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PROCEEDING BIENNIAL INTERNATIONAL CONFERENCE SAFE COMMUNITY

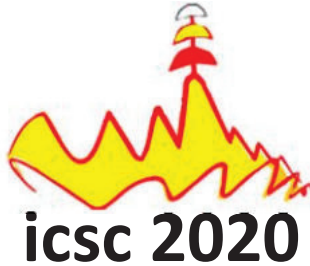
Bandar Lampung, December 10th - 11th, 2020

**Family Empowering in Safe Community for
Health Sustainable Free from COVID 19**



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Politeknik Kesehatan Tanjungkarang





PROCEEDING

Biennial International Conference Safe Community

Family Empowering In Safe Community For Health Sustainable
Free From Covid 19

Bandar Lampung, December 10th – 11th, 2020

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Editorial Staff:

Jl. Soekarno Hatta No. 6 Bandar Lampung, Lampung, Indonesia
Phone : +62 721 783 852 Faximile : +62 721 773 918
Handphone +62 852 6945 9111
Website <http://icsc.poltekkes-tjk.ac.id/>
Email: icsc@poltekkes-tjk.ac.id



PREFACE

As a health education institution that prepares vocational health personnel consisting of several types of vocational health workers, such as nurses, midwives, health analysts, sanitarians, dental nurses, nutritionists, pharmacist assistants, and dental technicians, giving a large enough role to improve health in the community, through the activities of the Tri Dharma Perguruan Tinggi.

Following the vision and mission of the Poltekkes Kemenkes Tanjung Karang to carry out the Tri Dharma of Higher Education through education, research and community service efforts, these efforts are carried out focusing on safety and community safety (Safe Community) in the health sector, for this reason, Poltekkes Kemenkes Tanjung Karang conducts an international conference every two years which themed Safe Community. The conference theme will be adapted to the conditions and situations in that year. This year, the COVID 19 issue is the first issue to be appointed as a virtual conference topic.

The outbreak of the COVID 19 outbreak has troubled the whole world including Indonesia, the Indonesian government has announced the coronavirus (COVID-19) outbreak in this country as a national disaster, a Non-Natural Disaster. This epidemic has resulted in changes in the structure of life in society, as a whole, not only changes in the health sector but, the socio-economic life of the community has also experienced a downturn.

Facing the COVID 19 Pandemic requires a high level of awareness from the public for efforts to prevent and spread it, starting from the family structure. One of the functions of the family is to maintain health, so the most effective prevention of the spread of COVID 19 is starting from the family, the family as the smallest unit of society needs support from health workers as preventive, promotive, curative and rehabilitative service providers.

Poltekkes Kemenkes Tanjung Karang is committed to participating in community/family preparedness efforts to face COVID 19, community preparedness in the form of involvement in pre-outbreak assessment and planning, responding during crises, and assisting mitigation throughout the recovery phase. As an educational institution with research excellence "Safe community" determines the theme of the 2020 international conference with the theme "Family Empowering in Safe community for Health Sustainable free from COVID 19"

Bandar Lampung, December 2020

Warjedin Aliyanto, SKM., M.Kes

Director

Politeknik Kesehatan Tanjungkarang

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Biennial International Conference Safe Community

**Family Empowering In Safe Community For Health Sustainable
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Bandar Lampung, December 10th – 11th, 2020

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EFFECTIVENESS OF ROBOTICS FALL PREVENTION PROGRAM AMONG ELDERLY IN SENIOR HOUSINGS, BANGKOK, THAILAND: A QUASI-EXPERIMENTAL STUDY

Natthawadee Maneeprom^{1*}, Surasak Taneepanichkul¹, Alessio Panza¹, Areerat Suputtitada²

¹College of Public Health Sciences, Chulalongkorn University, Bangkok 10330, Thailand

²Department of Rehabilitation Medicine, Faculty of Medicine, Chulalongkorn University, Bangkok 10330, Thailand

*Email correspondence: smoothycherry@gmail.com

ABSTRACT

This study aimed at investigating the effectiveness of a robotic fall prevention program on knowledge, exercises, balance, and incidence of falls among elderly in senior housings. This is a quasi-experimental study. Sixty-four elderly in two senior housings in Bangkok with Barthel Index scale ≥ 12 , who had either at least one fall experience in the past 12 months and/or had Timed Up and Go (TUG) test ≥ 20 seconds were recruited and purposively assigned to the intervention group (received a small robot-installed fall prevention software, personal coaching, and handbook, $n=32$) and control group (received only handbook, $n=32$). Outcomes were knowledge score evaluated by structured questionnaire through face-to-face interviews, number of exercises measured by self-recorded diary, and balance score assessed by TUG and Berg Balance Scale (BBS). The incidence of falls was assessed by face-to-face interviews. Both groups were assessed at baseline, 3rd, and 6th month after the intervention. There was a statistically significant improvement in knowledge mean score at 6th month in both the groups. However, the intervention group showed faster increase in knowledge mean score than the control group at 3rd month ($P < 0.01$). The intervention group showed a statistically significant higher number of exercises than the control group at 3rd and 6th month ($P < 0.05$). There was no statistically significant difference on TUG and BBS mean scores between the two groups at baseline, 3rd, and 6th month. However, the intervention group showed a statistically significant improvement in TUG and BBS at 6th month post-intervention ($P < 0.01$). There was one fall reported in the control group. The robotic fall prevention program increased knowledge on fall prevention and promoted exercises and balance among elderly in senior housings.

Keywords: fall prevention robot, elderly, Timed Up and Go test, Berg Balance Scale, Thailand, Senior housing



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A SCARY FEEDBACK BETWEEN HIV-AIDS WITH LUNG TUBERCULOSIS IN MARIAT HEALTH CENTER, SORONG DISTRICT

Linda Augustien Makalew^{1*}, Elna Vieke Rambli¹, Hendra Yafet Windesi²

¹Lecturer of Health Analyst, Polytechnic of Health, Jl. R. W. Monginsidi Malalayang Manado, Indonesia 95263

²Civil Servants at Mariat Health Center, Sorong Regency Indonesia 98414

*Email correspondence: linda.a.makalew@gmail.com

ABSTRACT

People with HIV / AIDS are very vulnerable to diseases related to immunity so that the disease will become chronic and can even cause death. One disease that is very familiar is Lung Tuberculosis (TB). **Method:** This study aims to identify the presence of Mycobacterium tuberculosis in HIV sufferers at Mariat Health Center in Sorong Regency. This type of research is descriptive by taking data on HIV sufferers during 2018 at Mariat Health Center in Sorong Regency, which amounted to 18 (eighteen) people. **Results and Discussions:** 4 (four) people (22%) of HIV sufferers have been infected with Mycobacterium tuberculosis. It is recommended that competent officers can more intensively provide counseling to HIV sufferers to pay more attention to clean and healthy living. **Conclusions:** more people with HIV-AIDS attachment to Lung Tuberculosis is very large at 22%.

Keywords: HIV/AIDS; Mycobacterium tuberculosis.



NURSE SATISFACTION AND PATIENT SATISFACTION AFTER BEDSIDE HANDOVER

Idawati Manurung^{1*}, Giri Udani¹

¹Nursing Programs, Tanjungkarang Health Polytechnic, Bandar Lampung, Lampung, Indonesia

*Email correspondence: idawati.manurung@poltekkes-tjk.ac.id

ABSTRACT

While in the hospital, patients can experience a process of handover between inpatient rooms and between shifts. The purposes of this research were to analyze the differences of the completeness of handover process, nurse satisfaction and patient satisfaction before and after bedside handover was implemented, to analyze the effect of handover completeness with nurse and patient satisfaction. This type of quantitative research used a quasi-experimental design with dependent t-test and independent sample t-test. The population and samples were nurses and patients at DemangSepulau Raya Hospital and DadiCokrodipo Hospital. The result were that there was a significant difference between the completeness of handoverprocess, nurse satisfaction and patient satisfaction before and after the bedside hand over was implemented, there was no difference satisfaction of nurses and patients with handover completeness. In conclusion, this bedside handover method is good, because it can improve the completeness of handover based on the nursing process, patient and nurse satisfaction. The suggestion is that the patient bedside handover shouldbe continued, because it improves nursing services, provides continuity of nursing care and maintains patient safety.

Keywords: *Bedside Handover, Nurse Satisfaction, Patient Satisfaction*



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Email: icsc@poltekkes-tjk.ac.id

MANAGING URINARY STRESS INCONTINENCE IN PERIMENOPAUSAL WOMEN

Siti Fatonah¹, Sulastri^{1*}

¹Nursing Programs, Tanjungkarang Health Polytechnic, Bandar Lampung, Lampung, Indonesia

*Email correspondence: sulastri@poltekkes-tjk.ac.id

ABSTRACT

Urinary incontinence is a common complaint experienced by women, especially just before menopause. Need proper handling to control it. There search objective was to determine the effect of Afigel exercise on urinary stress incontinence. Quasi experimental research design. Respondents 93 pre menopausal mothers. Purposive type of sampling technique. The sample was divided into two groups, group 1 as the intervention group as many as 31 people and group 2 as the control group as many as 62 people. By processing the data using the analysis of the T-Dependent Test. The results showed that the average age of the respondents was 47.10, the frequency of giving birth was 3.40 on average. The comparison of urinary incontinence in the Intervention Group and the Control Group after Afigel in the Intervention group was 1.53 with a standard deviation of 1.871. Incontinence after Afigel Gymnastics in the control group obtained an average of 6.18 with a standard deviation of 1.668. It can be seen that the mean difference between nbefore and after Afigel is 4.77 with a standard deviation of 0.336. The statistical test results obtained 0.000, which indicates that there is a significant difference in the ability to control stress in continence after affigel between the intervention group and the control group. It is recommended that afigel exercise be carried out routinely to control the tub, afigel exercise can be used as a nursing intervention as a therapeutic modality to over come urinary disorders, especially urinary incontinence, both in the service setting and in the community..

Keywords: *Afigel, affirmation, kegel excercise, Perimenopause, stress urinary incontinence.*



BACK MASSAGE WITH OLIVE OIL IMPROVE SLEEP QUALITY ON POST OPERATIVE PATIENT

Sono^{1*}, Heni Apriyani¹

¹Nursing Programs, Tanjungkarang Health Polytechnic, Bandar Lampung, Lampung, Indonesia

*Email correspondence: sonoahmad99@yahoo.co.id

ABSTRACT

Rest and sleep are human needs to any people. Everyone needs enough rest and sleep to maintain normal body function. Pattern and good sleep give good effect to health (Potter & Perry, 2005). Patients undergoing surgery or post operative experiencing disturbance sleep. In addition to pharmacological therapy, disturbance sleep complain can be solved by non pharmacological therapy. Back massage or back rub is one of nursing intervention to solving problem disturbance sleep on post operative patients. The research carried out during two months on 2018. The purpose of this research is to know influence of back massage to quality sleep on post operative patients in RSD Mayjend HM Ryacudu Kotabumi Lampung Utara. Research design is *quasy experiment with one group pretest and post test design*. Population in this study are post operative patient. Sampling technique is *purposive sampling*, involve 30 responden. Data analyze used is *paired-t test*.

The result research show that there is significant effect on back massage/ back rub to sleep quality in post operative patients (p value = 0,000). Based on research result, back massage can be suggested as one of nursing intervention to solving problems disturbance sleep on post operative patients..

Keywords : *sleep quality, massage, post operative*



BTA Microscopic Examination Specimen Profile In Enforcing Tuberculosis Disease

Siti Aminah^{1*}, Mimi Sugiarti¹

¹Medical Laboratory Programs, Tanjungkarang Health Polytechnic, Bandar Lampung, Lampung, Indonesia

*Email correspondence: aminahkurun.ak@gmail.com

ABSTRACT

PuskesmasPanjang is the public health center with the highest TB cases found out of 30 public health centers in Bandar Lampung City. The sputum specimen must be analyzed immediately. If there is a delayed analysis and placed at room temperature (28 C), it will change its consistency from viscous to liquid. The purpose of this study is to determine the effect of time and storage temperature on the results of BTA microscopic analysis. This study was conducted at Laboratories of PuskesmasPanjang Bandar Lampung from April until November 2019. Type of quantitative study is experimental study design, the independent variable was the result of BTA Microscopic analysis from 60 sputum specimen with storage temperature 25°C 1 x 24 hours, 2 x 24 hours, 3 x 24 hours, and storage temperature 2°C 1 x 24 hours, 2 x 24 hours, 3 x 24 hours. The dependent variable was sputum specimen sputum temperature 25°C 1 x 24 hours, 2 x 24 hours, 3 x 24 hours, and storage temperature 2°C 1 x 24 hours, 2 x 24 hours, 3 x 24 hours. The conclusion of this study is storage time and temperature conditions of 60 sputum specimens had no significant effect on the result of BTA microscopic analysis in PuskesmasPanjang Bandar Lampung.

Keywords: Sputum, Temperature 25°C, Temperature 2°C, Duration 3 x 24 Hours, BTA Microscopic Results



DIAPHRAGMATIC BREATHING EXERCISE IMPROVE PULMONARY VENTILATION FUNCTION IN ASTHMA BRONCHIALE PATIENT

Heni Apriyani^{1*}, Sono¹

¹Nursing Programs, Tanjungkarang Health Polytechnic, Bandar Lampung, Lampung, Indonesia

*Email correspondence: apri8yani@yahoo.co.id

ABSTRACT

Asthma Bronchiale is the top ten cause of illness and death in Indonesia (Ministry of Health of the Republic of Indonesia, 2008). Asthma disease that often recurs and is uncontrolled in addition to causing a decrease in productivity and quality of life of the community can also increase health costs, the risk of hospitalization and cause death (Eric, et.al., 2010). The results of previous studies indicate that diaphragmatic breathing exercise is effective in improving pulmonary ventilation function, which is indicated by an increase in peak expiratory flow. The purpose of this study was to determine the effect of diaphragmatic breathing exercise on the improvement of lung ventilation function in asthma patients in the working area of Kotabumi II Public Health Center, North Lampung Regency. The research design was a quasi experiment with one group pretest post tests. The population in this study were asthma patients, which involved 30 respondents with a purposive sampling technique. This research was conducted from September to October 2017. The results showed that there was a significant effect of diaphragmatic breathing exercise on the improvement of pulmonary ventilation function in asthma patients in the Kotabumi II Public Health Center (p value = 0,034 on $\alpha = 0,05$). Based on the results of this study, the suggestion for respondents is to do regular diaphragmatic breathing exercises to prevent asthma recurrence.

Keywords: *diaphragmatic breathing exercise, peak expiratory flow, Asthma Bronchiale*



DETERMINAN OF DIARRHEA BASED ON COMMUNITY-BASED PILLARS OF TOTAL SANITATION

Yeni Rosita¹, Mei Ahyanti^{1*}

¹Sanitation Programs, Tanjungkarang Health Polytechnic, Bandar Lampung, Lampung, Indonesia

*Email correspondence: meiahyati@poltekkes-tjk.ac.id

ABSTRACT

Diarrhea is still a health problem in the world, including Indonesia. There was an increase in cases from 2016-2018. The distribution of cases in South Lampung Regency was mostly in Taman Sari Village, the working area of Puskesmas Penengah. STBM is stated as a project that can bring big changes to the incidence of diarrhea. This study aims to determine the determinants of diarrhea based on STBM pillars. The method used in the study used a cross sectional design, the sample amounted to 267 heads of families which constitute the entire population in Taman Baru Village, Penengah District, South Lampung Regency. Data collection through interviews and observations then analyzed univariate, bivariate and multivariate using computer applications. The study found a significant relationship between knowledge and application of STBM pillars with the incidence of diarrhea. Meanwhile, the disclosure of information about STBM and support from community leaders stated that it was not related to the incidence of diarrhea. Efforts should be made to increase knowledge to the public regarding the latest information on diarrhea prevention. Further research can be carried out in relation to appropriate and effective models in delivering information to the public with the support of community leaders.

Keywords: STBM, application, diarrhea, pillars, models.



RECOVERY FOR PEOPLE WITH MENTAL DISORDERS BASED ON ANDROID: JIWA MUNYAI JIWA KUAT

Sulastris^{1*}, Siti Fatmah¹

¹Nursing Programs, Tanjungpurung Health Polytechnic, Bandar Lampung, Lampung, Indonesia

*Email correspondence: sulastris@poltekkes-tjk.ac.id

ABSTRACT

Effective ways to care for patients living with families need to be maximized, especially in the digital age. Jiwamuku is an application that can be used by families and patients to carry out screening and intervention digitally and remain under the monitoring of health workers. The purpose of this study was to analyze the effect of using my soul on the patient's ability to control the symptoms of mental disorders and increase the ability to control the symptoms of mental disorders. This research uses a quantitative approach with experimental methods pretest-posttest design. The research respondents were 186 patients who had undergone treatment and lived with their families. Measurement data with my soul application. The results of the analysis with the Wilcoxon test obtained p-value = 0.000 on the symptoms of mental disorders and the ability to control mental disorders, which means an increase in the patient's ability and a decrease in symptoms after the intervention using my soul. It is recommended to use my soul in managing mental health problems.

Keywords: *recovery, people with mental disorder, mental health screening, android.*



EFFECT OF PROLANIS EXERCISE ON BLOOD PRESSURE AT HYPERTENSION

Deni Metri^{1*}, Sono¹

¹Nursing Programs, Tanjungpurun Health Polytechnic, Bandar Lampung, Lampung, Indonesia

*Email correspondence: denimetri08@gmail.com

ABSTRACT

Hypertension that is managed properly will cause various complications, One of the causes that is often overlooked is the importance of physical activity in people with hypertension. Prolanic gymnastics is one of the promotive and preventive actions in maintaining blood pressure, which is held by BPJS. In this study, the research program was carried out 2 times a week, which was carried out in July-August 2019. The aim was to examine the effect of prolanic exercise on the blood pressure of patients with the Hypertension Program at Kotabumi II Public Health Center. This study used a quasi experimental post test design. The population in this study were patients with hypertension disease program (PPHT) at Kotabumi II Health Center with a total sample sampling technique of 35 people. Analysis of the relationship using the t test. Obtained the influence of prolanic exercise with blood pressure in PPHT patients with a value of $p = 0.00$ ($\alpha = 0.05$). The mean baseline blood pressure measurement: initial systole 147.14 (SD = 6.67) and the mean initial diastolic pressure 96.29 (SD = 3.82). The mean final blood pressure measurement: end systolic 132.00 (SD = 6.67) and the mean final diastolic pressure 91.71 (SD = 4.90). Researchers provide suggestions that prolanic exercise 2 times a week can be applied in the management of hypertension sufferers 00 ($\alpha = 0.05$). The mean baseline blood pressure measurement: initial systole 147.14 (SD = 6.67) and the mean initial diastolic pressure 96.29 (SD = 3.82). The mean final blood pressure measurement: end systolic 132.00 (SD = 6.67) and the mean final diastolic pressure 91.71 (SD = 4.90). Researchers provide suggestions that prolanic exercise 2 times a week can be applied in the management of hypertension sufferers 00 ($\alpha = 0.05$). The mean baseline blood pressure measurement: initial systole 147.14 (SD = 6.67) and the mean initial diastolic pressure 96.29 (SD = 3.82). The mean final blood pressure measurement: end systolic 132.00 (SD = 6.67) and the mean final diastolic pressure 91.71 (SD = 4.90). Researchers provide suggestions that prolanic exercise 2 times a week can be applied in the management of hypertension sufferers

Keywords: prolanic exercise, blood pressure



THE EFFECT OF AL-QUR'AN MUROTAL THERAPY AND MUSIC ON CONSCIOUSNESS RECOVERY

Efa Trisna^{1*}, Musiana¹

¹Nursing Programs, Tanjungpurang Health Polytechnic, Bandar Lampung, Lampung, Indonesia

*Email correspondence: efatrisna@poltekkes-tjk.ac.id

ABSTRACT

After the operation, the patient will experience a process where there is a decrease in the level of consciousness which is called consciousness recovery. This condition will be experienced by patients after surgery with general anesthesia. This condition must be end immediately for hemodynamic stability. The aim of the study was to see the effect of Al -Qur'an murotal therapy and music on recovery time in postoperative patients. This type of quantitative research uses a quasi-experimental design with dependent sample t-test. Population and samples were postoperative laparotomy patients under general anesthesia. The result is that there is a difference in the time for consciousness recovery of patients who undergo al-qur'anmurotal therapy through audio media with music listening therapy in postoperativeLaparotomy patients with general anesthesia at Abdul Moeloek Hospital in 2019. In conclusion, between music therapy and murotal speed the time to recover a fast awake is the murotal of Al-Qur'an. The suggestion is that the murotal therapy is chosen to speed up the time to recover consciousness so that the patient's haemodynamics are stable quickly.

Keywords: *Murotal Al-Qur'an, Music, Recovering*



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CPO WASTE WATER TREATMENT USING SEAWATER WITH A BATCH SYSTEM

Linda Barus^{1*}, Agus Sutopo¹, Ferizal Masra¹

¹Sanitation Programs, Tanjungkarang Health Polytechnic, Bandar Lampung, Lampung, Indonesia

*Email correspondence: linda.barus1@gmail.com

ABSTRACT

CPO liquid waste is a potential source of pollution for the environment. Generally high temperature, brownish in color, containing dissolved and suspended solids in the form of colloids and high oil residues with high BOD and COD content. The purpose of this study was to obtain the effectiveness of CPO liquid waste processing using sea water with a batch system. The study was conducted using an experimental design. The results showed that the decrease in the content of the wastewater parameters was good, but it did not meet the quality standards for CPO wastewater. Similar research needs to be carried out with a longer variation of contact time between seawater and CPO liquid waste, so that it can form a larger floc and easily deposit organic substances in wastewater.

Keywords: CPO, BOD, COD, seawater



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PATTERN OF CONTAMINANTS BACTERIA AND THEIR RESISTANCE IN ICU AND OPERATING ROOM AT HOSPITAL IN BANDAR LAMPUNG

Maria Tuntun^{1*}, Marhamah¹

¹Medical Laboratory Programs, Tanjungkarang Health Polytechnic, Bandar Lampung, Lampung, Indonesia

*Email correspondence: maria_tuntun@poltekkes-tjk.ac.id

ABSTRACT

Objective: To determine the resistance patterns of bacteria and contaminants in the ICU and operating room in several hospitals in Bandar Lampung. **Methods:** This study used a design *cross sectional*, was conducted in September - November 2019, at three hospitals which are BPJS referral hospitals in the city of Bandar Lampung, Indonesia. Samples were taken in the ICU and operating room by means of swabs on walls, floors, beds, clothes, equipment, and air samples. Samples were examined in the bacteriology laboratory of Poltekkes Kemenkes Tanjungkarang, including microscopic examination, isolation, identification and antibiotic sensitivity test. **Results:** Of the 54 samples examined, it was found that 61 isolates of contaminant bacteria were grouped into 11 species of bacteria. The bacterial patterns of Gram negative contaminants were *Proteus morganii* (19.7%), *Pseudomonas aeruginosa* (11.5%), and *Proteus mirabilis* (9.8%). Gram positive bacteria were dominated by *Staphylococcus aureus* (13.1%). bacteria *Proteus mirabilis* were resistant (16.7% - 100%) to 9 antibiotics used in this study. *Klebsiella pneumoniae*, *E. coli* and *Staphylococcus aureus*, had 56.82%, 54.55% and 45.45% resistance to antibiotic on average. Ciprofloxacin and meropenem are still sensitive to *Pseudomonas aeruginosa*, *Yersinia*, *P. vesicularis*, *Bacillus spp* and *Staphylococcus aureus*. **Conclusion:** Pathogenic bacteria have contaminated inanimate surface in the ICU and operating room, even the bacteria have developed resistance to antibiotics.

Keywords: contaminant bacteria, antibiotic resistance, ICU, operating room



PERFORMANCE EVALUATION OF COMMUNAL WASTE WATER TREATMENT TOFU TANGGAMUS DISTRICT

Imam Santosa^{1*}, Enro Sujito¹

¹Sanitation Programs, Tanjungkarang Health Polytechnic, Bandar Lampung, Lampung, Indonesia

*Email correspondence: imamsantosa2811@gmail.com

ABSTRACT

In Pekon Siring Betik, Wonosobo District, there are 24 households who are craftsmen of the Tofu Industry where they dispose of their waste water into the domestic ditches of other residents. The waste water of tofu causing an unpleasant odor every day. This caused unrest in the community which resulted in conflict between the residents and the tofu craftsmen. To solve this problem, the Tanggamus Environment Agency built a Tofu Communal Waste Water Treatment Plant (WWTP). The purpose of this study is to evaluate performance. Evaluating WWTP Performance taking into account the technical aspects that assess the suitability of buildings based on design criteria, wastewater quality standards, as well as operations. The research methodology carried out is descriptive analytic. The results of this study were in WWTP flow chart consisting of 7 stages, wastewater discharge of 12.4 m³/day, the quality of wastewater with parameters BOD, COD and pH had met the quality standards, while TSS had not met the quality standards, WWTP has a control tank volume of 1.62 m³, initial biodegester tank 9.1 m³, final biodegester tank 9.1 m³, overflow tank a 6.75 m³, overflow tank 3.8 m³, mud tank 4.5 m³, residence time waste water 2.9 days.

Keywords: WWTP, Communal, Tofu



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FOOD MANAGEMENT SANITATION AT LESEHAN FOOD TRADERS

Ferizal Masra^{1*}, Haris Kadarusman¹

¹Sanitation Programs, Tanjungkarang Health Polytechnic, Bandar Lampung, Lampung, Indonesia

*Email correspondence: ferizalmasra@gmail.com

ABSTRACT

Lesehan Food Trader is one type of food selling place that is in demand by the community, including in Bandar Lampung. Therefore, food hygiene must always be maintained, so as not to become a source of disease or poisoning for consumers. The purpose of this study was to obtain an overview of the sanitation of food management at lesehan food vendors along Jalan Kartini, Bandar Lampung City. This study used a survey design, conducted from July to September 2018. The population and sample were all lesehan traders selling along Jalan Kartini Bandar Lampung, totaling 30 traders. The results showed that as many as 83.3% of traders met the requirements for eating microorganisms, 40% of the lesehan traders met the food processing requirements, and 46.7% of the lesehan traders met the food storage requirements, and 60% of the traders met the food serving requirements. To improve the quality of food sanitation, lesehan traders on Jalan Kartini, Bandar Lampung City, need to be given counseling and monitoring by the Bandar Lampung City Health Office by involving the association of lesehan Kartini traders.

Keywords: Sanitation, Food, Lesehan



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FLOCCULATION AND FILTRATION AS AN ALTERNATIVE TO TREATING LIQUID TOFU WASTE OF TOFU INDUSTRY

Bambang Murwanto^{1*}, Prayudhy Yushananta¹, Agus Sutopo¹

¹Sanitation Programs, Tanjungkarang Health Polytechnic, Bandar Lampung, Lampung, Indonesia

*Email correspondence: bambang_murwanto@poltekkes-tjk.ac.id

ABSTRACT

The tofu industry is a small and medium business industry as economically and has a positive impact from an economic perspective. However, negatively, if the waste from making tofu is not treated properly, it will have a bad impact on the environment, such as river pollution where the tofu industrial waste water is disposed of, especially in the parameters of BOD and COD, for example as reported by Bastian (2016).) in Murwanto (2018) that there is pollution of tofu industrial wastewater, especially the COD parameter at the time of the waste water disposal. The purpose of this study was to find out how to treat tofu wastewater through reducing levels of BOD and COD through flocculation and filtration variations, namely quartz sand, activated carbon and zeolite. The coagulants used were Poly Aluminum Chloride (PAC) with 690 mg /L and 765 mg / L, respectively. This type of research is a Nested Design Experiment because the treatment is carried out in two stages, namely flocculation and filtration with three types of filter media (Quartz Sand, Activated Carbon and Zeolite). The results of this study decreased BOD and COD parameters significantly, with Active Kabon and Zeolite filters being the best choices. Even though there has been a significant reduction in BOD and COD levels, it has not reached the TLV of Water Lmbah as mandated by the Governor of Lampung Regulation Number 7 of 2010, therefore it is necessary to follow up with biological research.

Keywords: *Tofu, BOD, COD, ., Coagulation, Filtration, Flocculation, Activated Carbon, Zeolite.*



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EVALUATION OF CHOLINESTERASE ENZYME ACTIVITY IN FARMER GROUPS, TRIMURDJO DISTRICT, CENTRAL LAMPUNG REGENCY

Yusrizal^{1*}, Agus Purnomo¹

¹Medical Laboratory Programs, Tanjungkarang Health Polytechnic, Bandar Lampung, Lampung, Indonesia

*Email correspondence: yusrizalchaniago08@gmail.com

ABSTRACT

Blood cholinesterase levels are the amount of the cholinesterase enzyme active in blood plasma and red blood cells. Early detection of pesticide poisoning is checking the cholinesterase enzyme in the blood. The purpose of this study was to see the evaluation of Cholinesterase Enzyme Activity in Farmer Groups Trimurdjo District, Central Lampung Regency. This study used a quantitative research using a cross sectional approach. The subjects of this study were 86 farmers in the Trimurdjo Subdistrict, Central Lampung. The results showed that there was a significant relationship between the enzyme activity of farmer groups in Trimurdjo District, Central Lampung Regency and it was controlled by the variable nutritional confounding status, pesticide dose, use of personal protective equipment (PR = 0.205, 95% CI = 0.048 - 0.866). The results showed that the cholinesterase enzyme activity of the farmer groups who used pesticide doses was not in accordance with the SOP (Standard Operating Procedure), did not use Personal Protective Equipment (PPE) at the time of spraying, and lacked nutritional status had a higher risk of experiencing pesticide poisoning or cholinesterase enzyme activity low. Efforts can be made to reduce the number of farmers experiencing pesticide poisoning or low cholinesterase enzyme activity, namely by conducting counseling by the relevant sectors.

Keywords: *Cholinesterase enzyme levels, pesticides*



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THE STUDY OF COFFEE HUSK FIBER AND POLYVINYL ALCOHOL ADDITION ON CASSAVA STARCH-BASED BIOFOAM FORMULATION AND IT'S EXPERIMENTAL DESIGN OPTIMIZATION

Febrina Sarlinda^{1*}, Amrul Hasan¹, Zeni Ulma¹

¹Sanitation Programs, Tanjungpurwo Health Polytechnic, Bandar Lampung, Lampung, Indonesia

*Email correspondence: febrinasarlinda@poltekkes-tjk.ac.id

ABSTRACT

Polystyrene plastic or styrofoam is very popular to be used as a food packaging container even though Styrofoam has a bad impact on health and the environment. One alternative to styrofoam is biodegradable foam made from starch and fiber. It is safe for health and can be broken down naturally. Cassava peel is rich in starch (carbohydrates) but has low fiber content. Meanwhile, coffee husks are rich in fiber and minimal in carbohydrates. Both types of waste have the potential to become biodegradable foam raw materials. The addition of synthetic PVA polymer is expected to improve the characteristic of biodegradable foam. This study aims to obtain the best formulation for the manufacture of biodegradable foam from cassava starch with the addition of various coffee husk fiber's concentration (5%, 10%, 15%, 20%) and various PVA concentration (10%, 15%, 20%). The optimization of experimental design using RSM resulted in optimum variables to produce biodegradable foam. The optimum formulation for best tensile strength is 20% coffee husk fiber and 14% PVA. The optimum formulation for the lowest water absorption is 10% coffee husk fiber and 12% PVA. While optimum formulation for the most biodegradable foam is of 8,51% coffee husk fiber and 10% PVA.

Keywords: *biodegradable foam, cassava peel, coffee husk, polyvinyl alcohol, response surface method*



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DETERMINANTS OF STUNTING AMONG CHILDREN UNDER FIVE IN HORTICULTURE AREA

Prayudhy Yushananta^{1*}, Mei Ahyanti¹, Yetti Anggraini²

¹Sanitation Programs, Tanjungkarang Health Polytechnic, Bandar Lampung, Lampung, Indonesia

²Midwifery Programs, Tanjungkarang Health Polytechnic, Bandar Lampung, Lampung, Indonesia

*Email correspondence: prayudhiyushananta@poltekkes-tjk.ac.id

ABSTRACT

Childhood malnutrition is a critical public health problem in Indonesia. We aimed to explore the factors associated with malnutrition in horticultural farm children (<5 years). The study used a case-control design, the population was all children aged 6 to 59 months in the Liwa Community Health Center, West Lampung Regency. The sample of cases was 40 children under five with stunting, and the control sample was 120 under five with normal status. The case sampling technique was taken from the posyandu with the most stunting, while the control was normal under five from the same posyandu. Data collection by interview and measurement. Univariate, bivariate (kai squared test), and multivariate (multiple logistic regression) data analysis. The results of the study found that the characteristics of stunting under five had a low length at birth (45.7%), LBW (32.5%), low protein intake (25%), and poor parenting (60%). The risk factors for stunting were a length at birth, LBW, and low protein intake. The most dominant factor is the length at birth. The stunting control model through improving the nutritional status of pre-pregnant and pregnant women, and empowering women, as a process of improving women's institutions and status, affect household access to resources, including allocations for child health and nutrition.

Keyword: Stunting, LBL, LBW, Protein Intake, Under five



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THE USE OF WAXY CASSAVA STARCH AS A PROBIOTIC BACTERIAL ENCAPSULANT TO INCREASE IMMUNITY IN DEXTRAN-FED MICE

Subeki^{1*}, Reni Indriyani², Tanto Pratondo Utomo¹, Dewi Sartika¹, Muhartono³

¹Department of Agricultural Product Technology, Faculty of Agriculture, Lampung University. Jl. S. Brojonegoro No. 1 Gedung Meneng - Bandar Lampung 35145

²Department of nutrition, Tanjungkarang Health Polytechnic, Bandar Lampung, Lampung, Indonesia

³Department of Medical Education, Medical Faculty, Lampung University. Jl. S. Brojonegoro No. 1 Gedung Meneng - Bandar Lampung 35145

*Email correspondence: bekisubeki@yahoo.com

ABSTRACT

The outbreak of the covid-19 virus made the Indonesian government work hard to find the right formulation to prevent this national pandemic. The government is campaigning for a clean and healthy lifestyle by consuming foods that can increase immunity. Probiotics are dietary supplements containing lactic acid bacteria which function to increase the body's immunity in overcoming the Covid 19 pandemic. Therefore, it is necessary to look for materials that can encapsulate probiotic bacteria so that they can be consumed easily. One of them the use of waxy cassava starch as a probiotic bacteria encapsulant. This study aims to determine the use of waxy cassava starch as an encapsulant for the probiotic bacteria *Lactobacillus casei* in increasing immunity in dextran fed mice. The results showed that the number of live *L. casei* increased significantly 139×10^4 CFU / mg of feces in dextran feed mice after 30 days of oral *Lactobacillus* encapsulation. The oral administration of *Lactobacillus* encapsulation in dextran fed mice with bovine serum albumin (BSA) showed an increase in the production of serum anti-BSA immunoglobulin G 232 titer greater than given BSA alone. These results indicate that giving *Lactobacillus* encapsulation provides immunity activity in dextran fed mice.

Keywords: *Dextran, encapsulation, probiotic, starch, waxy cassava.*



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ANTIOXIDANT RETENTION IN CARROT AND CELERY-ENRICHED CHICKEN SAUSAGE WITH VARIOUS PROCESSING TECHNIQUES

Nawasari Indah PS^{1*}, Rifai Agung M²

¹Department of nutrition, Tanjungpurung Health Polytechnic, Bandar Lampung, Lampung, Indonesia

²Sanitation Programs, Tanjungpurung Health Polytechnic, Bandar Lampung, Lampung, Indonesia

*Email correspondence: nawasari@poltekkes-tjk.ac.id

ABSTRACT

Sausage is a processed meat product (beef or chicken) with high fat content which increase degenerative diseases risk. To minimize the risk should added antioxidants-rich food such as carrot and celery. Antioxidant compounds are changed during food processing. This study wants to know antioxidant retention of carrots and celery-enriched chicken sausage with several processing techniques (boiling, frying, and grilling). Product nutritional content were analyzed with proximate, antioxidant retention using total phenolic content (TPC) and antioxidant capacity. The data were analyzed using paired t-test and ANOVA with 5% significance. The results showed that formulation had no effect on nutritional content, while processing affected moisture, protein, fat, and ash content, but not on carbohydrate and crude fiber content. For antioxidant retention, formulation did not affect TPC but did affect the antioxidant activity of the product. However, the processing shows the opposite. Interestingly, frying process not only maintain its TPC but also increase its antioxidant capacity. It was suggested that frying process had less moisture content than others and also there was antioxidant activity in its absorbed cooking oil. It need further analysis about the correlation between those two.

Keywords: *sausage, carrot, celery, antioxidant.*



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STUDY OF THE ADDITION OF ANCHOVY ON SENSORY AND CHEMICAL PROPERTIES OF NORI FROM SPINACH AND SEAWEED (*Eucheuma Cottonii*)

Reni Indriyani¹, Subeki^{2*}

¹Department of nutrition, Tanjungkarang Health Polytechnic, Bandar Lampung, Lampung, Indonesia

²Department of Agricultural Product Technology, Faculty of Agriculture, Lampung University. Jl. S. Brojonegoro No. 1 Gedung Meneng - Bandar Lampung 35145

*Email correspondence: bekisubeki@yahoo.com

ABSTRACT

Anchovies are a type of fish that can be used as a source of calcium for body growth. However, the processing of anchovy is still limited. Therefore, it is necessary to diversify the product. This study aims to determine the addition of anchovy to spinach + seaweed (*Eucheuma cottonii*) on the best sensory and chemical properties of nori. This study used a non-factorial completely randomized block design with 4 replications. The study was conducted with 6 levels of treatment, namely the addition of anchovies to the composition of spinach + seaweed (90:10) which consisted of 0, 10, 20, 30, 40, and 50%. The data were further analyzed by using the LSD (Least Significant Difference) test at the 5% level. The results showed that the addition of anchovy to spinach + seaweed affected the organoleptic properties of the texture, color, aroma, and elasticity of the nori produced. The addition of anchovies 20% to spinach + seaweed produced the best nori with a texture score of 3.81 (compact), 2.52 (green) color, 3.46 aroma (tended not to smell anchovies), 3.81 elasticity (elastic), water content 13.94%, ash 13.26%, 10.30% protein, 1.05% fat, 20.43% crude fiber, 41.03% carbohydrates.

Keywords: anchovy, *Eucheuma cottonii*, nori, seaweed



NUTRITIONAL STATUS OF RELATIONSHIP WITH THE BABY SLEEP IN CAHAYA BUNDA CLINIC

Mailiza Cahyani^{1*}, Betty Prastuti¹

¹STIKes Payung Negeri Pekanbaru, Indonesia

*Email correspondence: faiza_111008@yahoo.co.id

ABSTRACT

Objective: If infants lack of sleep will lead to decreased immunity , growth disorders, physical development and have an impact on the development of the baby's brain, especially his ability to think when he was an adult. Method: This study is a quantitative analytic study with a type of *quasy experiment*..The population of this study were all babies aged 3-6 months who visited the mother's light clinic, totaling 68 babies with a *total sampling technique*. Results: The results showed that there was a relationship between the nutritional status of infants and the quality of baby sleep. Respondents with poor nutritional status have 3.3 times problematic sleep quality than respondents with good nutritional status. Conclusions: that nutritional status can affect the quality of sleep for babies so that health workers in Klinik should be able to pay attention to the nutritional status of babies as routine care for babies and can become one of the standards care that can provide safety and comfort to the baby.

Keywords: Sleep Quality, Nutritional Status, Babies, Mother's Light



WATER CONSUMPTION AND HYDRATION STATUS AMONG STUDENT AT PUBLIC ELEMENTARY SCHOOL

Fitria Saftarina^{1*}, Milatul Fauziah²

¹Community Medicine Departement, Faculty of Medicine, University of Lampung

²Doctor's Professional Study Program, Faculty of Medicine, University of Lampung

*Email correspondence: fitria.saftarina@fk.unila.ac.id

ABSTRACT

Children have a greater risk of dehydration than adults. As many as 22% of children in Indonesia still do not drink enough. As a result of several studies, children came to school with a deficit in hydration status. This study aims to analysis water consumption and hydration status in students at public elementary school X in Bandar Lampung. The study used analytical observational study. The population was 69 students, the sample was taken by total sampling technique. The study was conducted from September 2019 to January 2020, at public elementary school X Bandar Lampung. Water consumption status was obtained from the Beverage Intake Questionnaire and hydration status was obtained from urine specific gravity. Data were analyzed with frequency distribution. A total of 48 students (69.6%) had fulfilled their fluid needs with 47 students (68.1%) drinking water >3 times/day but 42 students (60.9%) experienced clinical dehydration. Most of the students of public elementary school X in Bandar Lampung fulfill their fluid needs but had clinical dehydration. Further research is needed to measure the adequacy of water with other objective methods and instruments.

Keywords: *specific gravity of urine, fluid consumption, hydration status.*



THE EFFECT OF GIVING MUNG BEAN ON INCREASING HEMOGLOBIN LEVELS OF PREGNANT WOMEN WITH ANEMIA

Sofika Larasati^{1*}, Mugiati¹, Warjedin Aliyanto¹

¹Midwifery Programs, Tanjungpurun Health Polytechnic, Bandar Lampung, Lampung, Indonesia

*Email correspondence: sofikalarasati@gmail.com

ABSTRACT

Anemia in pregnancy is potentially dangerous for mother and baby, such as the postpartum hemorrhage due to uterine atony, shock, and prematurity. The proportion of anemia in pregnant women in Indonesia increased from 37.1% in 2013 to 48.9% in 2018. It is known from the IDHS (SDKI) data that the number of maternal mortality rates in Lampung Province is dominated by hemorrhage as many as 46 cases. The purpose of this study was to determine the effect of giving mung beans to increasing hemoglobin levels in pregnant women with anemia at PMB Nurmala Dewi Bandar Lampung. This study is *quasy experiment* was conducted in February-March 2019 in PMB Nurmala Dewi. The sample was 16 pregnant women anemia in the experimental group and 16 in the control group, selected by *purposive sampling method*. Data collected by interview to determine the characteristics of the respondent and measure the hemoglobin level of pregnant women *pre - test* and *post-test*. Data analysis used *independent T test* to determine the effect of giving mung beans for pregnant women anemia. The result shows that the average hemoglobin concentration of pregnant women before being given intervention in the control group was 10.250 g%, the experimental group 9.813 g%. while the Hb level after the intervention in the control group was 10.881 g%, and the intervention group was 11.500 g%. The *Independent T-test* was obtained *p-value*= 0 , 007. There is an effect of giving mung beans to increase the hemoglobin levels in pregnant women anemic at PMB Nurmala Dewi Bandar Lampung (*p-value* = 0.007). So it is advisable for pregnant women to eat foods that contain lots of iron such as green beans for increasing hemoglobin levels in pregnant women.

Keywords : *Green Beans; Hemoglobin levels; Anemia in pregnant women*



THE EFFECT OF PROVIDING ADDITIONAL FOOD ON THE INCREASING WEIGHT OF PREGNANT WOMEN CHRONIC ENERGY LACK OF CHRONIC ENERGY IN TULANG BAWANG BARAT IN 2019

Nelly Indrasari^{1*}, Ranny Septiani¹, Elvia Marita¹

¹Midwifery Programs, Tanjungkarang Health Polytechnic, Bandar Lampung, Lampung, Indonesia

*Email correspondence: nellyindrasari@yahoo.com

ABSTRACT

The research objective was to determine the effect of local supplementary feeding on weight gain in pregnant women with chronic energy deficiency. The research method used a quasi-experimental design comparing the treated group and the control group. Measuring forearm circumference, height and weight before and after the intervention for 1 month, weight gain was calculated on the 30th day. Data were processed and analyzed using the T-Test. The results of the assessment of the average increase in body weight after the intervention were as follows: 1. Mung bean, kidney beans & biscuit intervention was 3.43.2. Mung bean & biscuit intervention was 3.38.3. , 83, and 4. the biscuit intervention was 1.76. The results of statistical tests for all interventions obtained a p value below 0.05, so it can be concluded that the intervention of green beans, kidney beans & biscuits, green beans & biscuits, and kidney beans & biscuit interventions had significant differences with the control group. Provision of Supplementary Food together with the intake of additional food derived from locally available ingredients and high in nutrients in the form of green beans and kidney beans is better than if only given biscuits. From these results, the active role and behavior of health workers in early detection of abnormalities in mothers and monitoring of food intake are indirect factors that play a major role in increasing maternal weight.

Keywords: *Supplementary Food, chronic energy deficiency*



THE DIFFERENCE OF EFFECTIVENESS OF OXYTOCIN MASSAGE WITH NATURAL GYMNASTIC TO UTERUS INVOLUTION IN BREAST MOTHER

Sri Lestariningsih^{1*}, Septi Widiyanti¹, Anita Triani¹

¹Midwifery Programs, Tanjungkarang Health Polytechnic, Bandar Lampung, Lampung, Indonesia

*Email correspondence: srilestariningsih@poltekkes-tjk.ac.id

ABSTRACT

The incidence of postpartum hemorrhage in developing African and Asian countries is more than 25-33%, in Indonesia in 2013 recorded a secondary hemorrhagic incidence of 30.3%, and for 3 consecutive years in the Yosomulyo Community Health Center in 2015 was 1.04 %, in 2016 it was 1.01%, and in 2017 it was 1.38%. Postpartum hemorrhage will interfere with the involution process which causes subinvolution of the uterus. Bleeding can be prevented by maintaining contractions that can be done with oxytocin massage and postnatal exercise. The purpose of this study was to determine differences in the effectiveness of oxytocin massage with puerperal gymnastics against uterine involution in postpartum mothers in the work area of the Yosomulyo Metro Center Health Center. The research method used in this study is quasi-experimental design with pretest and posttest design group. The sample size obtained by the Taro Yamamane formula was 42 people consisting of 21 people as oxytocin massage respondents and 21 people as postpartum gymnastics respondents. The sampling technique in this study was taken by accidental sampling. The instruments in this study were questionnaires and observation sheets. The statistical test used is the Mann-Whitney test. The results showed that the frequency distribution of uterine involution before oxytocin massage was 57.1% who experienced normal uterine involution and after massage oxytocin increased to 85.7% who underwent normal uterine involution, resulting in an increase in normal uterine involution by 28.6% compared mothers who do postnatal exercise. Statistical test results obtained p-value 0.043, which means that there is a difference in the effectiveness of oxytocin massage with puerperal exercise on uterine involution in postpartum mothers. Suggestions for research sites are expected for midwives to socialize by distributing leaflets and teach oxytocin massage techniques to postpartum mothers early to prevent bleeding and accelerate uterine involution.

Keywords: *Oxytocin Massage, Puerperal Gymnastics, Involution.*



EFFECT OF JAVA MASAGE TOWARDS THE QUALITY OF LIFE CHILD WITH ASTHMA

Retno Puji Hastuti^{1*}, Kodri¹

¹Nursing Programs, Tanjungkarang Health Polytechnic, Bandar Lampung, Lampung, Indonesia

*Email correspondence: retnopujihastuti15@gmail.com

ABSTRACT

Asthma is a chronic inflammation of the respiratory tract with symptoms of recurring cough, wheezing and shortness of breath. Impaired lung effectiveness generally causes the quality of life of children with asthma is lower than normal children. The purpose of this study was to determine the effect of Javanese masage on the quality of life of children with asthma. This is a qualitative research with quasi-experimental with pre and post test design to determine differences in the average value of quality of life of children before and after the Javanese masage. The population was children suffering from asthma in the Bandar Lampung Region. Samples were counted with 16 consecutive sampling techniques. Data collection by interview using the PedsQL questionnaire. The equipment used is VCD Java masage tutorial, Java masage kit, asthma treatment liftet, cellular phone, and form logbook. Data analysed with paired T-test. The results of the study showed a significant difference in Physical Function (p-value = 0.004); Psychic Function (p-value = 0.012); and there have significant diferent mean the quality of life of an asthmatic child (p-value = 0.000) before and after the Javanese masage. Suggested in this study Javanese masage can be used as complementary therapy for the prevention of asthma in children.

Keywords : *asthma, Java massage, quality of life*



THE EFFECT OF KINESTHETIC TACTILE STIMULATION ON ENHANCING MOTORIC DEVELOPMENT IN BABIES WITH LBW

Islamiyati^{*}, Sadiman¹

¹Midwifery Programs, Tanjungkarang Health Polytechnic, Bandar Lampung, Lampung, Indonesia

^{*}Email correspondence: islamiyati341972@gmail.com

ABSTRACT

The major causes of neonatal mortality in Indonesia are low birth weight (LBW), prematurity, asphyxia and infection. Babies with LBW have a higher risk of mortality and decreased child development than those with normal birth weight. In Metro City, congenital abnormalities (35%) accounted for the significant causes of neonatal mortality rate followed by LBW (30%). The incidence of LBW in Metro City was 9.6% of the total births in 2017, which was above the national rate of 6.2%. However, these risks can be overcome by knowing and taking appropriate treatment. For instance, research carried out at Dr. CiptoMangunkusumo Hospital, Jakarta showed that there are differences in neonatal behavior on LBW before and after auditory-visual-tactile-kinesthetic stimulation. In 2018, the incidence of LBW was 20% of the most cases treated at the perinatology ward of General A. Yani Metro Hospital. Similarly, in the first quarter of 2019 (January - March 2019), the rate decreased to 19% and was second-most cases after asphyxia. This study aims to determine whether kinesthetic tactile stimulation enhanced motor development in LBW at General A. Yani Metro Hospital in 2019. This is an intervention or quasi-experiment research with The One Group Pretest - posttest design carried out from September - December 2019 in the Perinatology Room of General A. Yani Metro Hospital. The research sample consists of 11 babies each in the intervention and control groups. Furthermore, the dependent and independent variable used in this study was motor development of low birth weight with data obtained through questionnaire and assessment sheet and analyzed using the dependent t-test. The results showed that the mean motor development of LBW in the intervention group before and after giving kinesthetic tactile stimulation was 5.82 and 11.18, respectively. Meanwhile, the mean motor development of LBW at the beginning of the study in the group that was not given kinesthetic tactile stimulation was 2.00, and after 10 days, it was 5.36. Furthermore, the motor value of LBW between before and after intervention in the group subjected to kinesthetic tactile stimulation obtained a p-value of 0.000, while in the control group, the p-value was 0.004. Comparison of values between the intervention and control groups obtained p-value = 0.000. Therefore, based on the research results, it was concluded that the increase in motor development in the group that was given kinesthetic tactile stimulation was 5.36 points, higher than the other by 2.00 points. In addition, there are differences in motor development in LBW before and after the administration of kinesthetic tactile stimulation.

Keywords: *Kinesthetic Tactile Stimulation, LBW*



RELIEVING BREAST ENGORGEMENT AMONG POST-PARTUM WOMEN: A INTERVENTION COMPARATIVE STUDY

Martini^{1*}, Yetty Anggraini¹

¹Midwifery Programs, Tanjungkarang Health Polytechnic, Bandar Lampung, Lampung, Indonesia

*Email correspondence: martini.mubarok@gmail.com

ABSTRACT

The problem that can arise during the puerperium and lactation is breast engorgement, intervention to relieve it is needed. The aim of the study was to analyze differences in the effectiveness of aloe vera compress and cabbage leaves compress on breast engorgement among post-partum women. A non-randomized control group pretest posttest design is the design used in this study. The research sample consisted of a total of 30 postpartum mothers, each group consisting of 15 respondents, who were selected using non-probability random sampling with consecutive sampling type. The data were statistically analyzed using mann whitney test. The results showed that the mean of breast engorgement level before intervention on aloe vera compress group was 4.53 and the mean of breast engorgement level after intervention was 2.47. The mean of breast engorgement level before intervention on cabbage leaves compress group was 5.00 and the mean of breast engorgement level after intervention was 3.60. There is a difference in effectiveness between the aloe vera compress and the cabbage leaves compress in post-partum women who have breast engorgement in Pujokerto Public Health Center, Central Lampung with $p\text{-value} < \alpha$ ($0,018 < 0,005$)

Keywords : *Breast Engorgement, aloe vera, cabbage leaves, breast care*



PREVENTION OF HYPOTHERMIA IN NEWBORNS: A CONTROLLED INTERVENTION STUDY

Martini Fairus^{1*}, Martini¹, Yuliawati¹

¹Midwifery Programs, Tanjungkarang Health Polytechnic, Bandar Lampung, Lampung, Indonesia

*Email correspondence: fairus.toha@gmail.com

ABSTRACT

Newborns are very at risk for a decrease in temperature, because the baby's temperature control center is not adequate until 2 days after birth. Infant mortality which is contributed by hypothermia in Indonesia is 6.3%. One of the efforts to prevent hypothermia is the application of warm chains. This study aim is to determine the effectiveness of the application of warm chains with modification of black clothes to prevent hypothermia in newborns. The design in this study is a Posttest With Control Group Design. The sample of the study consisted of a total of 60 newborns, including 30 in the experiment and 30 in the control groups. Data analysis used the *Mann Whitney test*. The results showed that the mean of body temperature in newborns in the intervention group was 36.850°C. The mean of body temperature in newborns in the control group was 36.630°C. The results of statistical tests obtained a *p value* of 0.000. The Application of warm chains with a modification of black clothes is more effective to prevent hypothermia in newborns. Advice for health workers who provide services for newborns, should wear black clothes for newborns to prevent hypothermia.

Keywords : *Warm Chain, Hypothermia, Newborns*



PROCEEDING

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BUCCAL DRUGS DELIVERY SYSTEM APPROACH TO INTERVENTION TOWARD EMERGENCY CASE IN EPILEPSY PATIENT - COVID 19 WITH RESPIRATORY DISEASE INDICATION AND SEIZURE : A SYSTEMATIC REVIEW

Anas Subarnas¹, Iwan Setiawan^{2*}, Yoga Windu Wardhana¹

¹Department of Pharmacy, Padjadjaran University, Jatinangor, Bandung, Indonesia

²Sekolah Tinggi Ilmu Kesehatan Nasional, Indonesia

*Email correspondence: iwan.setiawan02@stikesnas.ac.id

ABSTRACT

People infected with COVID-19 also may experience neurological symptoms and these neurological manifestation may occur with or without cardiovascular and respiratory symptoms. Specific neurological symptoms accompanying the COVID-19 infection include loss of smell and taste, muscle weakness and pain, tingling in the hands and feet, vertigo, delirium, ischemic and hemorrhagic stroke, and seizures. A systematic review was undertaken following the methodological and reporting standards recommended by PRISMA. A literature search was conducted in October 2020. Searches were conducted in PubMed, Scopus, Web of Science and Scielo. Initially, 487 different potential articles were retrieved from the databases used. After screening by title and abstract, 123 of them were selected for full-text review. In the second step, 26 were excluded for the following reasons (papers could be excluded due to more than one criterion). Result from this systematic review was found the virus can cause complicated disorders in the nervous system, such as seizures and epilepsy. The destructive effects of Covid-19 in the central nervous system are mainly caused by a cytokine storm produced by either the entry of pro-inflammatory cytokines from the periphery into the CNS or the production of these cytokines by activated microglia. Secondary seizures may be initiated after strokes, electrolyte imbalance, increased oxidative stress, and mitochondrial dysfunction in Covid-19 patients. In Case Emergency Epilepsy Patient which have a limitation in use oral drug conventional, an appropriate drugs choice intervention it's really needed so that the patient's life can be saved. More research is needed to prove the exact mechanism of seizures in Covid-19 patients. Therefore, the research to develop a buccal mucoadhesive mucoadhesive as an epilepsy treatment is very interesting to carry out.

Keywords : *Epilepsy, Covid 19, Buccal*



EFFECTIVENESS OF PROBIOTIC YOGHURT ON THE GROWTH OF *Salmonella typhi*

Retno Martini Widhyasih^{1*}, Dinda Akhirani¹, Mega Mirawati¹

¹Health Polytechnic of Jakarta III, Bekasi of West Java, Indonesia

*Email correspondence: retnotlm2019@gmail.com

ABSTRACT

Probiotic on yoghurt can competes with pathogens to attach on intestinal mucosal epithelial cells, so the pathogen cannot colonize the intestinal mucosa, produce organic acids, H₂O₂, bacteriocin and other antibacterial compounds. This study aims to determine the effectiveness, inhibition zone values, and the minimum volume of probiotic yoghurt in inhibiting the growth of pathogenic *Salmonella typhi* bacteria in vitro. This research used probiotic yoghurt which was made by fermenting milk with the addition of starter bacteria *Lactobacillus subsp. bulgaricus*, *Streptococcus thermophilus*, and *Lactobacillus acidophilus*. The inhibitory test was carried out by well diffusion method (agar well diffusion) with five treatment groups yoghurt with different volume and repeated five times. The results showed the largest inhibitory zone in the volume of 200 µL yoghurt with an average diameter of 15.4 mm. The results of the analysis using ANOVA showed p <0.05, which means that there is effectiveness of probiotic yoghurt on inhibition zone values, and effect of inter-group volume treatment on inhibition zone except on volume treatment of 100 µL with 150 µL. The minimum volume of probiotic that effectively inhibits the growth of *Salmonella typhi* is 100 µL.

Keywords: Yoghurt, probiotic, *Salmonella typhi*



REDUCTION OF EPITHELIUMCELLANDENDOMETRIUM LAYER THICKNESS USING TURMERIC RHIZOME'S EXTRACT ON FEMALE *Rattus norvegicus* Sprague Dawley's STRAIN

Hendri Busman^{1*}, Sutyarso¹, Nuning Nurcahyani¹, Emantis Rosa¹, Salman Farisi¹, Lendawati²

¹Department of Biology, Faculty of Mathematics and Natural Sciences, Lampung University, Indonesia

²Medical Laboratory Programs, Tanjungkarang Health Polytechnic, Bandar Lampung, Lampung, Indonesia

ABSTRACT

This study aims to rate turmeric rhizome's extract (*Curcuma longa* L.) antiestrogenic potential towards epithelium cell and endometrium layer's thickness reduction on female white rat (*Rattus norvegicus*) Sprague Dawley's strain. Methods of this study is an experimental laboratory using *post-test only controlled group design* research, using 28 female white rats Sprague Dawley's strain age around 6-8 weeks old and weighted around 200-250 g that splits into 4 group. The control group (C) who were given aquadest 1 ml; Treatment 1 (T1) was given 250 mg / kgBW of turmeric rhizome's extract + 1 ml CMC (Carboxyl Methyl Cellulose); Treatment 2 (T2) was given 500 mg / kgBW turmeric rhizome's extract + 1 ml CMC; Treatment 3 (T3) was given 1000 mg / kgBW of turmeric rhizome's extract + 1 ml CMC for five days. The result of this study showed the mean endometrium epithelium cell had been C. $291 \pm 43,9$; T1. $234,86 \pm 55,7$; T2. $174,29 \pm 24,93$; and T3. $167 \pm 55,5$. The result of One-Way ANOVA test showed $p=0,000$. The result of Post-Hoc LSD test showed there was a significant difference ($p<0,05$) between group C with T2 and T3; and between T1 with T2 and T3. Statistical test results showed the presence of antiestrogenic potential effects associated with endometrium layer thickness ($P = 0.013$), and there was a decrease in endometrium thickness associated between the control group and group treatment T1 ($P = 0.014$), treatment T2 ($P = 0.047$), treatment T3 ($P = 0.002$). Turmeric rhizome's extract has an antiestrogenic potential and capable to reduce total of epithelium cells and endometrium's layer thickness on female white rat Sprague Dawley's strain. This can be made as evaluation for implantation of the embryo to the endometrium's mechanism onto next research.

Keywords: Endometrium epithelium cells; endometrium layer; turmeric rhizome's extract; antiestrogenic potential



EFFECTIVENESS OF PLANT TO AGAINST THE GROWTH OF *Streptococcus pyogenes*

Misbahul Huda^{1*}, Suroso¹

¹Medical Laboratory Programs, Tanjungkarang Health Polytechnic, Bandar Lampung, Lampung, Indonesia

*Email correspondence: misbahulhuda@poltekkes-tjk.ac.id

ABSTRACT

Rosella and Lime have a low pH so they can kill the *Streptococcus pyogenes* bacteria that causes ISPA. The purpose of this study was to determine the effectiveness of lime juice and Rosella petal stew water to kill of *Streptococcus pyogenes*. This research is an experimental study with Complete Randomized Design, ANNOVA statistical test, if F count is greater than Ftable then it is continued with BNT (Smallest Significant Difference) test at an error rate of 5% and 1%. T test was conducted to compare the effectiveness of lime and rosella to kill of *Streptococcus pyogenes*. Samples are Rosella and lemon juice with concentrations of 10%, 20%, 3%, 40%, 50%, 60%, 70%, 80%, 90%, 100% with 3 repetitions, and 0 % as negative control. The results showed that the diameter of the inhibitory zone against the *Streptococcus pyogenes* bacteria by lime from 10% to 100% was 8.15 mm to 24.05 mm. The diameter of the inhibitory zone by Rosella from 10% to 100% is 8.28 mm to 21.27 mm. Lime is more effective than Rosella in inhibiting the growth of *Streptococcus pyogenes*. Statistically the T test does not differ significantly.

Keywords: lime, Rosella, *Streptococcus pyogenes*



EFFECTIVENESS OF PINEAPPLE EXTRACT (*Ananas comosus* (L.)) ON *Streptococcus pneumoniae* GROWTH

Sri Ujjiani^{1*}, Marhamah¹

¹Medical Laboratory Programs, Tanjungpurun Health Polytechnic, Bandar Lampung, Lampung, Indonesia

*Email correspondence: sriujjiani123@yahoo.com

ABSTRACT

Pneumonia accounts for 15% of all deaths of children under 5 years of age, and causes death to 808,694 children in 2017. Based on the results of the Basic Health Research (Riskesdas) 2007, shows that the national prevalence of URI: 25.5 %, pneumonia morbidity in infants: 2.2%, underfives: 3%, 23.8% of infant mortality, and 15.5% under fives. The use of traditional medicine is a treatment that has been carried out from generation to generation and is part of the history of human culture. One of the natural ingredients that can be used as traditional medicine is pineapple (*Ananas comosus* (L.)). Research on the effectiveness of pineapple extract has been conducted (*Ananas comosus* (L.)) on the growth of *Streptococcus pneumoniae*. This type of research is a pure laboratory experimental study in vitro. In this study, the inhibition and killing power of pineapple extract (*Ananas comosus* (L.)) against the growth of *Streptococcus pneumoniae* at various concentrations of 0.5%; 1%; 2%; 4%; 8%; 10%; 20%; 30%; 40%; 50%; 60%; 70%; 80% ; 90%; 100%. This research was conducted at the Lampung Province Health Laboratory Center which was carried out from June to November 2018. The results of the One-way Anova test analysis obtained a p -value = 0,000 so that the p -value <0.05, which means that The concentration of pineapple extract tested had an effect on the growth of bacteria *Streptococcus pneumoniae* and the results of the Least Significance Different (LSD) or Post hoc LSD (p -value <0.05) showed that pineapple extract was effective in inhibiting and killing *Streptococcus pneumoniae* at a concentration of 8%.

Keywords: Effectiveness, Pineapple extract, *Streptococcus pneumoniae*



ACTIVITY OF *Lumbricus rubellus* EARTHWORM EXTRACT REDUCING POCKET DEPTH IN CHRONIC PERIODONTITIS WISTAR RATS

Iga Ayu Dharmawati¹, D M Sukrama², I B Putra Manuaba³, I M Bakta⁴, Hasanuddin Thahir⁵,
N L Kartini⁶, Suraoka Iputu⁷

¹Health polytechnic of the Ministry of Health Denpasar, Bali, Indonesia.

²Faculty of Medicine, Udayana University, Bali, Indonesia.

³Analytic Laboratory, Udayana University, Bali, Indonesia

⁴Faculty of Medicine, Udayana University, Bali, Indonesia.

⁵Department of Periodontology, Faculty of Dentistry, Hasanuddin University, Makassar, Indonesia.

⁶Faculty of Agrothechnology, Udayana University, Bali, Indonesia.

⁷Health polytechnic of the Ministry of Health Denpasar, Bali, Indonesia.

*Email correspondence: ayu_dharmawati@yahoo.com

ABSTRACT

Periodontitis is an inflammation that causes progressive damage to periodontal connective tissue, recession, alveolar bone, and pocket formation (Carranza, 2012). The periodontal pocket is an abnormal depth of the gingival sulcus which is a clinical sign of periodontal abnormality. Probing is the only reliable method of detecting pockets. Systemic administration of antibiotics and anti-inflammatory as additional therapy after SRP (Scaling root planning) provides clinical benefits in reducing pocket depth (Plessas, 2014). There have been many natural anti-inflammatory ingredients found, one of which is the earthworm *Lumbricus rubellus*. The anti-oxidant content found in earthworm *Lumbricus rubellus* has activity as anti-inflammatory, anti-pyretic and anti-carcinogenic (Cooper, 2013). This study aims to determine the ability of *Lumbricus rubellus* earthworm extract to reduce the periodontal pocket depth in Wistar rats with periodontitis.

Keywords: *Lumbricus rubellus*, earthworm, periodontitis



RELATIONSHIP OF CONSUMING SOFTDRINK ON PH SALIVA ACIDITY IN STUDENTS OF SMAN 13 BANDAR LAMPUNG IN 2020

Desi Andriyani^{1*}

¹Dental Nursing Programs, Tanjungkarang Health Polytechnic, Bandar Lampung, Lampung, Indonesia

*Email correspondence: desiandriyani2212@gmail.com

ABSTRACT

The degree of acidity (pH) of saliva is influenced by many factors, one of which is the presence of stimulation (stimulation). This stimulation can be in the form of stimulation of sweet and sour taste, which is a drink that is widely consumed by the public, because it is easy to obtain and the sweet taste is also refreshing without knowing the impact of soft and isotonic drinks on the oral cavity. This study aims to determine whether there is a relationship between soft drink consumption and pH acidity of Saliva in students of SMAN 13 Bandar Lampung. This type of research is analytic observation, the design or design in this study using a cross sectional approach. As for the sampling method using the Quota sampling technique, as many as 75 students of SMAN 13 Bandar Lampung research using litmus paper to determine the criteria for acids and bases. The results obtained from 75 samples who consumed Softdrink, 20 people (26.67%), Softdrink Fanta, 34 people (45.33%), Coca-Cola 18 people (24%) other brands 3 people (4%) . Chi Square test for the pH of Saliva on various soft drinks consumed obtained a p-value of 0.01, because the p-value <(0.05) means that soft drinks can reduce the degree of acidity of the pH of Saliva.

Keywords: Softdrink, PH Saliva

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Email:icsc@poltekkes-tjk.ac.id

