PROCEEDING BOOK OF

The 2nd International Seminar on Traditional Medicine

"Best Practice Traditional Medicine in Pandemic Era"

Saturday, 13th November 2021 (GMT+7)

Publisher:

Health Polytechnic Surakarta
Health Ministry, Indonesia

Journal Partner

JURNAL ILMU KESEHATAN
POLTEKKES KEMENKES SURAKARTA

JKG JURNAL KEPERAWATAN GLOBAL
ISSN : 2528-0102
E-ISSN : 2580-5919

JURNAL KEBIDANAN DAN KESEHATAN TRADISIONAL
POLTEKKES KEMENKES SURAKARTA

JIFI
International Journal of Applied Pharmaceutics
ISSN 0975-7058

Jurnal Keterapian Fisik

PROCEEDING BOOK

The 2nd International Seminar on Traditional Medicine

"Best Practice Traditional Medicine in Pandemic Era"

Editorial Board:

Nur Rachmat

Rendi Editya D

Diah Kartika Pratami

Saturday, 13th November 2021 (GMT+7)

Online International Conference

Health Polytechnic of the Ministry of Health Surakarta, Indonesia

Proceeding Book

The 2nd International Seminar on Traditional Medicine

Theme: "Best Practice Traditional Medicine in Pandemic Era"

Solo, 13th November 2021

Publisher:
Health Polytechnic of Surakarta, Ministry of Health, Central Java, Indonesia

Editorial Staff:
Jl. Letjend Sutoyo, Mojosongo, Surakarta, 57127
Telp: +6271-856-929, Fax: +6271-855-388
http://poltekkes-solo.ac.id/
Email: polkessolo@gmail.com

1st PUBLICATION on December 2021

ISBN 978-623-98729-2-2

TABLE OF CONTENT

PREFACE

The 2nd International Conference Traditional Medicine, here in referred to as "ICTM", an international conference committed to producing high-quality journals in the fields of Pharmacy, Analytical Pharmacy and Food, Jamu and Traditional Medicine, Nursing, Midwifery, Prosthetic Orthotic, Acupuncture, Physiotherapy, Occupational Therapy, Speech Therapy, Health Promotion, Health Education, held by Health Polytechnic of Surakarta, Central Java, Indonesia.

The 2nd International Conference on Traditional Medicine (ICTM) raised the topic "The Best Practice Traditional Medicine in Pandemic Era" intends to share information and description of the use of traditional health in health maintenance, disease prevention, and health care, especially in this pandemic era. As we are currently in a pandemic, the meeting has been held virtually on 13 November 2021. This effort is made to excite the development again traditional medicine (jamu) and open the public's insight into the use of medicine traditional medicine (herbal medicine) in maintaining the immunity in the pandemic era.

This ICTM has presented domestic and foreign speakers. Several parties involved include Gadjah Mada University, Mahidol University of Thailand, University of Sharjah United Arab Emirates, Karnataka Ayurveda Medical College India, PUI Pujakesuma, KASTA, Universitas Pancasila and involving an internal Polkesta lecturer as a resource person. ICTM 2021 is planned to invite the Minister of Tourism and Creative Economy of Indonesia and Secretary-General The Indonesian Ministry of Health as a "keynote speaker".

This conference is a forum for students, researchers, lecturers, observers, and practitioners from universities, research institutions, industry, and professionals to exchange ideas and the latest information in the field of focus and scope of health sciences. The expected output of this ICTM is publication in the international conference proceeding. The selected manuscripts will be published in the international SCOPUS-indexed or accredited national journal.

Satino, SKM, M.Sc.N
Director of Health Polytechnic of Surakarta

ABOUT 2nd ICTM

A. Background

The world is currently experiencing an outbreak of the Covid-19 pandemic caused by the coronavirus, namely Sars-CoV-2. The virus was first reported in Wuhan China on December 31, 2019. Symptoms experienced include acute respiratory distress, fever above 38°, cough, weakness, muscle aches, and diarrhea. In patients with severe COVID-19, the symptoms experienced can cause pneumonia, acute respiratory syndrome, kidney failure, and even death.

Diseases caused by viruses are generally 'self-limiting diseases', namely diseases that can be cured by relying on the body's immune system. Because of that, there have been many campaigns on how to increase the body's immune system to prevent contracting viral infections, and if infected, the body will be strong against it. The immune system can be increased or suppressed, one of which is by administering an immunomodulator. Immunomodulators are compounds that can interact with the immune system so that they can increase (immunostimulators) or suppress (immunosuppressants) the immune response (Ikawati et al., 2020).

The use of traditional medicine in the era of the Covid-19 pandemic is very useful as prevention, namely as an increase in body resistance or as a compliment. The use of this traditional medicine can also be used as an immunomodulator (medicinal plants containing active substances such as red ginger, ginger, turmeric, meniran, empon-empon), reducing symptoms of Covid-19 (cough and cold using kencur rhizome, headaches using garlic, difficulty sleeping using nutmeg seeds, and nausea and vomiting using ginger), and overcoming the comorbid Covid-19 factors) (Rosalina, 2020)

Jamu is often referred to as a traditional Indonesian herb because herbal medicine has been known since the time of our ancestors before science related to modern medicine entered Indonesia. Most of the herbal concoction recipes are tens or even hundreds of years old and continue to be used from generation to generation until now.

Although there is a lot of evidence that some herbal ingredients have been clinically tested until now there are still many people who are a priori to herbal medicine. Pioneered by the Research and Development Agency and the National Commission for Herbal Medicine, through service-based research, by taking thousands of samples centered at the Hortus Medicus Tawangmangu Clinic and assisted by various herbal medicine scientific clinics spread throughout Indonesia, it has been scientifically proven, some herbal ingredients have proven to be useful and have the effect of increasing endurance, especially in this pandemic era.

The International Seminar with the title: “Best Practice Traditional Medicine in the Pandemic Era” intends to share information and descriptions regarding the Utilization of Traditional Health in Health Care, Disease Prevention, and Health Care, especially in this Pandemic Era.

The seminar will present resource persons from academia, bureaucracy, practitioners, and industry who will discuss the Best Practice of Traditional Medicine during the COVID-19 pandemic. This effort was carried out to stimulate the development of traditional medicine (Jamu) and open public knowledge in the use of traditional medicine (Jamu) in maintaining the immunity in the pandemic era.

B. Theme

International Seminar with the theme "Best Practice Traditional Medicine in the Era of a Pandemic".

C. Purpose

This international seminar with the theme "Best Practice of Traditional Medicine in the Era of a Pandemic" aims to:

1. Adding insight into traditional medicine during the covid-19 pandemic.
2. Provide insight into the role of health workers and the role of society in general in the development of traditional medicine.
3. Provide insight into the benefits of traditional medicine during the COVID-19 pandemic.

D. Organizer

This seminar is organized by the Health Polytechnic of Surakarta.

E. Date and Place

Saturday, November 13, 2021

Time: 08.00-17.00 WIB (GMT +7)

Place: Zoom Meeting

Keynote Speaker :

Kunta Wibawa Dasa Nugraha, SE, M.A, Ph.D

(General Secretary of The Ministry of Health)

Speakers :

1. Dr. Sugiyanto, S.Pd., M.App.Sc (Head of Education Center of Health Human Resources of The Ministry of Health)
2. Dr. ATM Darunee Rattanawongsamathakul B.ATM (Mahidol University, Thailand)
3. Prof. Apt. Zullies Ikawati, Ph.D. (Faculty of Pharmacy, Universitas Gadjah Mada, Indonesia)
4. Muhammad Arsyad Subu, PhD (College of Health Sciences University of Sharjah United Arab Emirates (UAE)
5. Dr. Ravi Rao S., MD(Ayu), PhD (Karnataka Ayurveda Medical College, Mangaluru, India)
6. Tri Budi Santoso, PhD (Health Polytechnic of the Ministry of Health Surakarta, Indonesia)
7. Athanasia Budi Astuti, S.Kp., M.N (Health Polytechnic of the Ministry of Health Surakarta, Indonesia)
8. Dr. apt. Nutrisia Aquariushinta Sayuti, M.Sc (Health Polytechnic of the Ministry of Health Surakarta, Indonesia)

9. Sih Rini Handajani,M.Mid. (Health Polytechnic of the Ministry of Health Surakarta, Indonesia)

F. Participant

The number of participants in the activity is around 600 people who come from:

1. Government agencies
2. Educational institutions
3. Relevant organizations/professions/associations
4. Traditional health workers
5. General public
6. Health students, and other professions.

G. Call of Paper and Slide Presentation

1. Scope:

a. Pharmacy
b. Analytical Pharmacy and Food
c. Jamu and Traditional Medicine
d. Nursing
e. Midwifery
f. Prosthetic Orthotic
g. Acupuncture
h. Physiotherapy
i. Occupational Therapy
j. Speech Therapy
k. Health Promotion
l. Health Education

2. Important dates

a. Abstract Submission Deadline 19th October 2021
b. Abstract Acceptance Notification 2nd November 2021
c. Full Paper Submission Deadline 9th November 2021
d. Slide Presentation (10 Slide) Deadline 10th November 2021
e. Conference Day: 13th November 2021
f. Final Full Paper Revision 13th November 2021

3. Registration fee

a. Presenter (Slide Presentation) IDR 500K
b. Participant Free
c. Selected paper for SINTA journal and Scopus Journal (according to journal APC)

4. Publication

a. Accepted Paper will be published in the Proceeding,
b. Selected Paper will be Presented during Conference with Slide Presentation

c. The selected paper will be assisted to be published in SINTA and SCOPUS Journal*
d. Term and condition applied, with publication fee

THE COMMITTEE

The Proceeding Book of The 2nd International Seminar on Traditional Medicine
"Best Practice Traditional Medicine in Pandemic Era"
Saturday, 13th November 2021 (GMT+7)

Steering Committee

Director	Satino, SKM, M.Sc.N	Director of Health Polytechnic of Surakarta
Manager	1. Emi Suryani, M. Mid	Vice Director I
	2. Sudiro, S.Kp.Ns, M. Pd.	Vice Director II
	3. Budi Utomo, SKM, SST, M.Kes	Vice Director III
	4. Indarto AS, S.Pd. M.Kes	Head of Traditional Medicine Departement
Supervisor	Yulianto Wahyono, Dipl PT, M.Kes	Head of SPI

Organizing Committee

Chairman	Apt. Indri Kusumua Dewi, M.Sc	Head of Pharmacy Departement
Vice-Chairman	Athanasia Budi Astuti, S.Kp, MN	Head of Education Development Center
Secretary	1. Widyaningsih, S.Sos, MM	Public relation and KAK Coordinator
	2. Lis Sarwi Hastuti, SKM, M.Sc	Head of Laboratory Unit
Finance	1. Sri Sugiarwati, SE, MM	Financial coordinator and BMN
	2. Hendrawan Sulistiyo W, SE, MM	
	3. Nikmah Ayu R.A, SST, M.K.M	(KASTA)
	4. Era Widyastuti, SE	

Divisions

Events	1. Joko Tri H, S.Kep, Ns, M.Kes	
	2. Sigit Tri A, S.Kp, Ns, M.Kes	
	3. Drs. Imam Waluyo, M.BA	(Binawan University, Jakarta)
Sponsorships	KH Endah Widhi Astuti, M.Mid	Head of Obstetrics Departement
Information and Technology	1. Purwoko Yunianto, S.Kom	Head of Information and Technology Unit
	2. Riyono, S.Kom	
	3. Nurokhmat Fadli S, M.Kes	
Documentation and Decoration	1. Eksan Purnomo, SE	
	2. Muftikha Khoiri R, A.Md.Kes	
Equipment	Romy Lestyawan Avan Y	
Public Relation and Publication	1. Widyaningsih, S.Sos, MM	4. Nurokhmat Fadli S, M.Kes
	2. Agustin Rahmawati, SKM	5. M. Syafi'i, SST, M.Kes
	3. Kristian Adi Kusuma, A.Md	6. Sugiyarto, SST, Ners, M.Kes

Master of Ceremony	1. Paula Hesti Mahanani, S.S 2. Agustin Rahmawati, SKM 3. Dwi Setyawan, SST.OP, M.Kes

Seminar Team

Coordinator	Athanasia Budi Astuti, S.Kp, MN
Administration Secretary	Linda Safira, S.Kom
Moderator	1. lnsiyah,MN 2. Sih Rini Handayani, M.Mid 3. Prasetyo Catur Utomo, SST 4. Drs. Imam Waluyo, MBA

Call For Paper Team

Coordinator	Dr. Nur Rachmat, BPO, M.Kes
Vice-chairman	1. Yuyun S, S.Kp, Ners, M.Kep 2. Rendi Editya, S.Kep, Ns, M.Kep 3. apt. Diah Kartika P, M. Farm
Administration	1. Melinda Putri Yusanti, S.Kom 2. apt. Pramitha Yuli, M.Sc 3. Eksan Purnomo, SE 4. Nurokhmat Fadli Sudirman, M.Kes

Competition Kreanova Team

Coordinator	Murwati, SKM, M.Kes (Epid)
Administration Secretary	1. Bony Wahyu Suryanto, ST, MM 2. apt. Oemeria Shitta S, M. Farm

REVIEWER AND EDITORIAL BOARD

RUNDOWN
THE 2nd INTERNATIONAL CONFERENCE ON TRADITIONAL MEDICINE
POLTEKKES KEMENKES SURAKARTA
November 13th, 2021

NO	TIME	EVENT
1	06.30 - 07.00	Registration
2	07.00 – 07.15	Opening ceremony (opening, singing Indonesia Raya,)
3	07.15 - 07.30	Welcome speech & official opening
	07.30 – 08.00	Keynote Speaker 1 Kunta Wibawa Dasa Nugraha, SE, M.A, Ph.D (General Secretary of The Ministry of Health)
4	08.00 – 08.30	Speaker: Dr.Sugiyanto, S.Pd.,M.App.Sc (Head of Education Center of Health Human Resources of The Ministry of Health)
5	08.30 - 09.00	Speaker I: Dr. ATM Darunee Rattanawongsamathakul B.ATM (Center of Applied Thai Traditional Medicine, Faculty of Medicine Siriraj Hospital, Mahidol University, Thailand) "***Thai Traditional Medicine Best Practice in Pandemic Era***"
6	09.00 – 09.30	Speaker II: Prof. Apt. Zullies Ikawati, Ph.D. (Faculty of Pharmacy, Universitas Gadjah Mada, Indonesia) ***"Drug Discovery from Natural Resources: Indonesian Experience"***
	09.30 – 09.45	Panel Discussion
7	09.45 – 10.15	Speaker III: Muhammad Arsyad Subu, PhD (College of Health Sciences University of Sharjah United Arab Emirates (UAE) ***"Evidence Based of Complementary Alternative Medicine (CAM) and its implementation to Fight COVID-19"***
8	10.15 – 10.45	Speaker IV: Dr. Ravi Rao S., MD(Ayu), PhD (Karnataka Ayurveda Medical College, Mangaluru, India) ***"Herb, Yoga, and Ayuverda Best Practice During Pandemic"***
9	10.45 – 11.00	Panel Discussion
10	11.00 – 11.15	Speaker V : Tri Budi Santoso, BScOT, M.OT, PhD OT (Lecturer Occupational Theraphy, Health Polytechnic of the Ministry of Health Surakarta, Indonesia) ***"Buiding Resilience in a Time of Uncertainty"***
11	11.15 – 11.30	Speaker VI : Dr. Apt. Nutrisia Aquariushinta Sayuti, M.Sc.

		(Head of the Pharmacy Diploma III Study Program, Health Polytechnic of the Ministry of Health Surakarta, Indonesia) ***"Effectivity Telemedicine in Pandemic Era"***
12	11.30 – 11.45	Speaker VII : Sih Rini Handajani,M.Mid (Secretary of Midwifery Department, Health Polytechnic of the Ministry of Health Surakarta, Indonesia) ***"The Miracle of Ginger in Midwifery Practice"***
13	11.45 – 12.00	Speaker VIII : Athanasia Budi Astuti, S.Kp., MN (Head of Education Development Center, Health Polytechnic of the Ministry of Health Surakarta, Indonesia) ***"Community Empowerment by Utilizing Natural Resources in the Face of the COVID 19 Pandemic"***
14	12.00 – 12.15	Panel Discussion
15	12.15 - 13.15	ISHOMA
16	13.15-13.30	Opening & reading the procedure for the call for paper
17	13.30 – 16.00	Brake out room Oral Presentation Room 1: pharmacy & traditional medicine
		Brake out room Oral Presentation Room 2: Nursing, Midwifery, Physical therapy
18	16.00 – 16.30	Winners Announcement best paper Winners Announcement international competition
19	16.30 – 16.45	Closing Ceremony

LIST OF PRESENTER

THE 2nd INTERNATIONAL CONFERENCE ON TRADITIONAL MEDICINE
POLTEKKES KEMENKES SURAKARTA
November 13th , 2021

NO	AUTHOR	AFFILIATION	TITLE
1	Agnis Pondineka Ria Aditama	Department of Pharmacy, Pharmacy Academy of Jember	Effect of osterix and osteocalcin enhancement by quercetin (3,3′,4′,5,7-pentahydroxyflavone) on osteoblast HFOB 1.19 cell line
2	Wirda Anggraini	Faculty of Pharmacy, Airlangga University	A systematic review of potential phytochemical compound bark of *Parameria laevigata* on biofilm formation
3	Desi Nadya Aulena	Faculty of Pharmacy, Universitas Pancasila, Jakarta	Review: potential as antihypertension therapy of zingiberaceae familia plant
4	Nilda Lely	Postgraduate Student, Faculty of Pharmacy, Andalas University, Padang	Antiinflammatory of main compound form *Piper crocatum* ruiz & pav inhibition of il-1β lipopolysaccharide-induced raw 264,7 cells
5	Novianti	Study Program of Diploma 3 In Midwifery, Faculty of Math and Science, Bengkulu University	Physical evaluation of red ginger extract (*Zingiber officinale* rosc. var. rubrum*)* cream of 10% and 20% concentration to reduce low back pain for pregnant women in second and third of trimesters
6	Shirly Kumala	Faculty of Pharmacy Universitas Pancasila, Jakarta Indonesia	Evaluation of microbiological contamination parameters of traditional medicine containing temulawak (*Curcuma xanthoriza)*
7	Rini Tri Hastuti	Department of Pharmacy and Food Analysis, Health Polytechnic of Surakarta,	Vitamin C levels and antioxidant activity of wetcandied pineapples based on the level of pineapples ripeness *(Ananas comosus* var. queen*)* as a functionalfood product
8	Sefrianita Kamal	Faculty of Pharmacy, Universitas Andalas, Padang	Determination of the stability of catechin from gambir (*Uncaria gambir* (hunter) roxb) through solubilization mechanism
9	Wardiyah	Department of Pharmacy, Poltekkes Kemenkes Jakarta II, Indonesia	Physical stability, photoprotective effect, and primer irritation test of cream o/w lime peel extract (*Citrus aurantifolia*) as a sunscreen
10	Diah Kartika Pratami	Faculty of Pharmacy, Universitas Pancasila, Jakarta, Indonesia	Antioxidant activity of *Zingiber officinalle* var rubrum and *Curcuma zanthorrhiz*a with different drying methods
11	Yoga Dwi Saputra	Program Studi Diploma III Farmasi, Akademi Farmasi Indonesia Yogyakarta	The relationship of knowledge level with self-management andcompliance with dabetes mellitus drug use in Gading Clinic, Yogyakarta January 2020 period
12	Sri Sumarni	Poltekkes Kemenkes Semarang	Does rosella flower extract (H*ibiscus sabdariffa* linn) increase erythrocyte levels for anemic teenagers?
13	Anisa Lailatusy Syarifah	Akademi Farmasi Putra Indonesia Malang, Malang, 65123	The effect of the concentration of bangle ethyl acetate fraction toward spf value in cream formulation temugiring extract
14	Novi Yantih	Faculty of Pharmacy, Universitas Pancasila, Jakarta, Indonesia	*In vitro* release study of curcumin- polyvinyl alcohol-chitosan hydrogel

NO	AUTHOR	AFFILIATION	TITLE
15	Luluk Handayani	Master of Applied Midwifery, Poltekkes of Health Ministry Semarang	Utilization of rosella flower petals (*Hibiscus sabdariffa* linn) extract to increase hemoglobin and hematocrit of female adolescents with anemia
16	Regia Desty Rakhmayanti	Major of Food and Pharmaceutical Analysis, Poltekkes Kemenkes Surakarta, Indonesia	Antioxidant activity of peel-off mask containing coffee (C*offea arabica*) and turmeric (*Curcuma longa*) using DPPH method
17	Arum Dwi Agustin	Pharmaceutical and Food Analysis Department of Health Polytechnic of Surakarta	Development crackers of shallot peel flour (*Allium cepa* l.) substitution
18	Diah Kartika Pratami	Faculty of Pharmacy, Universitas Pancasila	Formulation and determination of quality parameters of propolis extract microcapsule tablets from *Tetragonula sapiens* using direct printing method
19	Indri Kusuma Dewi	Health Polytechnic of the Ministry of Health Surakarta, Indonesia	Evaluation of the physical properties of indonesian traditional boreh cream preparation
20	Rosyati Pastuty	Professional Education of Midwife Study Program Health Polytechnic Palembang Ministry of Health, Palembang	The role of audio hypnotherapy for anxiety pregnant woman in Covid-19 pandemic
21	Anida Izatul Islami	Postgraduate Midwifery, Health Polytechnic of The Ministry of Health, Semarang	The effect of hypnotherapy on the anxiety of pregnant women at high-risk in Covid-19 pandemic
22	Ni Komang Yuni Rahyani	Jurusan Kebidanan, Poltekkes Kemenkes Denpasar, Bali, Indonesia	Utilization of complementary service training media for midwives in health care centers in Bali
23	Sahnawi Marsaoly	Department of Midwifery - Poltekkes Kemenkes Ternate	The effectiveness of rorano (traditional potions) on reducingmenstrual pain in vocational school students in Ternate City
24	Mas'adah	Mataram Nursing Departement Health Polytechnic, Mataram Ministry of Health	Fulfillment of sleep quality of cancer patients through benson meditation relaxation technique
25	Dewi Umu Kulsum	STIKES Jenderal Achmad Yani, Cimahi	The effect of swedish massage on emotional and psychological problems of child with cancer in the early period of chemotherapy treatment in RCAK Bandung, 2018
26	Luh Sandya Natasha Sparingga	RSIA Puri Bunda, Denpasar	Correlation of emotional regulation with quality of life in mothers caring for children with cerebral palsy in Sanggar Permata Hati Sukoharjo Regency
27	Nur Rachmat	Health Polytechnic Ministry of Health Surakarta	Effectiveness of use of flexible prosthesis in transfemoralamputee
28	Noerdjanah	Department of Physiotherapy, Health Polytechnic Ministry of Health, Surakarta Indonesia	Early detection of scoliosis in childhood, early adolescence, and late adolescence

ABSTRACT_01

EFFECT OF OSTERIX AND OSTEOCALCIN ENHANCEMENT BY QUERCETIN (3,3′,4′,5,7-Pentahydroxyflavone) ON OSTEOBLAST hFOB 1.19 CELL LINE

AGNIS PONDINEKA RIA ADITAMA[1], BURHAN MA'ARIF[2*], FAISAL AKHMALMUSLIKH[3]
[1]Department of Pharmacy, Pharmacy Academy of Jember, Jember, 68125, Indonesia, [2]Department of Pharmacy, Faculty of Medical and Health Science, Maulana Malik Ibrahim StateIslamic University, Malang, 65151, Indonesia, [3]Pharmaceutical Science, Faculty of Pharmacy, Universitas Airlangga, Surabaya, 60115, Indonesia
*Corresponding author email: burhan.maarif@farmasi.uin-malang.ac.id

ABSTRACT

Objective: This study was aimed at investigating the effect of quercetin (3,3′,4′,5,7-pentahydroxyflavone) as a phytoestrogen in the treatment of estrogen deficiency-induced osteoporosis, through the measurement of osterix and osteocalcin expressions on osteoblast hFOB 1.19 cell line.

Methods: hFOB 1.19 cells were cultured in 24-well microplates, induced with 10 ng/ml TNF-α and incubated for 24 h. TNF-α induction was used to create estrogen deficiency condition. Quercetin was then added at 10 µM concentration. The immunocytochemistry double staining method was performed with anti-rabbit osterix primary antibody and anti-mouse osteocalcin primary antibody. The cells were then incubated at 4 °C overnight. Finally, an anti-rabbit secondary antibody FITC and anti-mouse secondary antibody rhodamine were added, before the cells were analyzed using a Confocal Instrument Laser Scanning Microscopy (CLSM) at 488 and 543 nm.

Results: Quercetin increased the expressions of both osterix and osteocalcin in the osteoblast hFOB 1.19 cell line compared to the negative controls ($p<0.005$), with expression values of57852*±3878.71 AU and 24161.75*±1498.65 AU, respectively.

Conclusion: Quercetin shows an anti-osteoporosis effect by increasing the expressions of both osterix and osteocalcin in osteoblast hFOB 1.19 cell line.

Keywords: Quercetin, Anti-osteoporosis, Osteoblast, hFOB 1.19 cell line, Osterix, Osteocalcin.

ABSTRACT_02

A SYSTEMATIC REVIEW OF POTENTIAL PHYTOCHEMICAL COMPOUND BARK OF *PARAMERIA LAEVIGATA* ON BIOFILM FORMATION

WIRDA ANGGRAINI[1,2], DJOKO AGUS PURWANTO[1*], ISNAENI[1], IDHA KUSUMAWATI[1], SURYANTO[2]

[1] Faculty of Pharmacy, Airlangga University, Surabaya, 60286, Indonesia [2] Departement of Pharmacy, Faculty of Medicine and Health Science, Maulana Malik Ibrahim State Islamic University, Malang, 65151, Indonesia

*Corresponding author email: djokoagus@ff.unair.ac.id

ABSTRACT

Objective: Infectious disease is one of the problems in the health sector that continues to grow from time to time. Microorganisms can differentiate and develop in complex ways to form new morphologies that grow on the surface, known as biofilms. *Parameria laevigata* contains a variety of secondary metabolites, so that it has potential as an antibiofilms. The purpose of this research was to examine the effect of the compounds contained in the bark of *Parameria laevigata* in forming biofilms.

Methods: This systematic review research method is Systematic-Meta Analysis, which identifies research articles from journal databases including Microsoft Academic Search, Google Scholar, PubMed, and Science Direct. Meta-Analysis was used to analyze, determine, and interpr*et al*l the data in the systematically served articles.

Results: Using a specific search prism guideline, the search result for research article found 28 research journals as primary data for systematic review research. The results of this systematic review showed that the bark of *Parameria laevigata* contains alkaloids, flavonoids, tannins, and saponins. Alkaloids can interfere with the components of peptidoglycan in bacteria. Flavonoids have able to inhibit the growth of microorganisms. Tannins have a role in influencing cell wall polypeptides so that the formation of cell walls becomes less than perfect. Saponins hydrolyze bacterial cell walls.

Conclusion: The bark of *Parameria laevigata* has the potent activity to develop as antimicrobial by inhibiting biofilms formation mechanism.

Keywords: Biofilm formation, Natural product, *Parameria laevigata*, Phytochemical

ABSTRACT_03

REVIEW: POTENTIAL AS ANTIHYPERTENSION THERAPY OF ZINGIBERACEAE FAMILIA PLANT

DESI NADYA AULENA[1], RASYIIDA NUUR RAAFI[1], YESI DESMIATY[1*], RISMA MARISI TAMBUNAN[1], DIAH KARTIKA PRATAMI[1]

[1] Faculty of Pharmacy, Universitas Pancasila, Jakarta, 12640, Indonesia

*Corresponding author email: yesidesmiaty@gmail.com

ABSTRACT

Objective: This journal review aims to inform the potential of medicinal plants in the Zingiberaceae family in regulating blood pressure through inhibition of the ACE receptor for hypertension.

Methods: Reference searches were carried out through the PubMed and Google Scholar databases with the keywords "Zingiberaceae", "Angiotensin-Converting Enzyme Inhibitor" and "Antihypertensive". Several plants from the Zingiberaceae family have been used by the community as an alternative therapy to reduce high blood pressure and are a non-pharmacological treatment for hypertension.

Results: Hypertension is a degenerative disease where systolic and diastolic blood pressure is above normal which is one of the highest causes of death in the world. Synthetic drugs are one of the widely used antihypertensive treatments, but their use in the long term can cause various side effects. The therapeutic use of traditional medicine has attracted a lot of public attention because it is considered more affordable and safe than synthetic drugs. Plants from the Zingiberaceae family can be an option for antihypertensive therapy. Research that has been carried out has proven that several plants in the Zingiberaceae family (*Zingiber officinale*, *Curcuma xanthorriza, Kaempheriae galanga, Curcuma longa, Piper nigrum, Elettaria cardamomum,* and *Zingiber purpureum*) have secondary metabolites that can play a role in lowering blood pressure.

Conclusion: Based on the results of literature studies using clinical, in vitro, and in vivo methods sourced from primary, secondary, and tertiary articles, it was found that secondary metabolites such as flavonoids and essential oils (1,8-cineole, gingerol, shagaol, curcumin, terpinyl acetate, limonene, terpinene-4-ol, ethyl cinnamate) contained in plants of the Zingiberaceae family can play a role in various bioactivities, such as antioxidant, anti-inflammatory, anti-bacterial and antihypertensive.

Keywords: Antihypertensive, Zingiberaceae, *Zingiber officinale*, *Curcuma xanthorriza*, *Kaempperiae galanga*, *Curcuma longa*, *Piper nigrum*, *Elettaria cardamomum*, *Zingiber purpureum*.

ABSTRACT_04

ANTIINFLAMMATORY OF MAIN COMPOUND FORM *Piper crocatum* Ruiz & Pav INHIBITION OF IL-1β LIPOPOLYSACCHARIDE-INDUCED RAW 264,7 CELLS

NILDA LELY[1,3*], FATMA SRI WAHYUNI[2], YUFRI ALDI[2], ALMAHDY[2]
[1]Postgraduate Student, Faculty of Pharmacy, Andalas University, Padang, 25163, Indonesia
[2]Faculty of Pharmacy, Andalas University, Padang, 25163, Indonesia
STIFI Bhakti Pertiwi, Palembang, 30128, Indonesia
*Corresponding author email: fatmasriwahyuni@phar.unand.ac.id

ABSTRACT

Objective: This study aimed to determine the anti-inflammatory effect of the main compound of red betel leaves.

Methods: Isolation of the main compound from the ethyl acetate fraction of red betel leaves by column chromatography. Cell viability was determined by the MTT method in a concentration range of 1.25; 2.5; 5; 10; 20; 40 ug/mL. The anti-inflammatory effect of the main compound was tested against the inhibition of IL-1β production in LPS-induced RAW 264.7 macrophage cells. IL-1β levels were determined by ELISA.

Results: The viability test of the main compound from *Piper crocatum* leaves showed concentrations that gave viability percentages above 80%, namely 10, 5, 2.5, and 1.25 ug/mL. Concentrations of the main compound 10, 5, 2.5, and 1.25 ug/mL significantly inhibited the production of IL-1β with $p<0.05$.

Conclusion: The main compound of Piper crocatum leaves has the potential to be used as an anti-inflammatory.

Keywords: Main compound, *Piper crocatum*, IL-1β, ELISA.

ABSTRACT_05

PHYSICAL EVALUATION OF RED GINGER EXTRACT (*Zingiber officinale* Rosc. var. rubrum*)* CREAM OF 10% AND 20% CONCENTRATION TO REDUCE LOW BACK PAIN FOR PREGNANT WOMEN IN SECOND AND THIRD OF TRIMESTERS

NOVIANTI [1*], ASMARIYAH [1] , SURIYATI [1], NORI WIRAHMI [2]

[1]Study Program of Diploma 3 in Midwifery, Faculty of Math and Science, Bengkulu University, Bengkulu, 38371, Indonesia. [2] Study Program of Diploma 3 Pharmacy, Faculty of Math and Science, Bengkulu University, Bengkulu, 38371

*Corresponding author email: novianti@unib.ac.id

ABSTRACT

Objective: This study evaluates the physical properties of red ginger extract *Zingiber offcinale* Roscoe var.rubrum cream which is safe for pregnant women in helping pregnant women in the second and third of trimesters to reduce low back pain.

Methods: Evaluating the physical properties of red ginger extract *Zingiber offcinale Rosc.* var.rubrum cream by using 2 activities, namely evaluation of creams consisting of organoleptic tests, pH test, Viscosity test, spreadability test and Homogeneity test, then continued with phytochemical screening which consisted of examination of alkaloids and examination of steroids.

Results: Evaluation results of making red ginger extract cream (*Zingiber offcinale* Rosc, var. rubrum) with a concentration of 10% and 20% meet all the requirements of the physical properties of the cream such as organileptic test (same smell, color, shape and texture), pH test (7), Viscosity test (22.801,05 and 39.062,95 cp), Spreadability test (2,76-3,31), and homogeneity test (Homogeneous). Red ginger extract cream contains alkaloids from phytochemical screening results.

Conclusion: red ginger extract (*Zingiber offcinale* Rosc, var rubrum) cream with concentrations of 10% and 20% have the potential to be applied to pregnant women in the trimesters 2 and 3 who experience low back pain.

Keywords: Cream, Red Ginger, Low Back Pain, Pregnancy

ABSTRACT_06

EVALUATION OF MICROBIOLOGICAL CONTAMINATION PARAMETERS OF TRADITIONAL MEDICINE CONTAINING TEMULAWAK (*Curcuma xanthoriza)*

DIAH KARTIKA[1], TIKA MALIKHAH[1], DESI NADYA AULENA[1], NOVI YANTIH[1], SHIRLY KUMALA[1]*

[1]Faculty of Pharmacy Universitas Pancasila, Jakarta Indonesia
*Corresponding author email: fskumala@univpancasila.ac.id

ABSTRACT

Objective: Jamu is a traditional medicine inherited from generation to generation that is used by the Indonesian people as a drink that has the power to increase immunity. Before the herbal medicine is distributed, the herbal medicine must meet the safety and quality requirements based on BPOM Regulation Number 32 of 2019. The raw material used in making herbal medicine is in the form of simplicia resulting from oven drying. Selection of raw materials is one of the factors that will affect the level of microbial contamination. The aim of this study is to determine whether the microbial contamination contained in simplicia and herbal medicine in the form of instant powder or liquid medicine fulfil the requirement of BPOM No. 32 of 2019.

Methods: Determination of microbial contamination was carried out by testing the total plate count using TSA (Tryptic Soy Agar) media, Yeast and Mold count plates using SDA (Sabouraud Dextrose Agar) media, *Escherichia coli* using MCB selective media (Mac Conkey Broth) and MCA (Mac Conkey Agar), *Salmonella* using RVSEB (Rappaport Vassiliadis *Salmonella* Enrichment Broth) and XLD (Xylose Lysine Deoxycholate) media, and *Shigella* using XLD (Xylose Lysine) media Deoxycholate) and also MCA (Mac Conkey Agar).

Results: The result of the herbal powder samples test showed that the total plate count was <10 CFU/g, the yeast and mold count plates was <10 CFU/g, *Escherichia coli was* negative/g, *Salmonella was* negative/g, *and shigella* was negative/g. while in herbal liquid the total plate count is 1.2 x 102 CFU/g, yeast and mold count plates was <10 CFU/g, *Escherichia coli* was negative/g, *Salmonella* was negative/g, and *Shigella* which was negative/g.

ConclusionBased on the results of data analysis from the two samples, the herbal medicine produced as jamu has fulfilled the applicable requirements.

Keywords: Herbal medicine, Total plate count, *Escherichia coli*, *Salmonella, Shigella*

ABSTRACT_07

VITAMIN C LEVELS AND ANTIOXIDANT ACTIVITY OF WETCANDIED PINEAPPLES BASED ON THE LEVEL OF PINEAPPLES RIPENESS *(Ananas comosus* var. queen*)* AS A FUNCTIONALFOOD PRODUCT

RINI TRI HASTUTI[1*], **PRADEA INDAH LUKITO**[2]

[1,2] Department of Pharmacy and food Analysis, Health Polytechnic of Surakarta,57127, Indonesia.

*Corresponding author email: rini_trihastuti@yahoo.com

ABSTRACT

Objective : The purpose of this study to find out the levels of vitamin C and antioxidant activity of wet candied pineapple based on the level of ripeness of pineapple as a functional food product.

Methods : This type of research is true experimental with posttest-only control research design. The determine vitamin C level method using spectrophotometry UV-Vis and the antioxidant activity testing using the DPPH (2,2-diphenyl-1-picryl- hydrazyl-hydrate) free radical inhibition method. Statistical test using One Way Anova test continued Post Hoc test.

Results : The results of the determination of vitamin C levels in wet candied pineapple with full green, half yellow and full yellow ripeness levels respectively were 4.22; 17.24; 0.75 mg/gram. The results of the antioxidant activity test (IC50) on wet candied pineapple with ripeness levels of full green, half yellow and full yellow, respectively were 61.86; 49.98; and 72.11 mg/L, Based on the level of antioxidant intensity of each ripeness, the levels were strong, very strong andstrong. The results of the One Way Anova test on the level of ripeness of pineapple fruit in wet candied on vitamin C levels and antioxidant activity, both of them had a significant difference with P value = 0.000 ($P < 0.05$) which indicates that there wasa difference in antioxidant activity levels of wet candied pineapple based on the ripeness level of pineapple. The results of the Pos Hoc test showed a P value = 0.000 ($P < 0.05$) with the highest antioxidant activity value in half-yellow candied pineapple.

Conclusion : The conclusion of this study is there are differences in vitamin C levels and antioxidant activity in wet candied pineapple based on the level ofripeness as a functional food product. Wet candied with half yellow pineapple contains the highest vitamin C and the highest antioxidant activity.

Keywords: Functional Foods, Fruit Ripeness Level, Antioxidants, Vitamin C, Pineapple Wet Sweets

ABSTRACT_08

DETERMINATION OF THE STABILITY OF CATECHIN FROM GAMBIR (*Uncaria gambir* (Hunter) Roxb) THROUGH SOLUBILIZATION MECHANISM

SEFRIANITA KAMAL[1,2,*] SHUCY WULANDARI[2], SARA SURYA[2], FEBRIYENTI[1], ERIZAL ZAINI[1], DACHRIYANUS HAMIDI[1]

[1]Faculty of Pharmacy, Universitas Andalas, Padang,25163, west Sumatera, Indonesia
[2]Program Studi Farmasi, Universitas Dharma Andalas Padang, West Sumatera, Indonesia
[*]Corresponding author email. sefrianitakamal@gmail.com

ABSTRACT

Objective: This study aims to obtain the solubility of catechins in water through the solubilization mechanism and determine their stability

Methods: The research was conducted using the method of making spontaneous solubilization

Results: Thermodynamically stable 0.5% catechin W/A solubilization formulation can be formulated using the oil phase, namely Tween 80 (15% and 10%) as a surfactant, 15% propylene glycol and 10% glycerin and is quite stable against shaking (centrifugation) and testing. freeze-thaw or cycling test.

Conclusion: Good solubility of catechins in water by solubilization mechanism. Based on the characterization and stability testing of the formed catechin solubilization system, the solubilization system of catechins was obtained which was more stable.

Keywords: solubility, catechin, solubilization, stability

ABSTRACT_09

PHYSICAL STABILITY, PHOTOPROTECTIVE EFFECT, AND PRIMER IRRITATION TEST OF CREAM O/W LIME PEEL EXTRACT (*Citrus aurantifolia*) AS A SUNSCREEN

WARDIYAH[1], ULYA SAFRINA[1*], HARPOLIA CARTIKA[1]
[1]Department of Pharmacy, Poltekkes Kemenkes Jakarta II, DKI Jakarta, 10560, Indonesia
*Corresponding author email: ulya.syafrina@poltekkesjkt2.ac.id

ABSTRACT

Objective: Sunscreen is one of the skin protectors containing active substances that can actively absorb, scatter or reflect solar energy that penetrates the skin. Previous studies have shown that lime extract has an SPF value of 40.15 at a concentration of 300 g/mL and belongs to the category of ultra-protective sunscreen.The aims of this research was to discover the physical stability, photoprotective effect, and primer irritation of cream O/W lime peel extract as as sunscreen.

Methods: The cream formulations were prepared using different concentrations of lime peel extract (5%, 10%, and 15%). Physical stability test performed was cycling test, storage in high temperature (40°C±2°C), room temperature (25°±2°C), and low temperature (4°C±2°C). Then tested for SPF value using a UV/Vis spectrophotometer and primer irritation test using rabbits.

Results: All cream formulations have homogeneity, pH, viscosity, and dispersion values that meet the requirements. The SPF value of extracts and cream preparations gave SPF values above 15, indicating that the extracts and the three formulas had sunscreen protection activity in the ultra category. The SPF value and total phenol decreased in cold and hot storage, but were quite stable at room temperature storage. The results of the irritation test on rabbits showed moderate irritation in the base group and slight irritation in the extract group

Conclusion: Lime peel extract sunscreen cream has good physical stability, photoprotective effect in the ultra category, and mild to moderate level of irritation.

Keywords: *sunscreen, lime peel extract, SPF*

ABSTRACT_10

ANTIOXIDANT ACTIVITY OF *Zingiber officinalle* var rubrum AND *Curcuma* zanthorrhiza WITH DIFFERENT DRYING METHODS

DIAH KARTIKA PRATAMI[1]*, WIWI WINARTI[1], DESI NADYA AULENA[1], NOVI YANTIH, SHIRLY KUMALA[1]

[1]Faculty of Pharmacy, Universitas Pancasila, South Jakarta, DKI Jakarta, Indonesia, 12640

*Corresponding author email: d.kartika@univpancasila.ac.id

ABSTRACT

Objective: *Zingiber officinalle* var rubrum and *Curcuma zanthorrhiza* are the traditional medicine widely used in Indonesia to possess several health beneficial properties. Usefulness of traditional medicine mainly because the content of the active compounds and antioxidants. Traditional drying methods such as with the sunlight can lead decreased efficacy of herbal medicine. This study aims to determine the effect of drying methods on antioxidant activity of *Zingiber officinalle* var rubrum and *Curcuma zanthorrhiza* extract.

Methods: In this study, samples from Lembah Cisadane, Bogor, West Java, were dried with three drying methods: direct sunlight, room, and oven. Quality of extract was then measured for antioxidant activity with 1,1-diphenyl-2-picrylhydrazyl (DPPH) radical scavenging methods. Then the best type of drying methods was used to make spray drying extract, herbal drink and instant powder.

Results: The results showed that dried using an oven at 40˚C for 24 hours resulted in the highest radical scavenging activity with lower moisture content. Then the antioxidant activity of spray-drying *Zingiber officinalle* var rubrum and *Curcuma zanthorrhiza* extract shown the lower IC_{50} 79.88 and 197.50 ppm, respectively.

Conclusion: In conclusion, the drying methods might affect antioxidant activities. The microencapsulation protects bioactive compound and enhance the antioxidant properties of extract.

Keywords: *Zingiber officinalle* var rubrum, *Curcuma zanthorrhiza*, drying methods, DPPH, spray-drying

ABSTRACT_11

THE RELATIONSHIP OF KNOWLEDGE LEVEL WITH SELF-MANAGEMENT AND COMPLIANCE WITH DABETES MELLITUS DRUG USE IN GADING CLINIC, YOGYAKARTA JANUARY 2020 PERIOD

YOGA DWI SAPUTRA[1*], **NUR AINI WIDIASTUTI**[1]
[1]Program Studi Diploma III Farmasi, Akademi Farmasi Indonesia Yogyakarta
*Corresponding author email: yogadwisaputra@afi.ac.id

ABSTRACT

Objective: Diabetes Mellitus is a degenerative disease, which is one of the top ten diseases in Indonesia. Good knowledge will affect self-management and adherence to diabetes mellitus drug use. This study aims to determine the relationship between the level of knowledge and the accuracy of diabetes mellitus drug use and to determine the relationship between the level of knowledge and adherence to diabetes mellitus drug use at Gading Clinic Yogyakarta.

Methods: This type of research is an observational correlation study with a descriptive approach. Respondents in this study were patients with reconciliation with type 2 diabetes mellitus at the Gading Yogyakarta Clinic. Data collection using a questionnaire about knowledge related to diabetesmellitus, accuracy, and adherence to drug use by answering the questions provided. Data analysis was carried out by using the SPSS program with the Chi Square Test.

Results: This study shows that the results of the chi-square test between the level of knowledge and self-management show Asym. Sig 0.007 less than 0.05. The results of the chi-square test between the level of knowledge and drug adherence showed Asym. Sig 0.734 is more than 0.05.

Conclusion: Based on these results, it can be concluded that there is a relationship between the levelof knowledge and self-management and there is no relationship between the level of knowledge and adherence to medication use for type 2 diabetes mellitus patients at the Gading Clinic Yogyakarta.

Keywords: Diabetes Mellitus, Knowledge, Self-management, Compliance with drug use.

ABSTRACT_12

DOES ROSELLA FLOWER EXTRACT (*Hibiscus sabdariffa* Linn) INCREASE ERYTHROCYTE LEVELS FOR ANEMIC TEENAGERS?

SRI SUMARNI [1*], LULUK HANDAYANI [2], DONNY KRISTANTO[3]
[1]Poltekkes Kemenkes Semarang
[2]Magister Terapan Kebidanan, Poltekkes Kemenkes Semarang
[3]Badan Penelitian dan Pengembangan Kesehatan Magelang

*Corresponding author email: marninugroho@yahoo.com

ABSTRACT

Background: Teenager is a crucial event and vulnerable of anemia due to the occurrence of menstruation and rapid growth. Some of them have imbalance micro nutrition intake. Iron absorption is very good when consumed together with vitamin C such as Rosella flower.

Objective: The purpose of the study is to prove does the rosella flower has benefits to improve the level of erythrocytes for anemic teenager.

Method: Type of research true eksperiment with randomized pretest and posttest control group design. The sample number of 40 anemic teenager with inclusion criteria. There was 20 girls as an intervention groups given Rosella flower l extract of 279 mg and Fe 60 mg tablets and 20 teenagers as control groups given Fe 60 mg tablets and placebos. The intervention was done for 14 days. Analysis of data with t-test statistics.

Results: The results showed an average difference in the erythrocyte number of intervention groups was higher compared to the control group (0.77 million/mm3 and 0.35 million/mm3 respectively). There was a statistically difference in the erythrocyte number of anemic teenager between the intervention group and the control group with a p-value= 0.001.

Conclusion: Consuming extract of Rosella flower (Hibiscus Sabdariffa, Linn) effectively increases the erythrocytes level of anemic teenager.

Keywords: Rosella Flower, Erythrocyte, Anemia, teenager

ABSTRACT_13

THE EFFECT OF THE CONCENTRATION OF *BANGLE* ETHYL ACETATE FRACTION TOWARD SPF VALUE IN CREAM FORMULATION *TEMUGIRING* EXTRACT

ANISA LAILATUSY SYARIFAH[1*], ANDINI[1]
[1]Akademi Farmasi Putra Indonesia Malang, Malang, 65123
*Corresponding author email: nisa17.as@gmail.com

ABSTRACT

Objective: *Bangle* (*Zingiber cassumunar*) extract contains several groups of polar and non-polar secondary metabolites compounds. With the fractionation, the polar and non-polar compounds can be separated better. The concentration of the *bangle* ethyl acetate fraction added in the formulation of the *temugiring* (*Curcuma heyneana*) extract cream formulation must be determined precisely since it may affect the SPF (Sun Protection Factor) value. This research aims to determine the effect of concentration variations of the *bangle* ethyl acetate fraction on the SPF value of the *temugiring* ethanol extract cream.

Methods: In this research, *temugiring* extract and *bangle* extract were obtained by maceration method employing ethanol as solvent, while the *bangle* ethyl acetate fraction was obtained from the *bangle* extract fractionation using n-hexane, ethyl acetate, methanol, and water as solvent. Then the *bangle* ethyl acetate fraction obtained was formulated in cream formulations of *temugiring* extract formulas 1, 2, and 3 with variations in the concentration of *bangle* ethyl acetate fraction 2%; 3%; and 4%. Furthermore, the determination of the SPF value was carried out using the UV-Vis spectrophotometre method.

Results: Based on the research done previously, variations in the concentration of the *bangle* ethyl acetate fraction resulted in different SPF values for each cream formula. The SPF value for formulas 1, 2, and 3 was 6.445; 6.803; and 9.704. One Way ANOVA test produced a sig value of 0.037.

Conclusion: Thus, it can be concluded that the concentration of the *bangle* ethyl acetate fraction would directly affect the SPF value.

Keywords: *bangle*, *Curcuma heyneana*, *temugiring*, sun protection factor, *Zingiber cassumunar*

ABSTRACT_14

IN VITRO RELEASE STUDY OF CURCUMIN- POLYVINYL ALCOHOL-CHITOSAN HYDROGEL

NOVI YANTIH[1]*, ESTER PANTAU[1], SHIRLY KUMALA[1], DESI NADYA AULENA[1], DIAH KARTIKA PRATAMI[1]

[1]Faculty of Pharmacy, Universitas Pancasila, Jakarta, Indonesia, 12640

*Corresponding author email: yantih.novi@univpancasila.ac.id

ABSTRACT

Objective: The aims of this research were to make curcumin hydrogel using polyvinyl alcohol and chitosan polymer as carrier matrix and to study the release of curcumin in vitro from polyvinyl alcohol-chitosan hydrogel matrix at 3 pH.

Methods: Synthesis of hydrogel using microwave irradiation and assay of curcumin in the release test using high performance liquid chromatography method. In vitro release of curcumin in dissolution media with pH 1,2, 4.5, and 6.8 was tested at 10, 15, 30, 45, and 60 minutes.

Results: The obtained polyvinyl alcohol-chitosan hydrogel containing curcumin is orange in color, has no odor and has a chewy texture. The highest percentage of curcumin release as much as 76.17% occurred in the hydrogel which was irradiated at 60% power for 1 minute and released at a pH of 1.2. The lowest percentage of curcumin release as much as 33.55% occurred in the hydrogel which was irradiated at 80% power and released at a medium pH of 6.8.

Conclusion: Microwave irradiated PVA-chitosan hydrogel can be developed as a new drug delivery matrix for controlled release drug dosage forms and it is necessary to conduct an in vivo release study to determine its bioavailability profile.

Keywords: curcumin, polyvinyl alcohol, chitosan, dissolution.

ABSTRACT_15

UTILIZATION OF ROSELLA FLOWER PETALS (*Hibiscus Sabdariffa, Linn*) EXTRACT TO INCREASE HEMOGLOBIN AND HEMATOCRIT OF FEMALE ADOLESCENTS WITH ANEMIA

LULUK HANDAYANI[1*], SRI SUMARNI[2], DONNY KRISTANTO MULYANTORO[3]
[1] Master of Applied Midwifery, Poltekkes of Health Ministry Semarang
[2] Poltekkes of Health Ministry Semarang
[3] Research and Development Center of Health Magelang
Corresponding author email: lulukhandayani82@gmail.com

ABSTRACT

Objectives : This research to prove provision benefits of Rosella flowers petal extract (Hibiscus Sabdariffa, Linn) to increase hemoglobin and hematocrit levels on female adolescent with anemia.

Method: The type of research is true experiment with randomized pretest and posttest control group design. Totals of samples was 40 female adolescaent with anemia is according to the inclusion and exclusion criteria divided by randomization sampling technique, consisting of two groups is intervention groups dan control groups. Data analysis used paired t-test statistical test to determine the difference between pretest and posttest in each group and independent t-test to determine the difference between the different groups**.**

Results: The average difference in hemoglobin and hematocrit levels in the intervention group was higher than the control group. The average difference in hemoglobin levels in the intervention group was 1.8 g/dL and the control group was 0.9 g/dL, ($p < 0.05$), The difference in the average hematocrit level in the intervention group was 5.6% and the control group was 2.7% ($p < 0.05$).

The researchers also found significant statistics differences between hemoglobin and hematocrit levels of female adolescents from intervention and control groups with p-value < 0.05.

Conclusion : The combination of Rosella flower petal extract (Hibiscus Sabdariffa, Linn) and Fe tablet was effective in increasing hemoglobin and hematocrit levels on female adolescent with anemia.

Keywords : Rosella Petals, Hemoglobin, Hematocrit, Anemia

ABSTRACT_16

ANTIOXIDANT ACTIVITY OF PEEL-OFF MASK CONTAINING COFFEE (*Coffea arabica*) AND TURMERIC (*Curcuma longa*) USING DPPH METHOD

REGIA DESTY RAKHMAYANTI[1*], YOUSTIANA DWI RUSITA[2]
[1]Major of Food and Pharmaceutical Analysis, Poltekkes Kemenkes Surakarta, Indonesia
*Corresponding author email: regiadesty@gmail.com

ABSTRACT

Objective: The purpose of this study was evaluated the quality parameters and analyzed the antioxidant activity of peel-off mask containing coffee (*Coffea arabica*) and turmeric (*Curcuma longa*).

Methods: This research has made 3 mask formulas, each of which contains coffee and turmeric. The formula made was combination of coffee and turmeric with ratio of each formula F1 (10:0), F2 (5:5) and F3 (0:10)**.** The quality parameters that has been tested are organoleptic, homogenity, pH, spreadability and drying time. The antioxidant activity was determined by DPPH method.

Results: The result of organoleptic parameters for FI was dark brown with coffee aroma and consistency like gel, FII was yellowish brown with spiced coffee aroma and consistency like gel and FIII was turmeric yellow with turmeric aoma and consistency like gel. The result of homogeneity test of all the formula was homogeny. The result of pH value of all the formula was 5.The drying time of each formula was FI 27.36 min; FII 28.38 min; FIII 28.54 min. The antioxidant activity are showed by IC50 value. The value of IC50 for each formula F1 (37.277 ppm), FII (34.757 ppm) and FIII (36.194 ppm). The test result showed that all the formula has verystrong antioxidant activity.

Conclusion: The face mask containing coffee and turmeric has the potential to be used as antioxidant and its meet the standard of quality quality parameter.

Keywords: face mask, antioxidant, coffee, turmeric

ABSTRACT_17

DEVELOPMENT CRACKERS OF SHALLOT PEEL FLOUR (*Allium cepa* L.) SUBSTITUTION

ARUM DWI AGUSTIN [1], RATIH PURWASIH [2*], ANISA PUTRI ARIANTI [3], AVIDA HIKMATUL MALIKAH [4]

[1,2,3,4] Pharmaceutical and Food Analysis Department of Health Polytechnic of Surakarta, Surakarta, 57127, Indonesia

*Corresponding author email: rpurwasih.515@gmail.com

ABSTRACT

Objective: There are so many plants that are used by the people of Indonesian either as food or medicine, one of which is shallots (*Allium cepa* L.). The use of shallots is limited to the meat, while the peel is not used. One of the ingredients of red onion skin (*Allium cepa* L.) is a flavonoid that has the potential to be an antioxidant. Utilization of shallot peel (*Allium cepa* L.) is carried out by making functional food in the form crackers.

Methods: The aim of this study were to determine the of flavonoids contents and antioxidant activity in shallot peel flour crackers (*Allium cepa* L.). This type of research is quantitative with a descriptive research design. The method used in this research is quantitative analysis using the UV-Vis Spectrophotometer instrument at a wavelength of 418 nm for determining contents of flavonoids, and 518 nm for antioxidant activity.

Results: The water content test result of the flour and shallots peel flour crackers (*Allium cepa* L.) were 6.17 ± 0,08% and 2.0 ± 1.0%. The test result for the ash content of shallots peel flour (*Allium cepa* L.) was 0.64 ± 0.026%. The result of the acid insoluble ash content test of shallots peel flour *crackers* (*Allium cepa* L.) was 0.1 ± 0.14%. The flour and shallots peel flour crackers (*Allium cepa* L.) positive for flavonoids compound as indicated by the red and orange qualitative test result. The results showed the flavonoid contents of shallots peel flour crackers (*Allium cepa* L.) were 7.16 ± 0.704%. The IC_{50} value of shallots peel flour crackers (*Allium cepa* L.) is 243.45 ppm which is included in the medium level antioxidant.

Conclusion: Shallots peel flour crackers fulfill the SNI standard with water content was 2.0 ± 1.0% and the ash content was 0.64 ± 0.026%. The sallots peel flour crackers have medium level antioxidant activity with IC50 value was 243.45 ppm.

Keywords: Shallots peel flour, crackers, flavonoid levels, antioxidant activity

ABSTRACT_18

FORMULATION AND DETERMINATION OF QUALITY PARAMETERS OF PROPOLIS EXTRACT MICROCAPSULE TABLETS FROM *Tetragonula sapiens*

DIAH KARTIKA PRATAMI[1], DENI RAHMAT[1], RIZKA NOOR AMALIA[1], HERI HERMASNYAH[2], MISRI GOZAN[2,3], MUHAMAD SAHLAN[2,3]*

[1]Lab of Pharmacognosy, Faculty of Pharmacy, Universitas Pancasila, South Jakarta, DKI Jakarta, 12640, Indonesia, [2]Department of Chemical Engineering, Faculty of Engineering, Universitas Indonesia, Depok, West Java, 16424, Indonesia, [3]Research Center for Biomedical Engineering, Faculty of Engineering, Universitas Indonesia, Depok, West Java, 16424, Indonesia.

*Corresponding author email: sahlan@che.ui.ac.id

ABSTRACT

Objective: The study aimed to develop the dry powder of propolis microcapsules into tablet preparations.

Methods: The tablet preparation was developed by direct compression method using Avicel PH 102 (filler-binder-disintegrant) with variations in Avicel PH 102 concentration of 50%, 75%, and 100%, respectively. Each of the tablets from these formulations was determined by the quality parameters of the preparation.

Results: The results showed that the dry powder microcapsules had a yellow-brown powder physical form, flow time of 0.413g/second, the compressibility of 18.56%, and fine powder was 80.04%. Out of the three formulae produced, formula III was the best with a tablet diameter of 11.11±0.01mm, the thickness of 5.26±0.03mm, disintegration time of 9.40±0.14 minutes, hardness of 15.46±0.84 kg/cm^2, weight uniformity of 506.74±2.86 mg, friability of 0.28±0.03%. Meanwhile, Pb and Cd metal contamination were not detected, microbial contamination with Total Plate Number gave (ALT) 4.20 x 10^2 colonies/g, Yeast Mold Number 1.18 x 10^2 colonies/g, and the water content of the tablet was 5.75%. The evaluation results also showed that formula III with a 100% Avicel PH 102 concentration had a relatively better disintegration time than others.

Conclusion: Propolis extract microcapsule tablet has been success developed. The best formula was used 100% Avicel PH 102 concentration.

Keywords: *microcapsules, propolis, formulation, tablet, direct compress, Avicel pH 102, quality parameters.*

ABSTRACT_19

EVALUATION OF THE PHYSICAL PROPERTIES OF INDONESIAN TRADITIONAL BOREH CREAM PREPARATION

INDRI KUSUMA DEWI[1*], ADDINIATI SHOFI W.M[1], EMY SURYANI[1], ATHANASIA BUDI ASTUTI[1], NUR RACHMAT[1], INDARTO[1]

[1]PUI Pujakesuma, Poltekkes Kemenkes Surakarta, Jl. Ksatrian No. 2 Danguran Klaten, Central Java, 57425, Indonesia

*Corresponding author email: indri.kusumadewi@gmail.com

ABSTRACT

Objective: Boreh is one of the herbs used by Balinese people for generations for health. The use of boreh is directly applied to the body that is sick and warms the body. The active ingredients of boreh used in this study were kencur rhizome, ginger rhizome, Javanese chili, nutmeg, galangal rhizome, and cinnamon. The cream is a semisolid preparation in an emulsion containing not less than 60% water and intended for external use.

Methods: This study used a descriptive research design. This research was conducted with physical tests, including organoleptic tests, homogeneity tests, pH tests, dispersibility tests, and adhesion tests on cream preparations.

Results: The results of the research on the cream preparations showed that the organoleptic test parameters had a light brown color, aromatic odor, semisolid form, and soft texture, the homogeneity test on the cream preparations showed homogeneity, the pH test results were 7.0, the dispersion power was 2.7 – 5.0 cm, and the results of the adhesion test were 1.13 seconds.

Conclusion: This study concludes that the physical test of boreh cream includes organoleptic test, homogeneity test, pH test, dispersibility test and viscosity test that fulfills the requirements of a good cream preparation, except that the adhesion test does not meet the requirements of a good cream preparation.

Keywords: boreh, cream, physical test

ABSTRACT_20

THE ROLE OF AUDIO HYPNOTHERAPY FOR ANXIETY PREGNANT WOMAN IN COVID-19 PANDEMIC

ROSYATI PASTUTY[1*], WILMA[1], NURUL KOMARIAH[2]
[1]Professional Education of Midwife Study Program Health Polytechnic Palembang Ministry of Health, Palembang 30126, Indonesia
[2]Diploma Program in Midwifery, Health Polytechnic Palembang Ministry of Health, Palembang 30126, Indonesia
*Corresponding author email: rosyatipastuty@poltekkespalembang.ac.id

ABSTRACT

Objective: The Purpose of the study was analyzed the role of Audio Hypnotherapy for anxiety pregnant woman in Covid-19 Pandemic.

Methods: This study was pre-experimental design with one group pre-test and post-test design. Total of the population were 70 pregnant women and sample were 70. Collecting data used PRAQ-R2 (Pregnancy-Related Anxiety Questionnaire–Revised). Questionnaire analyzed using Paired Samples t-test.

Results: This study showed that the level of anxiety pregnancy women decreased. The level of anxiety before listening Audio Hypnotherapy was and Standard Deviation was 6,028, Whereas after listening Audio during 2 weeks was 20,96 and SD 5,014. This Research told us was a difference in the average level of anxiety of pregnant women before and after listening to audio hypnotherapy (p=0,001).

Conclusion: Audio Hypnotherapy was effective to decrease levels of anxiety pregnant women in Covid-19 Pandemic.

Keywords: Anxiety, Pregnant Woman, Audio Hypnotherapy

ABSTRACT_21

THE EFFECT OF HYPNOTHERAPY ON THE ANXIETY OF PREGNANT WOMEN AT HIGH-RISK IN COVID-19 PANDEMIC

ANIDA IZATUL ISLAMI [1*], **TRIANA SRI HARDJANTI** [2]
[1]Postgraduate Midwifery, Health Polytechnic of the Ministry of Health, Semarang, 50239, Indonesia,
[2]Health Polytechnic of the Ministry of Health of Semarang, Semarang, 50239, Indonesia
*Corresponding author email: anidaizatul@gmail.com

ABSTRACT

Objective: The purpose of this study was to determine the effect of hypnotherapy on the anxiety of pregnant women at high risk in the Covid-19 pandemic.

Methods: Hypnotherapy is a therapy that is carried out to minimize the anxiety of pregnant women by helping them reach relaxation. The study was conducted using a single case experimental design method, the paradigm used was A (measurement) – B (intervention) – A (measurement) carried out in Cieurih Village, Tasikmalaya City Indonesia in July-August 2021. This intervention was given 3 sessions in 1 week for 40-50 minutes. The research data were analyzed by quantitative analysis (high-risk factors, high-risk distribution of pregnant women's anxiety, HARS score results) and qualitative analysis (descriptive analysis in the form of observation). This research process has been through informed consent to respondents.

Result: After 3 sessions of hypnotherapy for each sample showed an effect. This can be seen from the total number of anxiety scores after the final session of therapy is given. At the end of the session, 2 pregnant women experienced a category decrease to mild anxiety, namely Mrs N and Mrs Q. The other three pregnant women did not experience a category decrease but experienced a decrease in anxiety scores. However, all pregnant women who were the sample of the study experienced a decrease in anxiety scores.

Conclusion: Hypnotherapy affects reducing the anxiety of pregnant women at high risk in the Covid-19 pandemic.

Keyword: Anxiety; Pregnant Women At High-Risk; Hypnotherapy

ABSTRACT_22

UTILIZATION OF COMPLEMENTARY SERVICE TRAINING MEDIA FOR MIDWIVES IN HEALTH CARE CENTERS IN BALI

NI KOMANG YUNI RAHYANI[1*], KH. ENDAH WIDHI ASTUTI[2], NI KETUT SOMOYANI[1]

[1] Jurusan Kebidanan, Poltekkes Kemenkes Denpasar, Bali, Indonesia

[2] Jurusan kebidanan, Poltekkes Kemenkes Surakarta, Jawa Tengah, Indonesia

*Corresponding author email : yunirahyani@yahoo.co.id

ABSTRACT

Objective: Conventional midwifery services are known to have not met the expectations of clients, so additional services are neededin the form of complementary. Telling is healing and touching is healing as the motto of complementary midwifery services. The purpose of writing is to provide information about the effectiveness of training media in the form of videos and textbooks for midwives in health care centers.

Methods: The research design is a mixed method, in the form of quantitative and qualitative. The pretest and posttest with control group design involved 65 midwives who served in six health care centers in Bali Province. There were two intervention groups using video and text book and one control group. The research instrument was a self-reported questionnaire of knowledge, motivation and skill observation sheets. Univariate, bivariate and multivariate data analysis with STATA.

Results: Characteristics of respondents are homogeneous. There was a significant difference between the pretest and posttest scores in the intervention group ($p<0.05$). The characteristics of midwives were not significantly associated with an increase in knowledge, motivation and skills scores in complementary services ($p>0.05$). There was no significant relationship to the increase in motivation scores in the group of midwives who received video intervention ($p>0.05$). There was no significant relationship to the elevated in motivation scores in the group of midwives who received video intervention ($p>0.05$). As much as 72% increase in the skill score of midwives is influenced by the training media and the characteristics of the midwife simultaneously.

Conclusion:Clients and their families/partners consider that the complementary services provided by midwives are very helpful in increasing comfort andsatisfaction with midwifery services.

Keywords: complementary services; midwifery; mixed methods; training media

ABSTRACT_23

THE EFFECTIVENESS OF RORANO (TRADITIONAL POTIONS) ON REDUCING MENSTRUAL PAIN IN VOCATIONAL SCHOOL STUDENTS IN TERNATE CITY

SAHNAWI MARSAOLY[1]*, NUZLIATY T. DJAMA[2]
[1,2]Department of Midwifery - Poltekkes Kemenkes Ternate, Post Code 97711, Indonesia,
*Corresponding author email: sahnawin64@gmail.com

ABSTRACT

Objective: The purpose of this study was to determine how to use rorano and its effectiveness in reducing menstrual pain in vocational school students.

Methods: This research is descriptive with a cross sectional method. Data retrieval with questionnaires distributed through the google form application, and interviews. Samples were taken as many as 409 respondents, who experienced menstrual pain and used rorano during menstruation.

Results: Most respondents were female students aged 16 (43.3%), who were in grade 10 (38.3%), menarche at the age of 13 years (30.3%), and experienced dysmenorrhea in the first year of menstruation. (40.3%).

Conclusion: There are three variables that are significantly related to the reduction of menstrual pain, namely, routine, influence and family support.

Keywords : rorano, menstrual pain, vocational school students

ABSTRACT_24

FULFILLMENT OF SLEEP QUALITY OF CANCER PATIENTS THROUGH BENSON MEDITATION RELAXATION TECHNIQUE

MAS'ADAH[1*], SITTI RUSDIANAH JA'FAR [1]

[1]Mataram Nursing Departement Health Polytechnic, Mataram Ministry of health, Health V/10 East Pajang Mataram, 83121, West Nusa Tenggara, Indonesia [2] Mataram Nursing Departement Health Polytechnic, Mataram Ministry of health, Health V/10 East Pajang Mataram, 83121, West Nusa Tenggara, Indonesia

*Corresponding author email: Masadah.1979@gmail.com

ABSTRACT

Objective: The purpose of this study was to analyze the effectiveness of giving Benson meditation relaxation technique to the fulfillment of sleep quality in cancer patients at General Hospital of West Nusa Tenggara Province.

Methods: The design of this research is Quasy Experiment (Two-Group Pre – Post Test Design with control). The population is cancer patients who are being treated at General Hospital of West Nusa Tenggara Province who experience sleep disorders. The sampling technique uses the accidental sampling method, which is 30 people. The independent variable in this study was Benson relaxation therapy and the dependent variable was the sleep quality of cancer patients. Data were taken through open and closed interviews using the PSQI instrument and then analyzed using the Wilcoxon sign rank.

Results: The results of the statistical test showed that Benson's meditation relaxation p value = 0.003 meaning a significant value ($p < 0.05$) and the control group p value = 1.00 which means a significant value ($p > 0.05$). This means that there is an effect of giving benson meditation relaxation technique on the sleep quality of cancer patients which can be translated into 7 characteristics.

Conclusion: Benson meditation relaxation technique affects thought processes that are transmitted to the hypothalamus which will produce corticotropin Releasing Hormone Factor (CRF) causing the body to relax and cause feelings of pleasure so that the sleep needs of cancer patients will be met. It has an effect on the fulfillment of sleep quality in cancer patients.

Keyword : Benson meditation relaxation, sleep quality, cancer

ABSTRACT_25

THE EFFECT OF SWEDISH MASSAGE ON EMOTIONAL AND PSYCHOLOGICAL PROBLEMS OF CHILD WITH CANCER IN THE EARLY PERIOD OF CHEMOTHERAPY TREATMENT IN RCAK BANDUNG, 2018

DEWI UMU KULSUM[1]*, RINI MULYATI[2]
[1-2]STIKes Jenderal Achmad Yani, Cimahi, 40633, Indonesia
*Corresponding author email: dewiumukulsum81.stikay@gmail.com

ABSTRACT

Objective: This study aims to evaluate the effect of Swedish Massage therapy on emotional and psychological problems in children with Cancer in the early period of chemotherapy treatment at RCAK Bandung for the period September – November 2018.

Methods: The research design was pre-experimental with a "pre-test post-test two-group design" approach (before and after). The number of samples in this study was 17 children. This study uses The Stirling Children's Well-being Scale (SCWBS). SMT treatment for 20-30 minutes, two times a week for four weeks. The statistical test used was the paired t-dependent test and the Wilcoxon test.

Results: The results of statistical tests before and after the intervention with the dependent T-test obtained p-value = 0.000. There are differences in the emotional and psychological values of children with Cancer before and after the intervention.

Conclusion: There is a significant effect on the effectiveness of Swedish Massage Therapy on the emotional and psychological aspects of children with Cancer at RCAK Bandung with a P-value = 0.000.

Keywords: Swedish Massage Therapy, Emotional Problems, Psychological Problems, Children, Cancer

ABSTRACT_26

CORRELATION OF EMOTIONAL REGULATION WITH QUALITY OF LIFE IN MOTHERS CARING FOR CHILDREN WITH CEREBRAL PALSY IN SANGGAR PERMATA HATI SUKOHARJO REGENCY

LUH SANDYA NATASHA SPARINGGA[1*], LIS SARWI HASTUTI[2]
[1]RSIA Puri Bunda, Denpasar, 80116, Indonesia [2]Occupational Therapy Department, Health Polytechnic of Surakarta, Surakarta, 57173, Indonesia
*Corresponding author email: sandya.sparingga@gmail.com

ABSTRACT

Objective: Mothers who care for a child with cerebral palsy are the primary caregivers. Disability conditions of the children, have the potential to cause a burden for the mother. That role is vulnerable to making mothers have psychological distress and even a low quality of life. Emotion regulation is one of the occupational components that feels necessary to note because the ability to regulate emotions becomes important in difficult situations, not least the demands in caring for children. The purpose of this study was to find out the correlation of emotion regulation with quality of life in mothers who care for children with cerebral palsy in the Sanggar Permata Hati Sukoharjo Regency.

Methods: This research is a quantitative non-experimental correlational type with a cross-sectional design. The sampling technique used is purposive sampling. The sample in this study was 18 mothers who treated children with cerebral palsy in Sanggar Permata Hati Sukoharjo Regency. The data were taken using the Sociodemographic Questionnaire, Emotion Regulation Scale (Modification), and WHOQOL-BREF questionnaire with interval data scale type. The analysis method used is a parametric test using the Pearson Correlation test, with the help of the SPPS version 21 program.

Results: Research shows an association of emotion regulation with average quality of life (r=0.522, p=0.026). There is no correlation between emotion regulation and the domain of physical health (r=0.349, p=0.155). There is no correlation between emotion regulation and the domain of psychological well-being (r=0.454, p=0.058). There is a correlation between the regulation of emotions and the domain of social relationship ships (r=0.523, p=0.026). And there is a correlation of emotion regulation with the environmental domain (r=0.490, p=0.039).

Conclusion: There is a correlation between emotion regulation and average quality of life. There is no correlation between emotion regulation and the domain of physical health. There is no correlation between emotional regulation and the domain of psychological well-being. There is a correlation between the regulation of emotions and the domain of social relationships. And there is a correlation of emotion regulation with the domain of the environment.

Keywords: mothers who care for a child with cerebral palsy, emotion regulation, quality of life.

ABSTRACT_27

EFFECTIVENESS OF USE OF FLEXIBLE PROSTHESIS IN TRANSFEMORAL AMPUTEE

NUR RACHMAT[1]*, BAMBANG KUNCORO[2]
Poltekkes Kemenkes Surakarta, Surakarta, 5712, Indonesia
*Corresponding author email: nurrachmat@gmail.com

ABSTRACT

Objective: Transfemoral amputees experience many difficulties in carrying out daily activities. One of the devices that can be used in above-knee amputation patients is a flexible prosthesis. The use of prostheses in post-amputation patients can help with activities, one of which is independence in self-care, mobility, and locomotion. Based on the above researchers conducted a study with the research title "Effectiveness of Using Flexible Prosthesis in Transfemoral Amputee.

Methods: it is a quasi-experimental and one group pre and post-test research design, namely one treatment group with two measurements. The treatment group was instructed to wear a flexible artificial leg for one month in a row, without removing it except during bathing and sleeping. Then a post-test was carried out by measuring the functional level of independence of the treatment group. The study was conducted at PT Kuspito Orthotic Prosthetics and the time of the study was carried out in 2021. The population of this study was users of flexible prostheses at PT Kuspito Ortotik Prosthetic. The sample of this study were flexible prostheses users at PT. Kuspito prosthetic orthotic that meets the criteria as many as 30 users. The sampling technique was purposive sampling. The measuring instrument used was the Functional Independence Measure (FIM) questionnaire.

Results: Age range of patients of 26-64 years, gender is found to be more male than female. ii The Shapiro-Wilk category of independence level from the pre-test results has a significance value of 0.066, so it is said that the data is normal. obtained the value of Sig. (2-tailed) is 0.000 where the results are $p < 0.05$ there is a significant difference in the value of the level of independence between the results of the pre-test and post-test.

Conclusion: it can be concluded that there is a significant difference in the results that using a flexible artificial leg can increase the level of independence in above-knee amputation patients in carrying out daily activities.

Keywords: Effectiveness, Flexible Prosthesis, Transfemoral Amputee, independence level, Indonesia

ABSTRACT_28

EARLY DETECTION OF SCOLIOSIS IN CHILDHOOD, EARLY ADOLESCENCE, AND LATE ADOLESCENCE

SUGIONO[1], NOERDJANAH[2*]
Department of Physiotherapy, Health Polytechnic Ministry of Health, Surakarta Indonesia
Corresponding author email: djanah1970@gmail.com

ABSTRACT

Objective: The purpose of this study was to detect the incidence of scoliosis in childhood, early adolescence and late adolescence.

Methods: Type of research is to use observational research with a quantitative descriptive design. Respondents in this study were childhood, early adolescence and late adolescence with a total sample of 229 people. Results Measurement of scoliosis using a scoliometer. Having done the measurement of scoliosis followed by recording and assessing the level of prevalence / incidence of scoliosis.

Results: From the measurement of scoliosis in 229 samples, the results obtained from the measurement of scoliosis obtained respondents who did not have scoliosis 165 people (72.1%) and obtained respondents who experienced mild scoliosis 64 people (27.9%).

Conclusion: From the measurement results obtained, it can be concluded that 64 people (27.9%) experienced mild scoliosis, while 165 respondents (72.1%).

Keywords: early detection of scoliosis, childhood, and adolescence

COVER HALAMAN PENUTUP

ISBN 978-623-98729-2-2

Health Polytechnic Surakarta Health Ministry, Indonesia
2021