022

Jitasari Tarigan Sibero, Indah Dewi Sari, Reni Asmita Mage: 3203-3212

PDF : https://doi.org/10.35335/midwifery.v10i4.791 Abstract views : 154 times | PDF : 102 times

Utilization of Melon Skin Waste (Cucumis Melo L.) in Syrup Preparations as an Immunostimulant to Prevent Covid-19

Andi Nur Ilmi Adriana, Firmansyah Firmansyah, Muhammad Taufiq Duppa Page : 3213-3218

PDF bit https://doi.org/10.35335/midwifery.v10i4.784 bit Abstract views : 116 times | bit PDF : 83 times

The Effect of Exposure to Ultraviolet Rays of the Sun on Cataract Occurrence in Residents in Coastal Areas

I Gede Bramantya Surya Mahendra, Marie Yuni Andari Mage: 3219-3224

PDF

https://doi.org/10.35335/midwifery.v10i4.775
 Abstract views : 167 times | PDF : 99 times

Analysis of Factors Affecting Public Visit (KF) and Neonatus (KN) During the Covid-19 Pandemic in Area Martubung Health Center in 2021

Sartika Nasution, Sarma Lumban Raja, Rina Hanum Mage : 3225-3235

PDF : https://doi.org/10.35335/midwifery.v10i4.792 Abstract views : 30 times | PDF : 25 times

Analysis of Factors Influencing the Behavior of Mothers in Choosing Childbirth Helpers During the Covid-19 Pandemic in the Region Work of the Gunung Tua Health Center in 2021

象 Povi Anggraini Harahap, Razia Begum Suroyo, Mangatas Silaen 11/27 Page : 3236-3245

PDF Contemporary Factors Affecting Exclusive Breast Milk in Work Area of South Kluet Health Center in 2022

& Kiki Asrifa Dinen, Razia Begum Suroyo, Sarma Lumban Raja Mage : 3246-3255

PDF

: https://doi.org/10.35335/midwifery.v10i4.794
 Mi Abstract views : 42 times | PDF : 41 times

The Effect of Ginger Booking and the Aroma of Lemon Inhalation Therapy Towards Gerdadian Emesis Gravidarum for Pregnant Mothers in Trimester I

Eva Lesrina Asrin Siregar, Zuraidah Nasution, Sarma Lumbanraja M Page : 3256-3266

PDF Contemporal interaction i

Analysis of Maternal Care During the Public Time in Padang Sari Village, High District Raja Asahan District

Yusnani Dewi Manurung, Thomson P Nadapdap, Razia Begum Suroyo Page : 3267-3278

PDF

: https://doi.org/10.35335/midwifery.v10i4.797
 im Abstract views : 30 times | PDF : 34 times

Implementation of the Exclusive Breastfeeding Program in Pujud Health Center, Rokan Hilir Regency

Samina Rayanti Matondang, Irwan Muryanto, H. Ahmad Hanafi M Page : 3279-3287

PDF bit https://doi.org/10.35335/midwifery.v10i4.800 bit Abstract views : 64 times | bit PDF : 35 times

Determinants of Behavior and Proportion of Exclusive Breastfeeding at Tapung Health Center, Kampar Regency

Iin Rodearni, Zulfan Saam, Kamali Zaman, Jasrida Yunita, Novita Rany Page : 3288-3294

PDF bit https://doi.org/10.35335/midwifery.v10i4.801 bit Abstract views : 88 times | bit PDF : 46 times

Analysis of the Implementation of Total Quality Management (Tqm) on Nurse Performance at Mother and Child Hospital (Rsia) Eria Bunda Pekanbaru

Nurafni Marissa, Budi Hartono, Lita, Doni Jepisah, Arnawilis Page : 3295-3301

PDF C: https://doi.org/10.35335/midwifery.v10i4.799 Abstract views : 196 times | PDF : 79 times Factors Related to the Implementation of the Covid-19 Vaccine in the Indonesian Army in District-City, Riau Province

Palesvitri Yalesvitri, Ennimay Ennimay, Aldiga Rienarti Abidin, Budi Hartono, Hetty Ismainar Page : 3302-3309

PDF

https://doi.org/10.35335/midwifery.v10i4.804
 Abstract views : 68 times | PDF : 35 times

The Relationship between Basic Immunization Services and Mother Baby Satisfaction at the Puskesmas Kwala Bekala Medan Johor in 2022

Parningotan Simanjuntak, Nopalina Damanik M Page : 3010-3313

PDF bittps://doi.org/10.35335/midwifery.v10i4.812 bittps://doi.org/10.35335/midwifery.v100 bittps

Giving Aloe Vera Gel (Aloe Vera) As Topical In Burns Treatment

Iisdayanti simanjuntak
 Page : 3314-3318
 PDF
 : https://doi.org/10.35335/midwifery.v10i4.826
 Abstract views : 122 times | PDF : 111 times

Factors Affecting Women of Age Fertile in Choosing Injectable Contraceptives in the Village of Bangun Rejo Kec. Tanjung Morawa Deli Serdang Regency In 2022

Ribur Sinaga Page : 3319-2325

PDF : https://doi.org/10.35335/midwifery.v10i4.824 Abstract views : 73 times | PDF : 85 times

Relationship of Husband Support, Culture, and Sexual Comfort with Mother's Interest in Using IUD at Tanah Alas District Public Health Southeast Aceh

象 Siska Suci Triana Ginting, Lidya Natalia Sinuhaji , Juliana Munthe, Oktaria Kristin, Cyndi Pane 🗹 Page : 3326-3333

PDF : https://doi.org/10.35335/midwifery.v10i4.818 Abstract views : 149 times | PDF : 121 times

COVID-19 Health Protocol Training on the Competence of Village Community Leaders

象 Anatolia Karmelita Doondori, Pius Kopong Tokan, Irwan Budiana 📝 Page : 3334-3343

PDF

Abstract views : 32 times | BPDF : 27 times

Relationship of Knowledge, Attitudes and Behavior of Parents About Stimulation with Two

Fetti Seriati Situmorang, Juliani, Ernamari, Ira Agustina Page : 3334-3338

PDF b : https://doi.org/10.35335/midwifery.v10i4.819 Abstract views : 83 times | PDF : 63 times

Benefits of Red Ginger for Obstetrics

Mesrida Simarmata Mage : 3339-3343

PDF bittps://doi.org/10.35335/midwifery.v10i4.810 bittps://doi.org/10.35335/midwifery.v100 bittps://doi.000 bittps://doi.000 bittps://doi.000 bittps://doi.000 bittps://doi.000 bittps://doi.000 bittps://doi.000 bittps

Factors Affecting Mother's Behavior in Doing Infant Massage Independently in the Dian Maternal Clinic in Jakarta Barat In 2022

Ericha Merammis BR Sembiring, Basaria Manurung M Page : 3344-2347

PDF Contemporal interpretation in the second state of the second

The Effect of Primigravida Mother's Perineal Massage on Perineal Rupture in Tutun Sehati Pratama Clinic, Tanjung Morawa District Deli Serdang Year 2021

Asnita Sinaga M Page : 3348-3351

PDF Contemporal interpretation in the second state of the second

Factors Related To The Compliance Of Pregnant Mothers In Consuming Fe Tablets At Bpm Vera Year 2021

Diah Pitaloka Tarigan, Basaria Manurung Mage : 3352-3354

PDF b : https://doi.org/10.35335/midwifery.v10i4.808 Abstract views : 42 times | PDF : 52 times

The Effect of Giving Ambon Banana to Increasing Haemoglobin Levels in Takengon Adolescence in the Junior High School 42 in 2022

Kismiasih Adethia, Sukarni
 Page : 3355-3358
 PDF
 https://doi.org/10.35335/midwifery.v10i4.809
 Abstract views : 57 times | PDF : 61 times

The Relationship between the Clean and Healty Living Behavior Implementation and Stunting Prevalence Amid The Covid-19 Pandemic

Purbaety Nurbaety, Tri Yubiah, Nurlaili Zulkaidah Page : 3359-3364

PDF

https://doi.org/10.35335/midwifery.v10i4.803
 Abstract views : 75 times | PDF : 43 times

The Effect of Health Education on Childbirth on Third Trimester Primigravida Anxiety in Public Health Center Matiti in Humbang Hasundutan District 2022

Retno Wahyuni, Udur Hotlan Maria Sianturi Page : 3365-3368

PDF

https://doi.org/10.35335/midwifery.v10i4.831
 Abstract views : 57 times | PDF : 43 times

The Effect of Acupressur Therapy on Hyperemesis Gravidarum in Trimester I Pregnant Woman Aceh 2022

Nur Azizah, Rusmei Yanti Gultom Page : 3369-3371

PDF b : https://doi.org/10.35335/midwifery.v10i4.834 M Abstract views : 53 times | B PDF : 80 times

The Effect of Health Belief Model on Prevention Chronic Desease DM in Elderly at Bangun Rejo Village Tanjung Morawa District in 2022

Rosmega Pakpahan; Zulkarnain Batubara; Petra Dian Sari Zega; Siti Nurfadhilah M Page : 3372-3378

PDF https://doi.org/10.35335/midwifery.v10i4.816

🛍 Abstract views : 63 times | 🌄PDF : 87 times

The Effect of Implementation of Pregnant Women's Class on Knowledge and Attitude of Pregnant Women about Preparation for Delivery in Puskesmas Kabanjahe, Karo Regency in 2022

Imarina Tarigan
 Page : 3379-3383
 PDF
 : https://doi.org/10.35335/midwifery.v10i4.817
 Abstract views : 32 times | PDF : 52 times

The Relationship of the use of Injected Hormonal Contraception with the Event of White about KB Accepters in The Working Area of the Singosari Inpatient Health Center, Pematang Siantar City, In 2022

Masta Tambun
 Page : 3384-3390
 PDF
 : https://doi.org/10.35335/midwifery.v10i4.836
 Abstract views : 58 times | PDF : 61 times

The Effect of Pregnancy Gymnastics on Reducing Pain on The Backs of Pregnant Women in the Practice of Independent Midwives Sri Ratu Alam Batam City in 2022

Lisa Putri Utami Damanik, Sri Ratu Alam M Page : 3391-3394

PDF b : https://doi.org/10.35335/midwifery.v10i4.828 Abstract views : 46 times | PDF : 72 times

Relationship Knowledge and Attitude of Mom and Family Support in Doing Baby Massage Independently in Puskesmas District Onowaembo Help Gunungsitoli In 2021

magdalena Barus, Mediana Sembiring Page : 3395-3401

PDF bittps://doi.org/10.35335/midwifery.v10i4.827 bittps://doi.org/10.35335/midwifery.v100 bittps://doi.org/10.3535/midwifery.v100 bittps://doi.org/10.3535/midwifery.v100 bittps:/

Factors Related to Compliance of Mothers Consuming Kb Pills in Dameria Midwife Clinic Sembiring Karang Rejo Stabat Year 2021

Deby Cintya Yun Page : 3402-3409

PDF Contemporal interpretation in the second state of the second

The Effect of Health Education on reducing blood pressure of hypertensive patients at USU Hospital Medan in 2022

Indra Agussamad Page : 3410-3414

PDF Contemporal interpretation in the second state of the second

Kerokan and Benefits Provided In Maintaining Health Level During Pandemic

Alfredo Aldo Eka Putra Tjundawan, Onny Priskila, Mellisa, Ferdinand, Suryawan Ang, Agus Sugiono Page : 3415-3421

PDF : https://doi.org/10.35335/midwifery.v10i4.806 Abstract views : 101 times | PDF : 73 times

The Relationship of Covid-19 Pandemic Anxiety with Ante-Natal Care Examination at Sei Semayang Puskesmas, Sunggal District, Deli Serdang Regency

😓 Ninsah Putri Br Sembiring, Juliana Munthe, Henny Rista, Laria Simamora, Srilina Br Pinem, Yanti Farida Saragih

M Page : 3422-3425

PDF

https://doi.org/10.35335/midwifery.v10i4.829
 Abstract views : 56 times | PDF : 64 times

Factors Affecting Mother's Behavior in Doing Infant Massage Independently in the Dian Maternal Clinic in Jakarta Barat in 2022

Ericha Merammis BR Sembiring, Basaria Manurung, Dewi Purba, Nurmala Sari Dewi, Elfiana Mage: 3426-3428

PDF

thttps://doi.org/10.35335/midwifery.v10i4.848

Abstract views : 36 times | PDF : 40 times

Factors Affecting the Event of Anemia in Pregnant Women Trimester III in Puskesmas Namorambe Districts Deli Serdang Year 2022

Nurainun, Basaria Manurung, Kurniani, Arni, Surati Page : 3429-3432

PDF C: https://doi.org/10.35335/midwifery.v10i4.845 Abstract views : 35 times | PDF : 41 times

Influence Of Infant Massage On Increase In Baby Weight In Infants Aged 2-6 Months At The Midwife Clinic Halimah Lubis Districts Deli Serdang Year 2022

象 Siti Embun Hasibuan, Basaria Manurung, Maria Ulfah, Rani Sari, Sutra Warni 📝 Page : 3433-3435

PDF Constraints://doi.org/10.35335/midwifery.v10i4.846 Abstract views : 53 times | PDF : 49 times

Relationship Of Mother's Knowledge And Attitude With Supplementary Feeding (MP-ASI) In Children Aged 6-24 Months In Village Namo Mbelin Districts Deli Serdang Year 2022

Asri Mayanti, Diah Pitaloka, Lesri Tampubolon, Rosmanidar, Shinta Devi M Page : 3436-3439

PDF Contemporal interpretation in the second state of the second

Factors Related to the Satisfaction Level of Pregnant Mothers in Antanetal Care Services Hutabayu Puskesmas, Simalungun Regency in 2022

Siti Nurmawan M Page : 3440-3447

PDF Contemporary Contemporary PDF PDF: 58 times | Contemporary PDF: 58 times

The Effect of Pregnant Women's Class on Primigravida Mother's Anxiety in Pegajahan Puskesmas, Pegajahan District, Serdang Bedagai Regency in 2022

Isyos Sari Sembiring, Halimatun Sakdiyah, Pristiwanti , Susanti , Arifah, Surya Dani M Page : 3448-3453

PDF Contemporal interpretation in the second state of the second The Effect of "Aware" Health Education on Knowledge of Early Detection of Breast Cancer in Adolescent Women in Health Center Area Lut Bargain in 2020

I rosmani sinaga
Page : 3454-3457

PDF bittps://doi.org/10.35335/midwifery.v10i4.844 bittps://doi.org/10.35335/midwifery.v100 bittps://doi.000 bittps://doi.000 bittps://doi.000 bittps://doi.000 bittps://doi.000 bittps://doi.000 bittps://doi.000 bittps

The Effectiveness of Neck Massage to Increasing the Total of Postpartum Breast milk on the First until Third Days at PMB Medan City

Herna Rinayanti Manurung Page : 3458-3464

PDF bittps://doi.org/10.35335/midwifery.v10i4.852 bittps://doi.org/10.35335/midwifery.v100 bittps://doi.000 bittps://doi.000 bittps://doi.000 bittps://doi.000 bittps://doi.000 bittps://doi.000 bittps://doi.000 bittps

Relationship of Knowledge of Breastfeeding Mothers with Attitude to the Provision of the Covid-19 Vaccine at Puskesmas Bintang Aceh Central Regency Year 2022

Febriana Sari Sari, Fitriyani S Yoga
 Page : 3465-3468
 PDF
 1 https://doi.org/10.35335/midwifery.v10i4.855
 Abstract views : 46 times | PDF : 44 times

Factors that Influence Low Mother Visits to Posyandu During the Covid-19 Pandemic in Nagasaribu Village V Districts Lintongnihuta Districts Humbang Hasundutan Year 2022

Fetti Lusianna Simanjuntak, Astaria Br Ginting, Desi Asmarani , Siti Patimah Br Ginting, Ade Rachmat Yudiyanto

Mage : 3469-3473

PDF : https://doi.org/10.35335/midwifery.v10i4.854 Abstract views : 35 times | PDF : 91 times

Understanding the Implementation of the Health Personnel Professional Competency Test; A Juridical Review

Gunawan Widjaja
 Page : 3474-3484
 PDF
 : https://doi.org/10.35335/midwifery.v10i4.867
 Abstract views : 62 times | PDF : 47 times
 Stroke, Post Stroke, Drinking Pills Ängöng Niúhuangwan?

Alfredo Aldo Eka Putra Tjundawan, Onny Priskila, Mellisa, Ferdinand, Suryawan Ang, Agus Sugiono Page : 3485-3495

PDF Contemporal interpretation in the second state of the second

Analysis of the Effect of Age on Women's Reproductive Health Using the Mixed Method

Nila Hayati, Kamalia Ainun, Niasty Lazmy Zaen, Rizaldy Khair Page : 3496-3501

PDF

i https://doi.org/10.35335/midwifery.v10i4.837
Abstract views : 70 times | PDF : 45 times

Mapping of Antenatal Care Visits for Pregnant Women on the risk of pregnancy and prevention of childbirth complications

Purnama Handayani, Suhartini, Iswandi Idris Page : 3502-3511

PDF

i https://doi.org/10.35335/midwifery.v10i4.859
i Abstract views : 88 times | PDF : 46 times

Mobile Web Application Development in Administration Services in Nursing Department Laboratory

Ivony FN Putriningtyas, Lourdes L Situmorang Page : 3512-3519

PDF bit https://doi.org/10.35335/midwifery.v10i4.842 bit Abstract views : 78 times | bit PDF : 69 times

Overview of Services and Characteristics of Pregnant Mothers in the Era of the Covid-19 Pandemic in Bpm Pera Clinic in 2022

P. Oktaviance Oktaviance, Risda Mariana Manik, Bernadetta Ambarita, Charolina Moriana Sipakkar, Charolina Moriana Sipakkar
Moriana Sipakkar
Page : 3520-3523

PDF : https://doi.org/10.35335/midwifery.v10i4.785 Abstract views : 47 times | PDF : 48 times

The influence of giving varied food menu on increasing toddler weight in paud harapan the nation of Labuhan Batu Utara District year 2022

Herna Rinayanti Manurung Mage : 3524-3528

PDF

: https://doi.org/10.35335/midwifery.v10i4.946
 Mi Abstract views : 18 times | PDF : 12 times

The effect of spiritual emotional freedom technique (seft) therapy on sleep quality in elderly in tebes lues village, bies district, Central Aceh district year 2022

Rosmani Sinaga
 Page : 3529-2536
 PDF
 : https://doi.org/10.35335/midwifery.v10i4.995
 Abstract views : 32 times | PDF : 14 times

The role of the midwife as an implementer in handling risk 4T in Puskesmas Basah Rice, Pangkalan Susu subdistrict, Langkat district in 2021

Siti Nurmawan Sinaga Page : 3537-3542

PDF bit https://doi.org/10.35335/midwifery.v10i6.991 bit Abstract views : 13 times | bit PDF : 9 times

The relationship of husband's knowledge and attitude to male operating method contraception participation at Ujung Padang health center, Simalungun district

Beta Hanindiya, Nurasima Kurniati Damanik
 Page : 3543-3547

https://doi.org/10.35335/midwifery.v10i4.968
 Abstract views : 28 times | PDF : 4 times

Using rambutan leaves (nephelium lappaceum l.) as hair done in hair dye preparations

Dill Sastia Mara, Doni Saputra Pasaribu Page : 3548-3551

PDF Contemporal interpretation in the second state of the second

Factors affecting mothers who have babies in breastfeeding at Tuan Rondahaim General Hospital, Simalungun Regency

Henry Kurniawan, Sekar Pembayun Page : 3552-3556

PDF

thtps://doi.org/10.35335/midwifery.v10i4.970
 Abstract views : 11 times | BPDF : 5 times

Factors affecting the non-ownership of later in the family in Asuhan Kelahan Siantar Timur Pematangsiantar

Ismi Noer Fadilah, Putri Permata Sari Page : 3557-3560

PDF

https://doi.org/10.35335/midwifery.v10i4.974
 Abstract views : 10 times | PDF : 4 times

Antibacterial activity test of yen thuo leaf (leeaindica merr) ethanol extract on staphylococcus epdermidis bacteria and its cream production

Muhartri Sanjaya, Nur Cinta Suci Fairu
 Page : 3561-3564
 PDF
 : https://doi.org/10.35335/midwifery.v10i4.975
 Abstract views : 12 times | PDF : 7 times

The relationship of feeding complementary food for breast milk (mp asi) to children aged 0-24 months with the incidence of diarrhea in the work area of Pematang Raya Puskesmas, Simalungun district

Mustarduddin, Almazhia Mahliza Page : 3565-3568

PDF Contemporal interpretation in the second state of the second

Description of the covid-19 pandemic on community income in Tomuan Dolok village, Simalungun district

Nurmala Dewi Ria Lestari, Jumadiah Wardati, Tresia Melianna Simanjuntak, Novitas Sinaga Page : 3569-3572

PDF : https://doi.org/10.35335/midwifery.v10i4.978

M Abstract views : 21 times | PDF : 8 times

Contents lists available at IOCS

Science Midwifery

journal homepage: www.midwifery.iocspublisher.org

The Role of Essential Oils on Improving Elderly Skin Hydration

Linda Julianti Wijayadi¹, Kelvin²

¹Department of DermatoVenereology, Faculty of Medicine, Tarumanagara University, Jakarta, Indonesia ²Faculty of Medicine, Tarumanagara University, Jakarta, Indonesia

ARTICLEINFO

ABSTRACT

Article history: Received Aug 31, 2022 Revised Sept 07, 2022

Accepted Sept 28, 2022

Keywords:

Elderly Essential Oils Skin Hydration Skin hydration has an important role in various diseases of the elderly. Skin hydration is determined by two factors, namely the ability of the stratum corneum (SC) to retain water due to natural moisturizing factors and the barrier function of the intercellular lipid lamellar structure and tight junctions. Several parameters are usually used for skin hydration, such as surface water content (SWC) and transepidermal water loss (TEWL). With age, several changes in the skin affect hydration, including changes in the cellular and intercellular lipid matrix, skin pH, SC protease enzymes, decreased sebaceous and sweat gland activity, and decreased estrogen levels in women. Therefore, a moisturizer is needed to minimize the unwanted effects of some of these changes. Selection of the type of moisturizer is very important for the elderly, especially moisturizers with antiseptic, antibacterial, and antioxidant effects are highly recommended. The ability of essential oils as components of moisturizers has been proven in various studies. Essential oils can improve the function of the epidermal barrier and help prevent transepidermal water loss. Therefore, this literature review discusses the role of various essential oils, namely green tea oils (Camellia sinensis or Camellia assamica), virgin coconut oils (Cocos nucifera L.), evening primrose oils (Oenothera paradoxa), grape seed oils (Vitis vinifera L.).), rosemary oils (Rosmarinus officinalis L.), immortelle oils (Helichrysum italicum), and cannabis seeds oils (Cannabis sativa L.) on improving skin hydration in the elderly.

This is an open access article under the CC BY-NC license.



Corresponding Author:

Linda Julianti Wijayadi, Department of DermatoVenereology, Tarumanagara University, 5 Sawo Street, Central Jakarta, 10350, Indonesia, Email: lindajuliantiwijayadi@gmail.com

INTRODUCTION

With age, many changes occur in the human body, especially in the skin. The skin is the largest organ in humans and in general has three layers that work individually and collectively to protect all internal tissues and vital organs from the daily environment. The skin also plays an important role in controlling hydration and regulating body temperature (Kaniuk et al., 2022).

In the elderly, the hydration ability of the skin is reduced and as a result, the skin becomes dry. Some studies even show a prevalence of between 29% to 85% in the world and 60% in the

elderly with an average age of 70 years (Augustin et al., 2019; Hahnel et al., 2016; Mekic et al., 2019). Dry skin is usually referred to as xerosis, which is one of the most common skin diseases in the elderly. This is caused by many things, such as decreased lipids in the stratum corneum as well as reduced activity of the sebaceous and sweat glands. Every time xerosis occurs, a vicious circle often occurs, namely the process of peeling, cracking, inflammation, and infection. To solve this problem, people in the tropics have used various types of essential oils as traditional moisturizers for centuries effectively (Escuadro-Chin et al., 2019).

Essential oils are classic ingredients that are usually used for the manufacture of medicines and cosmetics. As technology develops, considerable efforts are being made by industries to discover the various medical benefits of natural resources. Natural is considered safer than synthetic, because of minimal side effects (Viciolle et al., 2012). Therefore, this literature review aims to discuss the role of essential oils on xerosis and pruritus in the elderly.

METHOD

This literature review aims to determine the role of various essential oils on skin hydration of the elderly. In this literature review, 24 articles were used on 7 types of essential oils which are known to have a positive effect on skin hydration, namely green tea oils (*Camellia sinensis* or *Camellia assamica*), virgin coconut oils (*Cocos nucifera L.*), evening primrose oils (*Oenothera paradoxa*), grape seed oils (*Vitis vinifera L.*)., rosemary oils (*Rosmarinus officinalis L.*), immortelle oils (*Helichrysum italicum*), and cannabis seeds oils (*Cannabis sativa L.*). The databases used include PUBMED, Science Direct, and Google Scholar. The terms used for unpatterned searches are "Skin Hydration", "Essential Oil", and "Elderly".

RESULT AND DISCUSSION

Reducing Skin Hydration Levels in the Elderly

The function and structure of the stratum corneum (SC) play an important role in keeping the epidermis hydrated, flexible, stable, and resistant. In this regard, the abnormal function of the epidermal permeability barrier (EPB) in elderly skin has been demonstrated in various studies. Several studies using tape stripping found that SC integrity was lower in the elderly when compared to younger skin. In addition, skin irritability in the elderly has also been shown to be significantly higher than in young people, especially in areas where the skin is exposed to sunlight (Blaak et al., 2017).

Some skin changes in the elderly are usually associated with reduced skin hydration which causes dry skin or xerosis. These changes include changes in SC barrier function including changes in the cellular and intercellular lipid matrix; changes in pH, changes in SC proteases, decreased activity of the sebaceous and sweat glands, and decreased levels of estrogen, especially in women (Stull & Yosipovitch, 2015).

SC consists of an intercellular lipid matrix. This matrix, which consists of ceramides, cholesterol, and free fatty acids, maintains skin hydration by preventing water loss from the epidermis, but in the elderly there is a decrease in ceramide levels in the SC, resulting in changes in these functions. In addition, the matrix also plays a role in regulating skin moisture, maintaining a strong bond between corneocytes, and regenerating cells (Kono et al., 2021; Stull & Yosipovitch, 2015). Corneocytes contain natural moisturizing factors, which are a collection of hygroscopic compounds, which attract and retain water within the cells. The natural moisturizing factors and free fatty acids in SC also help keep the pH low. This pH regulation plays a role in maintaining a balance between the formation and degradation (desquamation) of the epidermal barrier (Moncrieff et al., 2013). The pH of the skin becomes more alkaline with age. This change in skin pH can affect the enzymatic activity in SC. As a result of this change in enzymatic activity, the skin

becomes dry due to decreased production of natural moisturizing factors, reduced activity of ceramide-forming enzymes, and decreased lamellar body secretion (Stull & Yosipovitch, 2015).

The balance between protease and inhibitor activity controls the desquamation process, including the number of corneocyte cell layers in SC. Excessive protease activity can lead to SC thinning, while reduced protease activity can lead to SC thickening. In healthy skin, protease activity in SC varies at different body sites. Facial skin, for example, shows higher proteolytic activity. The facial SC is thinner than other body sites, and this increased protease activity may be related to the thickness of the skin (Stull & Yosipovitch, 2015). However, according to the study by Rawlings and Voegeli (2013), with age, this protease activity decreases, thus increasing the risk of dry skin.

The Role of Essential Oils in Improving the Hydration of Elderly Skin

Maintaining skin hydration is very important to delay the skin aging process because the skin becomes less elastic and more prone to wrinkling and infection when dry (Liao et al., 2022). Skin hydration is determined by two factors, namely the ability of SC to retain water due to natural moisturizing factors and the barrier function of the intercellular lipid lamellar structure and tight junctions. In measuring the level of skin hydration, several parameters are usually used, such as surface water content (SWC) and trans-epidermal water loss (TEWL). The two parameters were further grouped into four groups, namely group I (high SWC/low TEWL), group II (high SWC/high TEWL), group III (low SWC/low TEWL) and group IV (low SWC/high TEWL) (Masaki et al., 2018).

Using a good moisturizer can increase skin hydration through the corneo-desmosome degradation process. Moisturizers are skin care products that are usually used to increase skin hydration by minimizing skin friction, softening the skin, and filling cracks in the skin (Lodén, 2012). Moisturizers are the first line in the treatment of xerosis and pruritus in the elderly. Moisturizers with antiseptic, antibacterial, and antioxidant effects are recommended for senile xerosis. People in the tropics have effectively used various types of essential oils as traditional moisturizers for centuries. Significantly, essential oils can improve epidermal barrier function and help prevent transepidermal water loss (Escuadro-Chin et al., 2019; Yahya et al., 2020).

Essential oils are a mixture of complex compounds with low molecular weights that are volatile (monoterpenes and sesquiterpenes) and give rise to a distinctive aroma in each plant. This oil is usually extracted by distillation technique. The use of essential oils has been shown in various studies to help improve the balance of the skin's epidermal barrier (Andrade et al., 2021).

Effects of Some Types of Essential Oils on Skin Hydration Green Tea Essential Oil

Green tea plants (*Camellia sinensis* or *Camellia assamica*) have long been known to have antioxidant effects and are active compounds in moisturizing creams. The study of Tjandra et al. (2018) found that the essential oil of this plant has a significant effect in increasing skin hydration when compared to vitamin E, on the skin on the left and right arms.

Green tea contains 75-80% water and polyphenolic compounds (flavanols, flavandiols, flavonoids, and phenolic acids), polysaccharides, and catechins which account for more than 75% of polyphenolic compounds in tea leaves. The presence of these bioactive compounds helps in many reactions that are beneficial to human skin. In an in vitro study, it was found that polyphenols and polysaccharides from tea protect the skin, such as the ability to retain water, especially in a dry environment (Bae et al., 2020; Liao et al., 2022).

Catechin compounds have antioxidant effects and representative physiological activities by counteracting free radicals, slowing the degradation of the extracellular matrix caused by ultraviolet (UV) radiation and pollution, activating collagen synthesis, and inhibiting the products of matrix metalloproteinase enzymes (Bae et al., 2020).

Epigallocatechin gall, which is one type of catechin (contributing more than 50% of the types of catechins), is known to inhibit the degradation of hyaluronic acid in the epidermis by reducing the level of hyaluronidase expression and increasing the hydration retention capacity of the skin barrier. So this compound can increase skin hydration (Kim et al., 2018).

Virgin Coconut Essential Oil

Virgin coconut essential oil (*Cocos nucifera* L.) has long been recognized in traditional skin care applications, especially in Southeast Asia. This oil is coconut oil that is processed within 24 hours after harvest to avoid the formation of fatty acids that can cause skin irritation. The oil is colorless at or above 30°C and turns white in solid form but with a characteristic aroma (Escuadro-Chin et al., 2019; Noor et al., 2013).

Virgin coconut essential oil has a high content of fatty acids, especially lauric acid, and has a higher phenolic content and antioxidant activity than ordinary coconut oil (Noor et al., 2013). The high levels of lauric acid in this oil, proven in several in vitro and in vivo studies, have antimicrobial and anti-inflammatory effects (Karagounis et al., 2019). In the study of Yahya et al. (2020), this oil can reduce TEWL and increase skin hydration. In addition, this virgin coconut essential oil does not cause side effects as long as it is used as a moisturizer. While in the study of Varma et al. (2019), the application of virgin coconut oil has been shown to exert an anti-inflammatory effect by inhibiting various levels of cytokines including TNF- α , IFN- γ , IL-6, IL-5, and IL-8, enhancing skin barrier function by regulating aquaporin-3(AQP-3), filaggrin, and involucrin mRNA expression, and also protects the skin against UVB rays.

Evening Primrose Essential Oil

Evening primrose (*Oenothera paradoxa*) essential oil has long been known to stabilize the keratinization process of the epidermis, exhibit anti-inflammatory effects, play an important role in skin hydration, and prevent excessive water loss from the skin. This is indicated by the parameters of TEWL, elasticity, firmness, stability, and level of skin roughness. The content of this oil mainly consists of linoleic acid and γ -linolenic acid. These two acids play important roles in normal skin function, including being part of the ceramides in the lipid layer of the epidermis, regulating epidermal keratinization, and having a strong anti-inflammatory effect (Kazmierska et al., 2022).

The high content of γ -linolenic acid in this oil was also proven in the study of Park et al. (2014) can maintain skin hydration. γ -Linolenic acid stimulates epidermal hyperproliferation, because its metabolites, namely anti-inflammatory eicosanoids, have antiproliferative properties, and can increase ceramide synthesis and skin barrier function.

Grape Seed Essential Oil

Grape seed (*Vitis vinifera* L.) contains about 3.95-16.6% essential oil. The wide ratio of the amount of oil is influenced by the extraction technique, the type of solvent, and the operating conditions used (Duba & Fiori, 2015). Cultivar diversity and environmental factors during the harvest year also play an important role. Grape seed essential oil has long been used as an ingredient for food and skin health. This oil is rich in linoleic acid (65-72%), oleic acid (12-23%), palmitic acid (4-11%) and stearic acid (8.5-15%) (Sotiropoulou et al., 2016).

Linoleic acid is mostly found in epidermal phospholipids and plays an important role in skin barrier function because it is incorporated in ceramides, which are the main components of intercellular lipids. In addition, this oil also contains other active substances with high antioxidant activity that can maintain skin health, including phytosterols, flavonoids, phenolic acids, carotenoids, tocopherols and tocotrienols (vitamin E isomer group in the range of 1-53 mg/100 g oil) (Lee et al., 2014; Surini et al., 2018).

Rosemary Essential Oil

Rosemary (*Rosmarinus officinalis* L.) is a plant of the Lamiaceae family originating from the Caucasus and the eastern Mediterranean. The essential oil of this plant is usually obtained by classical extraction methods, namely maceration, decoction, hydro distillation, and solvent extraction. Various kinds of bioactive components of this oil, including monoterpenes, diterpenes, and polyphenols are obtained from the steam distillation process or the like (González-Minero et al., 2020).

In the study of Malvezzi De Macedo et al. (2020) and Montenegro et al. (2017) regarding this oil, it was found that gels containing rosemary essential oil nanoparticles showed a greater capacity to hydrate and increase skin elasticity compared to gels that did not contain oil. In addition, its use topically has several advantages, namely avoiding the effects of the initial metabolism of the drug, providing a direct effect on the area to be treated, and reducing the risk of drug side effects.

Immortelle Essential Oil

The immortelle plant (*Helichrysum italicum*) belongs to the Asteraceae family. This plant is often called "immortelle" or perennial because the flowers do not wither and the color remains alive even after being collected and dried (Wijayadi & Kelvin, 2022). In the study of Granger et al. (2020), found that a night cream containing immortelle essential oil showed a 64.4% increase in skin hydration and a 10% reduction in TEWL after 1 hour of administration in 117 volunteers. Meanwhile, in the study of Tadić et al. (2021) who compared creams and emulgels containing immortelle essential oil, found that they significantly decreased TEWL and increased skin hydration after 28 days of the administration, when compared to controls, thereby improving the function of the epidermal barrier.

This is in line with the study of Lemaire et al. (2022) who found that the neryl acetate compound contained in this oil plays a role in the formation of the epidermal barrier. By increasing involucrine and transglutaminase-1 (TGM-1), these compounds contribute to maintaining the epidermal barrier and by regulating aquaporin-3 (AQP-3), they also facilitate osmotic transport of water, and glycerol. With increasing age, the three types of lipids, namely ceramides, cholesterol and fatty acids, decrease. Neryl acetate compounds can increase lipid production, thereby increasing the function of the epidermal barrier, increasing water retention, and decreasing penetration from the outside.

Hemp Seed Essential Oil

Hemp seed essential oil is derived from the cannabis plant (*Cannabis sativa* L.). This essential oil from cannabis seeds has long been known in the skin care field. This plant contains a large amount of oil in its seeds (25-35%), as well as unsaturated fatty acids consisting of 50-60% linoleic acid, 20-25% α -linolenic acid and γ -linolenic acid. These three fatty acids are the structure of phospholipid cell membranes, so they have an effect on cell immunology as well as on several cell membrane functions, namely on hormone activity, fluidity or electrolyte transport. These linoleic and linolenic acids improve skin structure and reduce dry and rough skin structure by increasing skin hydration function (Kowalska et al., 2017).

In the study of Şeker and Esen (2021) on the effect of these essential oils on the skin, a comparison was made of creams containing various concentrations of cannabis seed oil (0%, 0.5%, 1% and 1.5%). Skin hydration decreased in the first 15 minutes, but increased significantly after 15-30 minutes and 30-60 minutes. A decrease in TEWL was also seen, particularly effective at 15-30 minutes. Meanwhile, in the study of Metwally et al. (2021) who used electrospun polycaprolactone patches as carriers of cannabis seed essential oil, found an increase in moisture content of up to 20% studied on human skin.

CONCLUSION

The use of essential oils as a moisturizing agent has been shown to be effective in improving skin hydration in the elderly. Essential oils of green tea, virgin coconut, evening primrose, grape seed, rosemary, immortelle, and cannabis seeds have been shown in various studies to increase skin hydration. This of course can be considered as an alternative treatment for various skin diseases in the elderly caused by decreased skin hydration.

ACKNOWLEDGEMENTS

This study was carried out with financial assistance from the government. Therefore, we thank all parties, especially the academic market, professional editors, and all colleagues whom we cannot mention.

References

- Andrade, S. F. de, Rijo, P., Rocha, C., Zhu, L., & Rodrigues, L. M. (2021). Characterizing the Mechanism of Action of Essential Oils on Skin Homeostasis–Data from Sonographic Imaging, EpidermalWater Dynamics, and Skin Biomechanics. *Cosmetics*, 8(36). https://doi.org/10.3390/%0Acosmetics8020036
- Augustin, M., Kirsten, N., Körber, A., Wilsmann-Theis, D., Itschert, G., Staubach-Renz, P., Maul, J.-T., & Zander, N. (2019). Prevalence, Predictors and Comorbidity of Dry Skin in the General Population. J Eur Acad Dermatol Venereol. https://doi.org/10.1111/jdv.15157
- Bae, J., Kim, N., Shin, Y., Kim, S.-Y., & Kim, Y.-J. (2020). Activity of catechins and their applications. *Biomedical Dermatology*, 4(1), 1–10. https://doi.org/10.1186/s41702-020-0057-8
- Blaak, J., Dähnhardt, D., Dähnhardt-Pfeiffer, S., Bielfeldt, S., Wilhelm, K. P., Wohlfart, R., & Staib, P. (2017). A plant oil-containing pH 4 emulsion improves epidermal barrier structure and enhances ceramide levels in aged skin. *International Journal of Cosmetic Science*, 39(3), 284–291. https://doi.org/10.1111/ics.12374
- Duba, K. S., & Fiori, L. (2015). Supercritical CO2 extraction of grape seed oil: Effect of process parameters on the extraction kinetics. *The Journal of Supercritical Fluids*, *98*, 33-43. https://doi.org/10.1016/j.supflu.2014.12.021
- Escuadro-Chin, M. O., Maanõ, M. M. C., & Dofitas, B. L. (2019). Randomized assessor-blinded controlled trial on the efficacy and safety of virgin coconut oil versus mineral oil as a therapeutic moisturizer for senile xerosis. Acta Medica Philippina, 53(4), 335–343. https://doi.org/10.47895/amp.v53i4.31
- González-Minero, F. J., Bravo-Díaz, L., & Ayala-Gómez, A. (2020). Rosmarinus officinalis L. (Rosemary): An Ancient Plant with Uses in Personal Healthcare and Cosmetics. *Cosmetics*, 7(4), 77. https://doi.org/10.3390/cosmetics7040077
- Granger, C., Brown, A., Aladren, S., & Narda, M. (2020). Night Cream Containing Melatonin, Carnosine and Helichrysum italicum Extract Helps Reduce Skin Reactivity and Signs of Photodamage: Ex Vivo and Clinical Studies. *Dermatology and Therapy*, 10(6), 1315–1329. https://doi.org/10.1007/s13555-020-00443-2
- Hahnel, E., Lichterfeld, A., Blume-peytavi, U., & Kottner, J. (2016). The epidemiology of skin conditions in the aged : A systematic review. *Journal of Tissue Viability*. https://doi.org/10.1016/j.jtv.2016.04.001
- Kaniuk, Ł., Podborska, A., & Stachewicz, U. (2022). Enhanced mechanical performance and wettability of PHBV fiber blends with evening primrose oil for skin patches improving hydration and comfort. *Journal* of Materials Chemistry B, 10(11), 1763–1774. https://doi.org/10.1039/d1tb02805g
- Karagounis, T. K., Gittler, J. K., Rotemberg, V., & Morel, K. D. (2019). Use of "natural" oils for moisturization: Review of olive, coconut, and sunflower seed oil. *Pediatric Dermatology*, 36(1), 9–15. https://doi.org/10.1111/pde.13621
- Kazmierska, A., Bolesławska, I., Polanska, A., Pazdrowska, A. D., Jagielski, P., Drzymała-Czyz, S., Adamski, Z., & Przysławski, J. (2022). Effect of Evening Primrose Oil Supplementation on Selected Parameters of Skin Condition in a Group of Patients Treated with Isotretinoin – A Randomized Double-Blind Trial. 11–16.
- Kim, E., Hwang, K., Lee, J., Han, S. Y., Kim, E. M., Park, J., & Cho, J. Y. (2018). Skin protective effect of epigallocatechin gallate. *International Journal of Molecular Sciences*, 19(1), 1–14. https://doi.org/10.3390/ijms19010173
- Kono, T., Miyachi, Y., & Kawashima, M. (2021). Clinical significance of the water retention and barrier function-improving capabilities of ceramide-containing formulations: A qualitative review. *Journal of*

Dermatology, 48(12), 1807–1816. https://doi.org/10.1111/1346-8138.16175

- Kowalska, M., Wozniak, M., & Pazdzior, M. (2017). Assessment of the sensory and moisturizing properties of emulsions with hemp oil. Acta Polytechnica Hungarica, 14(8), 183–195. https://doi.org/10.12700/APH.14.8.2017.8.10
- Lee, S. G., Kim, R., Cho, I., Kang, H., Yeom, W., Lee, S. H., Lee, S., & Choi, Y. W. (2014). Hydrogel-Based Ultramoisturizing Cream Formulation for Skin Hydration and Enhanced Dermal Drug Delivery. 37(10), 1674–1682.
- Lemaire, G., Olivero, M., Rouquet, V., Moga, A., Pagnon, A., & Synelvia, L. S. (2022). Neryl acetate , the major component of Corsican Helichrysum Italicum essential oil , mediates its biological activities on skin barrier Short Title : Neryl acetate increases skin barrier function 1 Laboratoires 2 QIMA M & L SA Groupe L ' Occitane , ZI S.
- Liao, R., Parker, T., Bellerose, K., Vollmer, D., & Han, X. (2022). A Green Tea Containing Skincare System Improves Skin Health and Beauty in Adults : An Exploratory Controlled Clinical Study.
- Lodén, M. (2012). Effect of moisturizers on epidermal barrier function. *Clinics in Dermatology*, 30(3), 286–296. https://doi.org/10.1016/j.clindermatol.2011.08.015
- Malvezzi De Macedo, L., Mendes, É., Militao, L., Lacalendola Tundisi, L., Artem Ataide, J., Barbosa Souto, E., & Gava Mazzola, P. (2020). Rosemary (Rosmarinus officinalis L ., syn Salvia rosmarinus Spenn.) A Review. *Plants*, 9(651), 1–12.
- Masaki, H., Yamashita, Y., Kyotani, D., Honda, T., Takano, K., Tamura, T., Mizutani, T., & Okano, Y. (2018). Correlations between skin hydration parameters and corneocyte-derived parameters to characterize skin conditions. January, 1–7. https://doi.org/10.1111/jocd.12502
- Mekic, S., Jacobs, L. C., Gunn, D. A., Mayes, A. E., Ikram, M. A., Pardo, L. M., & Nijsten, T. (2019). Prevalence and determinants for xerosis cutis in the middle-aged and elderly population: A cross-sectional study. 1–9. https://doi.org/10.1016/j.jaad.2018.12.038
- Metwally, S., Ura, D. P., Krysiak, Z. J., Kaniuk, Ł., Szewczyk, P. K., & Stachewicz, U. (2021). Electrospun PCL patches with controlled fiber morphology and mechanical performance for skin moisturization via long-term release of hemp oil for atopic dermatitis. *Membranes*, 11(1), 1–13. https://doi.org/10.3390/membranes11010026
- Moncrieff, G., Cork, M., Lawton, S., Kokiet, S., Daly, C., & Clark, C. (2013). Use of emollients in dry-skin conditions: Consensus statement. *Clinical and Experimental Dermatology*, 38(3), 231–238. https://doi.org/10.1111/ced.12104
- Montenegro, L., Pasquinucci, L., Zappalà, A., Chiechio, S., Turnaturi, R., & Parenti, C. (2017). Rosemary essential oil-loaded lipid nanoparticles: In vivo topical activity from gel vehicles. *Pharmaceutics*, 9(4), 1–12. https://doi.org/10.3390/pharmaceutics9040048
- Noor, N. M., Aziz, A. A., Sarmidi, M. R., & Aziz, R. (2013). The effect of virgin coconut oil loaded solid lipid particles (VCO-SLPs) on skin hydration and skin elasticity. *Jurnal Teknologi (Sciences and Engineering)*, 62(1), 39–43. https://doi.org/10.11113/jt.v62.1248
- Park, K. Y., Ko, E. J., Kim, I. S., Li, K., Kim, B. J., Seo, S. J., Kim, M. N., & Hong, C. K. (2014). The effect of evening primrose oil for the prevention of xerotic cheilitis in acne patients being treated with isotretinoin: A pilot study. *Annals of Dermatology*, 26(6), 706-712. https://doi.org/10.5021/ad.2014.26.6.706
- Rawlings, A. V., & Voegeli, R. (2013). Stratum corneum proteases and dry skin conditions. *Cell and Tissue Research*, 351(2), 217–235. https://doi.org/10.1007/s00441-012-1501-x
- Şeker, M., & Esen, Ö. (2021). the Effect of Hemp Seed Oil on Skin and Soap Performance. International Journal of Life Sciences and Biotechnology, 4(3), 420–438. https://doi.org/10.38001/ijlsb.931795
- Sotiropoulou, E. I., Varelas, V., Liouni, M., & Nerantzis, E. T. (2016). GRAPE SEED OIL: FROM A WINERY WASTE TO A VALUE ADDED COSMETIC PRODUCT-A REVIEW.
- Stull, R. V. C., & Yosipovitch, G. (2015). Chronic Pruritus in the Elderly: Pathophysiology, Diagnosis and Management. 201–215. https://doi.org/10.1007/s40266-015-0246-0
- Surini, S., Nursatyani, K., & Ramadon, D. (2018). Gel Formulation Containing Microcapsules of Grape Seed Oil (Vitis vinifera L.) for Skin Moisturizer. 10(1), 41–47. https://doi.org/10.5530/jyp.2018.10.11
- Tadić, V. M., Žugić, A., Martinović, M., Stanković, M., Maksimović, S., Frank, A., & Nešić, I. (2021). Enhanced skin performance of emulgel vs. Cream as systems for topical delivery of herbal actives (immortelle extract and hemp oil). *Pharmaceutics*, 13(11). https://doi.org/10.3390/pharmaceutics13111919
- Tjandra, O., Wijayadi, L. J., & Rumawas, M. E. (2018). Green tea moisturizer improves skin hydration in elderly. *Universa Medicina*, 37(1), 3–12. https://doi.org/10.18051/univmed.2018.v37.3-12
- Varma, S. R., Sivaprakasam, T. O., Arumugam, I., Dilip, N., Raghuraman, M., Pavan, K. B., Rafiq, M., &

Paramesh, R. (2019). In vitro anti-inflammatory and skin protective properties of Virgin coconut oil. *Journal of Traditional and Complementary Medicine*, 9(1), 5–14. https://doi.org/10.1016/j.jtcme.2017.06.012

- Viciolle, E., Castilho, P., & Rosado, C. (2012). In vitro and in vivo assessment of the effect of Laurus novocanariensis oil and essential oil in human skin. *International Journal of Cosmetic Science*, 34(6), 546– 550. https://doi.org/10.1111/j.1468-2494.2012.00745.x
- Wijayadi, L. J., & Kelvin. (2022). Effectiveness of Helichrysum italicum Essential Oil on Wound Healing. 10(2), 681–697.
- Yahya, Y. F., Vani, O., Putra, D. E. W., Sovianti, C. S., Trislinawati, D., Marina, T., & Riviati, N. (2020). The Efficacy and Safety of Plant Oil Mixtures in the Treatment of Xerosis with Pruritus in Elderly People: Randomized double blind Controlled Trial. *Bioscientia Medicina : Journal of Biomedicine and Translational Research*, 5(3), 255–262. https://doi.org/10.32539/bsm.v5i3.206