



PROCEEDINGS OF HEALTH SCIENCE “FK-DIKUA”

Editors:
Heru Santoso Wahito Nugroho
Angelito E. Alvarado
Sanglar Polnok
David Ackah
Yessy Dessy Arna

ISBN 978-602-1081-13-6



9 786021 081136

Publisher:
Forum Ilmiah Kesehatan (FORIKES)
2017

Proceedings of Health Science “FK-DIKUA”

Editors:

Heru Santoso Wahito Nugroho (Indonesia)

Angelito E. Alvarado (Philippines)

Sanglar Polnok (Thailand)

David Ackah (Ghana)

Yessy Dessy Arna (Indonesia)

Publisher:

Forum Ilmiah Kesehatan (FORIKES)

2017



Proceedings of Health Science “FK-DIKUA”

Editors:

Heru Santoso Wahito Nugroho (Indonesia)

Angelito E. Alvarado (Philippines)

Sanglar Polnok (Thailand)

David Ackah (Ghana)

Yessy Dessy Arna (Indonesia)

ISBN 978-602-1081-13-6

Publisher:

Forum Ilmiah Kesehatan (FORIKES)

2017

Address: Cemara Street 25, Dare, Sukorejo, Ponorogo, Indonesia 63453

Phone: +6285853252665, +6281335718040

Email: forikes@gmail.com

Website: <http://forikes.webs.com>

Cover and Layout:

Heru Santoso Wahito Nugroho

First Edition, 2017



PREFACE

Proceeding of Health Sciences “FK-DIKUA” is part of the launching event of The Alumni Communication Forum of Doctoral Program in Health Sciences of Airlangga University, Indonesia. In this event presented scientific articles in the areas of health, written by researchers from several countries, namely Indonesia, the Philippines, Thailand, and India. Scientific publication also involves the editors of several countries, namely Indonesia, the Philippines, Thailand, and Ghana.

We hope that these proceedings can contribute significantly to the development of science and technology in the field of health.

Surabaya, April 22, 2017

Editors



TABLE OF CONTENTS

Cover ----- i

Title page 1 ----- ii

Title page 2 ----- iii

Preface ----- iv

Table of contents ----- v

BIOPSYCHOSOCIOCULTURAL (BPSC) PARADIGM AS A HOLISTIC HEALTH PARADIGM

Muhammad Anshari (1-6)

A NURSING CARE QUALITY MODEL DEVELOPMENT BASED ON NURSE PERFORMANCE ANALYSIS AND SATISFACTION OF NURSE AND PATIENT

Abdul Muhith (7-14)

THE ROLE OF ZINC AND CYSTEINE AMINO ACID ON GROWTH BIOMARKER OF STUNTING TODDLER'S BONE AFTER GIVING HIGH DOSAGE OF VITAMIN A

Hendrayati, Bambang Wirjatmadi, Merryana Adriani (15-23)

THE INFLUENCE OF SERVANT OF GOD'S KNOWLEDGE AND SKILL TOWARD VCT SUPPORT FOR INDIVIDUAL WHO HAVE RISK OF HIV AND AIDS

Imelda F.E. Manurung (24-26)

SURVEILLANCE SYSTEM OF HIV/AIDS SUSPECT DETECTION BY CADRE EMPOWERMENT AT BULUKUMBA DISTRICT, SOUTH SULAWESI, INDONESIA

Masriadi, Darmi Indrawati, Syamsul Bakhri (27-30)

ANALYSIS FACTOR THAT INFLUENCED INDEPENDENCE OF HEAD INJURY PATIENTS WHO WERE EVER NURSED AT EMERGENCY INSTALLATION OF RSUD DR. R. KOESMA TUBAN

Ahsan, Tina Handayani, Moh. Ubaidillah Faqih (31-36)

THE INFLUENCE OF GIVING ZINC TOWARD SERUM ZINC CONTENT ON POSTPARTUM MOTHERS

Lydia Fanny (37-39)

DISTRIBUTION OF CARIES BASED ON PUFA INDEX ON COLLEGE STUDENTS OF STUDENT STUDY SERVICE (KKN) PARTICIPANTS

Risty Widi Endah Yani, Angelito E. Alvarado, Sanglar Polnok, Dincy Devassy, Hadi Prayitno, Yessy Dessy Arna, Heru Santoso Wahito Nugroho, (40-41)

EARLY MARRIAGE OF MARRIAGE DISPENSATION IN EAST JAVA, INDONESIA (CHALLENGE OF TEENAGERS' READINESS TOWARDS GOLDEN GENERATION 2045)

Iswari Hariastuti (42-47)

UNMET NEED OF FAMILY PLANNING ON REPRODUCTIVE AGE COUPLE IN MAKASSAR

Rahmawati (48-55)

THE EFFECT OF CHILDREN'S HEALTH SERVICES AND MOTHERS' CHARACTERISTICS AGAINST THE DEVELOPMENT OF UNDER-TWO-YEARS-OLD TODDLERS

Tri Riana Lestari (56-61)

THE EFFECTIVENESS OF RED BETEL LEAF EXTRACT (*Piper crocatum*) AGAINST THE MINIMUM INHIBITORY CONCENTRATION AND MINIMUM BACTERICIDAL CONCENTRATION OF BACTERIA SALMONELLA TYPHI

Moch. Achwandi (62-67)

ADVERSITY QUOTIENTS AS THE DETERMINANT OF COLLEGE STUDENT'S SELF-ACTUALIZATION ABILITY IN STUDENT EXECUTIVE BOARD (BEM) MEMBERS

Byba Melda Suhita, Devi Prista Prawisudiarko (68-72)

THE NECESSITY OF DEVELOPING THE EFFECTIVE COPING MECHANISM FOR WOMEN IN PENITENTIARY

Sabina Gero (73-78)

THE CORRELATION BETWEEN COPING STRATEGY OF AUTISTIC CHILDREN'S PARENTS AND THE PARENTING PARENTS

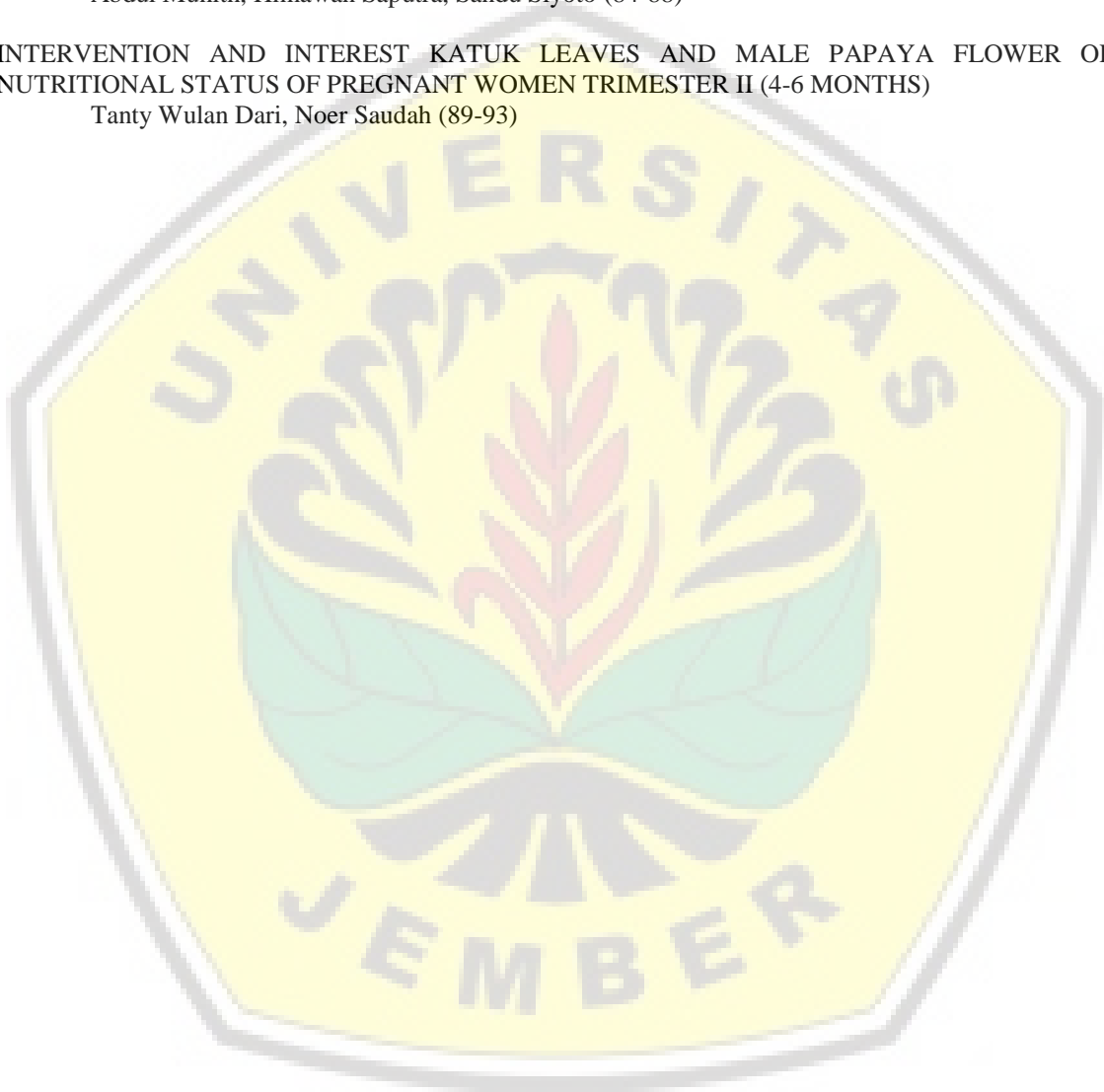
Ambar Asnaningsih (79-83)

THE CORRELATION BETWEEN HEALTHY HOUSE CONDITION AND DYSPNEA FREQUENCY OF PULMONARY TUBERCULOSIS PATIENTS

Abdul Muhith, Himawan Saputra, Sandu Siyoto (84-88)

INTERVENTION AND INTEREST KATUK LEAVES AND MALE PAPAYA FLOWER OF NUTRITIONAL STATUS OF PREGNANT WOMEN TRIMESTER II (4-6 MONTHS)

Tanty Wulan Dari, Noer Saudah (89-93)



**DISTRIBUTION OF CARIES BASED ON PUFA INDEX ON COLLEGE STUDENTS OF
STUDENT STUDY SERVICE (KKN) PARTICIPANTS**

**Ristya Widi Endah Yani¹, Angelito E. Alvarado², Sanglar Polnok³, Dincy Devassy⁴, Hadi Prayitno⁵,
Yessy Dessy Arna⁶, Heru Santoso Wahito Nugroho⁶**

1=Department of Dental Public Health, Faculty of Dentistry, Jember University, Indonesia

2= Human Resources Development Manager, LA Vina General Hospital, Philippines

3= Faculty of Nursing, Naresuan University, Thailand

4= Alponsa Clinics, Franciscan Clarist Congregation, India

5=Social Welfare Department, Faculty of Social and Political Sciences, Jember University, Indonesia

6= Health Polytechnic of Health Ministry in Surabaya, Indonesia

E-mail: ristya_widi@unej.ac.id

ABSTRACT

Adolescence is a period which the activity of caries and periodontal disease increases due to high consumption of cariogenic food and lack of maintaining healthy teeth and healthy mouth. This research aimed at describing caries based on PUFA index on 45 college students. The data regarding caries condition was provided in table. The research result showed that pulpitis cases was found in 345 teeth, fistula case in 8 teeth, meanwhile, ulcer and abscess case were not found. The condition above showed that caries based on PUFA index on college students was included in high category.

Keywords: Caries, PUFA index, College Students

INTRODUCTION

In the world, caries was a problem with the highest prevalence and significantly, it caused social effect, influenced 60-90% of school-age children and most of them were also teenagers (Dixit, et al., 2013). The recent study reported that there was an increase of high caries either on children or adult people. Caries trend had a tendency for being serious and involved many teeth. Serious caries that was not treated could cause pulpitis, sepsis, and infection which could widen to periodontal tissue, and sometimes it could cause serious complication such as cellulitis and brain abscess (Alkarimi, et al., 2012). Mouth cancer was in second ranking on males and third ranking on females, meanwhile, oropharynx cancer was in fifth ranking in Southeast Asia (World Health Organization, 2013). East Java Province had high DMF-t index, which was 5.5, with *decay* number in 1.6, *missing* in 3.8, and *filling* in 0.08. College students of Student Study Service [*Kuliah Kerja Nyata (KKN)*] participants were 20 – 24 years old which according to *Riskesdas* that DMF-t number for the age of 15-24 years was 1.8 (Balitbangkes, 2013). Adolescence was a period which the activity of caries and periodontal disease increased due to high consumption of cariogenic food and the lack of maintaining healthy teeth and healthy mouth.

Furthermore, there were various indexes for measuring dental and oral disease. PUFA index gave information about clinical consequence from untreated caries, such as pulp abscess that was perhaps more dangerous rather than the lesions of caries. Criteria for PUFA index were pulpitis, ulceration, fistula, and abscess. PUFA score for an individual was about 0-32 (Monse, et al., 2010; Benzian, et al., 2011; Monse, et al. 2012; Mehta, et al., 2013; Praveen, et al., 2015).

METHOD

The subject of this descriptive research was 45 college students of KKN participants in phase 1 at Glingseran village, Wringin sub-district, Bondowoso district on 21st February 2017. The data that was about variable of this research (caries based on PUFA index) was collected through dental check. The instrument and material which were utilized were glass mouth, oral sonde, forcep, *nierbekken*, *dappen glass*, tampon basin, *handscoon*, masker, mouthwash glass, *tissue*, *headlamp*, alcohol, *cotton roll*, and tampon. The collected data was analyzed descriptively and then, it was provided in table and chart.

RESULT

Table 1. Distribution of Dental Disease with PUFA Index Based on the Total of Teeth

Type of Dental Disease	Total of Teeth	Percentage
Pulpitis	345	24%
Fistula	11	0.8%
Ulcer	0	0%
Abscess	0	0%
Total	1440	

Distribution result of teeth check on college students of Student Study Service (*KKN*) participants was provided in Table 1.

DISCUSSION

Distribution of caries based on PUFA index on college students of Student Study Service (*KKN*) participants in phase 1 at Glingseran village, Wringin sub-district, Bondowoso district, Indonesia were: pulpitis (24%), fistula in 8 teeth (0.8%), meanwhile, ulcer and abscess were not found. This showed that high case was due to untreated dental disease, particularly pulpitis in adolescence. In addition, the total of other cases was less or even was not found in check time. In this case, perhaps the three cases had ever been occurred, but in the check time, it had healed. Thus, the occurrence number seemed to be small. According to the age group, the most number of dental treatment proportion was in the age of 16-18 years (69.4%), meanwhile, in the age of 19-20 years was 30.6%. The most susceptible age toward caries was in the age of 4-10 years which was in baby teeth and in the age of 12-18 years which was in adult teeth (Wong, et al., 2008).

Caries was a common chronic disease that was occurred in adolescence and it could cause negative impact toward either individual welfare or group when they had activities daily (Novita, 2016). In the age of more than 14 years, it was the more the time for being exposed by sugary and cariogenic food toward the teeth. If it was not supported by well dental and oral cleanliness, it would be occurred easily demineralization. As the effect, caries could be occurred. The biggest proportion of caries was found on students or college students which were 42.1% (Radiah, et al., 2013; Veiga, et al., 2016).

In addition, it was occurred hormonal change on adolescence to the early adulthood. The hormonal change could cause the occurrence of oral problem such as gum swellings. Hence, it could make oral cleanliness less. Nevertheless, this could cause the increase of caries occurrences (Tarigan & Rasinta, 2013; Lucaks & Largaespada, 2016).

CONCLUSION

According to the result of data analysis, it could be concluded that the occurrence of caries which was based on PUFA index on college students of Student Study Service (*KKN*) participants in phase 1 at Glingseran village, Wringin sub-district, Bondowoso district was in high category.

REFERENCES

- Alkarimi H, A., Watt R, G., Pikhart H., Jawadi A, H., Sheiham A, Tsakos G. Caries and Growth in School-Age Children. Official journal of the American Academy of Pediatrics. 2012; 133(3): e616-e623
- Balitbangkes. 2013. Laporan Nasional Riset Kesehatan Dasar. Jakarta: Depkes RI.
- Benzian Habib, Monse Bella, Weltzen Roswitha Heibrich, Hobdell Martin, Mulder J, Helderman Wim V, P. Untreated Severe Dental Decay: A Neglected Determinant Of Low Body Mass Index In 12 Years Old Filipino Children. BMC Public Health. 2011; 11(558): 1-10
- Dixit Lonim Prasai, Shakya Ajay, Shrestha Manash, Shrestha Ayush. Caries Prevalence, Oral Health Knowledge and Practice Among Indigenous Chepang School Children of Nepal. BMC Oral Health. 2013; 13(20): 1-5
- Lucaks J.R., L.L Largaespada. Explaining sex differences in caries prevalence: saliva, hormones, and "life history" etiologies. Am J of human Biology. 2006; 18: 540-55.
- Mehta N, M., Corkins M, R., Lyman B, Malone A, Goday P, S., Carney L, N., Monczka J, L., Plogsted S, W., Schwenk W, F. Defining Pediatric Malnutrition: A Paradigm Shift Toward Etiology-Related Definitions. Journal of Parenteral and Enteral Nutrition. 2013; 20(10): 1-22
- Monse B, et al. 2012. The Effects of Extraction of Pulpally Involved Primary Teeth on Weight, Height and BMI in Underweight Filipino Children. A Cluster Randomized Clinical Trial. BMC Public Health. 2012; 12(725): 1-7
- Monse B., Heinrich W, R., Benzian H., Holmgren C., Van Palenstein Helderman W. PUFA—An Index of Clinical Consequences of Untreated Dental Caries. Community Dent Oral Epidemiology. 2010; 38: 77–82
- Novita A.R. Hubungan Karies Gigi Terhadap Kualitas Hidup Yang Terkait Dengan Kesehatan Gigi Dan Mulut Pada Remaja Usia 12-14 Tahun Di SMP Negeri 2 Jumantono Kabupaten Karanganyar. Undergraduate Thesis. Surakarta: Muhammadiyah University of Surakarta. 2016.