THE 1st INTERNATIONAL CONFERENCE ON
NUTRITION AND PUBLIC HEALTH

BOOK OF ABSTRACT

"Accelerating Stunting Reduction Through the First 1000 Days of Life Interventions in Response to Environmental Challenges"

Organized by:
Nutrition Science Department
Faculty of Public Health
Universitas Jember

co-host:

BOOK OF ABSTRACT

The 1st International Conference on Nutrition and Public Health (ICNPH)

"Accelerating Stunting Reduction Through the First 1000-days of life Interventions in Response to Environmental Challanges"

August 2nd – 3rd 2019

Makassar

Nutrition Department in Faculty of Public Health,
Hasanuddin University

Editors:
Dr. Healthy Hidayanti SKM., M.Kes
Muh. Fajaruddin Natsir, SKM., M.Kes

Publisher:

unhas press
UPT. Unhas Press

BOOK OF ABSTRACT

The 1st International Conference on Nutrition and Public Health (ICNPH) 2019

"Accelerating Stunting Reduction Through the First 1000-days of life Interventions in Response to Environmental Challanges"

Editors:

Dr. Healthy Hidayanti SKM., M.Kes

Muh. Fajaruddin Natsir, SKM., M.Kes

Publisher:

UPT Unhas Press

ISBN: 978-979-530-216-2

Address:

Kampus Unhas Tamalanrea, Jl. Perintis Kemerdekaan

Km. 10 Makassar 90245

0411 – 8997706 085353555569

E-mail: unhaspress@gmail.com

Secretariat Division :
Mesra Rahayu,SKM, M.Kes (Coordinator)
Azizah Sudirman, S.Gz

Event Division:
dr.Devintha Virani, M.Kes, Sp.GK (Coordinator)
Muhammad Rachmat, SKM,M.Kes

Scientific Division :
Dr.Healthy Hidayanti, SKM, M.Kes (Coordinator)
Muhammad Fajaruddin Natsir, SKM,M.Kes

Public Relation, Documentation, Publication Division :
Sabaria Manti, SKM,M.Kes, M.Sc (Coordinator)
Indra Dwinata, SKM,MPH

Equipment and transportation Division :
Marini Amalia Mansur, S.Gz, MPH (Nutrition) (Coordinator)
Muh. Iffah Nurhikmah, S.Gz

IT Division :
Muhammad Rizal, S.S (Coordinator)
Muh.Aripai, SKM, M.Kes

PREFACE

problems are not comprehensively eliminated yet overnutrition emerges in increasing trend. Stunting is a problem of malnutrition in children under five who is currently the focus to be addressed. Existence of nutritional problems can obstruct national development, so nutritional investment is crucial to break the chain of problems and will have an impact on the quality of human resources in the future.

The 1st International Conference on Nutrition and Public Health (ICNPH) 2019 is conducted to exchange scientific ideas and experiences in the field of nutrition and public health, particularly concerning recent advances, likely future developments of stunting reduction interventions. The conference includes the most influential speakers to present keynote speeches & plenary sessions by eminent personalities from around the world in addition to contributed papers both oral and poster presentations. The big theme of **ICNPH-2019** is **"Accelerating Stunting Reduction Through the First 1000-days of life Interventions in Response to Environmental Challenges"**

ICNPH-2019 convenes top scientific researchers, practitioners, global and public health professionals, policy makers and advocacy leaders, industry, media and other related professionals to advance nutrition and public health science and its practical application. Hence it offers a great opportunity to obtain comprehensive experience offering the greatest insights in updated nutrition and public health sciences particularly in research, policies, interactive exhibitions, new technology, and better opportunities for networking in a welcoming environment.

This abstract book is designed to provide comprehensive information to all participants including the organizing committee regarding the whole agendas of the conference, therefore all of the activities can be run smoothly and on schedule and can achieved the final outcomes.

ICNPH-2019 is organized and hosted by Nutrition Department in Faculty of Public Health, Hasanuddin University with fully supported from the faculty and the University. It is sponsored by local to regional government and private institutions including media partners. On behalf of the Organizing Committee of **the 1st ICNPH-2019**, we would like to thank for your participation and to congratulate on completion of the conference. Hopefully the efforts and results of the conference can benefit all participants and the community.

Makassar, 2-3 August 2019

Organizing Committee of the 1st ICNPH-2019

6. Health sciences

Dietary Inflammatory Index: A New Tool for Assessing Inflammation Contain on Foods Which Consumed by Adolescence to Reduce Non Communicable Diseases

Karera Aryalika[1], Farida Wahyuningtyas[2]

[1,2]*Departement of Nutrition, Faculty of Public Health, Universitas Jember*

Email address of corresponding author: karera.fkm@unej.ac.id

ABSTRACT

The state of obesity in the body lead to have chronic low-grade inflammation in the long term condition. Diet has been known as an important regulatory factor on inflammatory condition. Characteristic of individual diet according to its inflammatory properties in order to investigate the inflammatory links between obesity and diet can be assessed by dietary inflammatory index (DII). The study aimed to asses inflammation contain on foods which consumed by adolescence using new tool namely dietary inflammatory index. A comparative cross sectional study with 152 overweight-obese and 151 normal adolescence in Trenggalek District was involved. Inflammation contained on foods measured by dietary inflammatory index. Nutritional status of adolescence was categorized using CDC (BMI-for-Age-percentils). There was no differences between dietary inflammatory index and nutritional status ($p>0.05$). However, pro inflammatory diet (the higher dietary inflammatory index score) was found among overweight and obese adolescence. Inversely, anti inflammatory diet (the lower dietary inflammatory index score) was associated with normal adolescence. Therefore, overweight and obese adolescence should consume more foods which contain anti inflammatory parameter to prevent high circulating of adipocytokines in the blood so that incidence of metabolic syndrome can be reduced earlier.

Keywords: Adolescence, Foods, Inflammation, Dietary Inflammatory Index, Non Communicable Disease

Dietary Inflammatory Index: A New Tool for Assessing Inflammation Contain on Foods Which Consumed by Adolescence to Reduce Non Communicable Diseases

Karera Aryatika[1], Farida Wahyuningtyas[2]

[1,2]*Departement of Nutrition, Faculty of Public Health, Universitas Jember*

Corresponding author's email: karera.fkm@unej.ac.id

The state of obesity in the body lead to have chronic low-grade inflammation in the long term condition. Diet has been known as an important regulatory factor on inflammatory condition. Characteristic of individual diet according to its inflammatory properties in order to investigate the inflammatory links between obesity and diet can be assessed by dietary inflammatory index (DII). The study aimed to asses inflammation contain on foods which consumed by adolescence using new tool namely dietary inflammatory index. A comparative cross sectional study with 152 overweight-obese and 151 normal adolescence in Trenggalek District was involved. Inflammation contained on foods measured by dietary inflammatory index. Nutritional status of adolescence was categorized using CDC (BMI-for-Age-percentils). There was no differences between dietary inflammatory index and nutritional status (p>0.05). However, pro inflammatory diet (the higher dietary inflammatory index score) was found among overweight and obese adolescence. Inversely, anti inflammatory diet (the lower dietary inflammatory index score) was associated with normal adolescence. Therefore, overweight and obese adolescence should consume more foods which contain anti inflammatory parameter to prevent high circulating of adipocytokines in the blood so that incidence of metabolic syndrome can be reduced earlier.

Keywords: Adolescence;Foods;Inflammation;Dietary Inflammatory Index;Non Communicable Diseases

INTRODUCTION

In Indonesia, prevalence of overweight and obese among adolescence aged 16-18 years increase from 1,4 percent (2010) to 7.3 percent in 2013. Among 7.3 percent adolescence aged 16-18 years who categorized as ornutrition 5.7 percent are overweight and 1.6 percent are obese[1]. However, several studies found that the prevalence of overweight and obese among adolescence was higher compare with national prevalence. The prevalence of overweight and obese among anemic and non anemic adolescence in Malang District is 19.1 and 17.4 percent respectively[2].

Obesity in adolescence substantially increases the risk of health problems in adulthood[3]. Being overweight and obese increases the risk of developing diabetes, heart disease, high blood pressure, cancer and other adverse health outcomes[4]. Obesity is a state in which there is an overaccumulation of subcutaneous or abdominal adipose tissue[5]. Obesity is associated with alterations in immunity, a chronic low-grade inflammation in which there are elevated circulating pro-inflammatory cytokines[5]. The increase size of adipocytes plays a decisive role because, in the long term condition, it will increases adipose tissue. The effect of increasing adipose tissue was rising production of adipocytokines and it triggers a series of inflammation[5]. Overall, obesity is thus an underlying condition for inflammatory and metabolic diseases[5].

On the other hand, diet has been known to be an important regulatory factor on immune response[6]. The study showed that there was association between different dietary pattern and chronic low grade inflammation[7]. Additionally, another study conducted by Steck et al (2014) explain that there is positive association between western type diets and pro-inflammatory biomarkers[8]. A considerable effort has been forwarded to link the dietary pattern and some low grade inflammatory markers[9].

To assess the diet quality in relation to inflammation it may cause in the body, Dietary Inflammatory Index (DII) was developed. The dietary inflammatory index is a tool for assessing diet quality and has the potential to be used for evaluating and guiding individuals in setting dietary goals to help decrease levels of inflammation. Thereby, DII can be used potentially to reduce the risk of obesity and certain chronic health conditions[8]. Dietary inflammatory index (DII) can be useful to characterise an individual's diet according to its inflammatory properties in order to investigate the inflammatory links between obesity and diet.

In the light of these development, it is very important to understand the type of adolescence diet which contained pro- or anti-inflammatory and thus contributes to obesity. The reason for conducting study among overweight, obese and normal adolescence was able to capture variation in the type of diet of adolescence based on their nutritional status. Meanwhile, there is no such studies about level of pro- and anti-inflammatory markers which contain on foods that consumed by adolescence especially in Indonesia.

METHODS

Study Design and Sampling Procedure

This study was designed as a comparative cross sectional study to investigate the differences between dietary inflammatory index among overweight,obese and normal adolescence. Multistage random sampling design was used to select 16-18 years school adolescence in Trenggalek district. Firstly, researcher determine location of the place where the data will be collected. Trenggalek District are chosen for the setting research area selected purposively. Researcher look for the data of total senior high school which located in Trenggalek district from Depdikbud at the venue. Randomly selected 6 out 48 senior high schools. The researcher do the screening both inclusion and exclusion criteria in the senior high school to determine the samples which use for the present study.

Instrument Development and Data Collection Procedure

Instrument of the study, we used structured questionnaires, SQ FFQ and food photograph. For screening, we used SECA weighting scale, SECA measuring length boards for anthropometry measurement. We conducted pre tested before data collection.

Ethical Considerations

This present study received ethical approval from the Faculty of Medicine University of Indonesia with ethical approval number 381/UN2.F1/ETIK/2017. This study also had permittion letter from Ministry of Internal Affairs (11 38/16.1/31/1.86/2017). There is no problem of ethics in this present study, before this research conducted the researcher explained in advance what will be done and subject asked to sign the informed consent if agreed to follow this research.

Data Processing and Analysis

A. Data Processing

Nutritional Status

Adolescence nutritional status was described using CDC chart 2000. BMI was calculated as weight in kg divided by stature in cm twice and multiply by 10,000. After that look in CDC chart (this chart is different between boys and girls age 2-20 years old) and categorized BMI for-age-percentiles into non obese (5th - < 85th percentiles), overweight (85th – 95th percentiles) and obese (≥ 95th perecntiles).

Calculation dietary intake

Intakes of all food items had been converted into intakes of energy and nutrients by using Nutri-survey for window version 2007.

Calculation of adapted dietary inflammatory index

According to Shivappa's reference, 45 food nutrients parameters spesific overall inflammatory score was available for DII index (INDEX 1). Calculation of this DII was linked to standard global daily mean intake and standard deviation from the world composite database for all food nutrients parameters. Z score was calculated by substracting this global mean from individual dietary data from individual dietary intake and dividing by standard deviation[10].

Calculation of centered percentile value for each food nutrient parameters

Z score was converted to percentile values (0-100) by using percentiles rank in SPSS and these values were divided by 100 to get (0-1). To minimize the effect of "right skewing" (a common occurence with dietary data), this value was squared and substracting 1 to convert as a centered percentile score which ranged from -1 to +1 for each food nutrient parameter.

Food nutrient parameter spesific dietary inflammatory index (DII) score

Food nutrient parameter spesific dietary inflammatory index (DII) score was calculated by multiplying centered percentile value for each food nutrient parameters with respective overall food nutrient parameter spesific inflmmatory effect score.

Overall dietary inflammatory index (DII) scores

Overall dietary inflammatory index (DII) had been obtained from the sum of all food nutrient parameter spesific dietary inflammatory index (DII) score and was converted as DII quintiles. The greater the DII score, the more pro-inflammatory the diet, and more negative values represent more anti-inflammatory diets.

B. Data Analysis

The data had been was analyzed by SPSS version 20.0. Normality check was performed using Kolmogorov Smirnov. Categorical data of socio economic demographic was analyzed using chi square. Futhermore, differences of dietary intake among overweight, obese and normal adolsecence analyzed by independent t- test if it was distributed normally. To assess association between dietary inflammatory index (DII) and nutritional status, chi square was performed.

RESULT

Socio economic demographic

For socio economic demographic, there was significant association between sex, age and nutritional status. Prevalence of female suffered overweight and obesity was higher (69.7%) compare with male (30.3%). Furthermore, the most prevalence of overweight and obesity happened in adolescence who had age 16 years old (63.2%).

Dietary intake of overweight/obese and normal adolescence

Overweight and obese adolesence had significantly higher intake of energy, protein, total fat, fiber, fe, niacin, thiamin, vit B6, vit B12, PUFA, saturated fat, MUFA, trans fat, omega 6, omega 3, folic acid, magnesium compare with normal adolesence. Additionally, normal weight adolescence had higher intake of selenium and beta carotene compare with overweight and obese adolescence.

Association between dietary inflammatory index (DII) and nutritional status.

There was no association between dietary inflammatory index and nutritional status ($p>0.05$). The median of DII among overweight/obese adolesecence was -0.0665 following by first and thirds percentiles around -0.1512 and 0.0108 respectively. Meanwhile the median of dietary inflammatory index of normal adolescence was -0.3318 following by first and third percentiles around -3.7380 and 0.8457 respectively. The result described that median of dietary inflammatory index among overweight and obese adolescence was higher compare to normal adolescence.

Adolescence who belonged to pro inflammatory scores of dietary inflammatory index had risk of suffering overweight and obese 1.16 times than adolescence who belonged to anti inflammatory scores of dietary inflammatory index.

DISCUSSION

Prevalence of overweight and obesity among female adolescence were higher compare with male adolescence. The findings of higher nutritional status among female adolescence was conform to those of a previous study by World Health Organization[10]. According to Rosenfeld (2004), both male and female humans experience pubertal growth spurts and are not sexually dimorphic in adult stature. This pubertal growth spurt occurs during adolescence and serves to prepare the child for adulthood. This means that the organs and characteristics required for certain roles in adulthood are developed during this period and the relatively larger female size might have evolved to support the birth of offspring in adulthood[11]. Besides that during this period, boys gain proportionately more muscle mass than fat as compared to girls. They experience increased linear growth to produce a heavier skeleton and develop greater red blood cell mass than girls. Girls on the other hand have more fat than muscle tissues. Therefore, more females adolsecence are at risk of obesity than male[10]. This may explain the reason why females were found in this study have overweight and obese during adolescence compare than male.

Adolescence who were in age 16 years old suffered more overweight and obesity compare with those who were in 17 years old. The same findings from previous study explained that over 80% of adolescence growth (attained weight and height) is completed in early adolescence (10-16 years), with a marked deceleration in weight and height velocity in the post-pubertal phase[10]. During that periods, when the adolescence had high attained of height and weight, it was possible to become overweight and obesity, if they did not consider their nutritional balance requirement and had enough physical activity.

High consumed of macronutrient intake was caused obesity was in line with previous study. But, for micronutrient consumption such as vit B complex, fiber, omega 3 and 6, PUFA and MUFA, magnesium was not in line with previous study. Furthermore, there was no difference in the result of FFQ source of micronutrient foods between overweight/obese and normal adolescence. Additionally, it might be happened because of overestimation sq ffq result.

The median of dietary inflammatory index of overweight and obese adolesecence was -0.0665. It was in line with previous study that the highest value of dietary inflammatory index

which contain pro inflammatory was closed to '+1'[9]. Meanwhile the median of dietary inflammatory index of normal adolescence was -0.3318. It was similiar with previous study that showed the highest value of dietary inflammatory index which contain anti inflammatory was related to '-1'[9].

Present findings suggested that diet induced inflammation might be contributed to increasing or maintaining obesity[71]. The origin of inflammation during overweight and obesity is not yet fully understood. It is acknowledged that inflammation is induced by adiposity, but this relationship can be directional (i.e pro inflammatory diet can increase or maintain adiposity), thus creating a visious cycle, because nutrient excess and some spesific foods or nutrients also have been asociated with inflammation. The potential mechanism underlying this association is the activation of pathogen-associated molecular pattern, such as Toll-like receptor and Nod-like receptor, which induced the activation of inflammatory markers in several tissues including the adipose tissue[12]. Moreover, dietary patterns (e.g high fat /low fibre or low fat/high fiber diet) and single spesific nutrient (e.g dietary fiber) appear to have important consequences in the gut microbiota, which is also involved in low grade inflammation associated with obesity[12].

Several studies show that pro-inflammatory diet have positive association with abdominal obesity[13], risk of chronic disease[14]. Otherwise, anti-inflammatory diet was associated with decrease of weight[15]. Moreover, proinflammatory cytokines, including IL-6, IL-1, and TNF-a, could stimulate appetite, thereby increasing energy intake and fat deposition[16]. Weight gain also could be promoted by b-adrenegic desensitization due to chronic stimulation of the peripheral sympathetic nervous system caused by adiposity signals, such as leptin and insulin, which are related to the inflammatory process[17]. Excess of certain nutrients can also triggers hypothalamic inflammation, which has the potential to cause of the obesity[18].

CONCLUSION

However, a pro inflammatory diet (the higher dietary inflammatory index score) was found among overweight and obese adolescence. Inversely, anti-inflammatory diet (the lower dietary inflammatory index score) was associated with normal adolescence. Therefore, overweight and obese adolescence should consume more foods which contain anti inflammatory parameter to prevent high circulating of adipocytokines in the blood so that incidence of metabolic syndrome can be reduced earlier.

REFERENCES

1. Balitbangkes Kemenkes RI. 2013. Riset Kesehatan Dasar (Riskesdas) 2013. Kemenkes RI: Jakarta.
2. Oy S. 2016. Food based recommendations developed by linear programming approach to combat anemia among adolescent school girls in Malang, Indonesia. Jakarta (ID) : Universitas Indonesia. [Thesis]
3. Nguyen et al. 2013. High prevalence of overweight among adolescents in Ho Chi Minh City, Vietnam. BMC Public Health.13(141): 1471-2458. Doi : http://www.biomedcentral.com/1471-2458/13/141.

4. Trasande L, Chatterjee S. 2009. The Impact of Obesity on Health Service Utilization and Costs in Childhood. Obesity (Silver Spring) 17(9):1749-1754.
5. Van Graal LF, Mertens IL, De Block CE. 2006. Mechanisms linking obesity with cardiovascular disease. Nature. 13(80):875-880.
6. Minihane et al. 2015. Low-grade inflammation, diet composition, and health: current research evidence and its translation. British Journal of Nutrition.114: 999-1012. Doi: 10.1017/S0007114515002093
7. Galland L. 2010. Diet And Inflammation. Nutr Clin Pract. 25(6): 634-640. Doi: 10.1177/088453361038573
8. Steck et al. 2014. The Dietary Inflammatory Index: A New Tool for Assessing Diet Quality Based on Inflammatory Potential. The Digest. 49(3):1-10
9. Giugliano D, Ceriello A, Esposito K. 2006. The Effect of diet on inflammation. Journal of the American College of Cardiology. 48(4):677-685. Doi: 10.1016/j.jacc.2006.03.052
10. World Health Organization. 2006. Adolescent Nutrient : A review of the situation in selected South East Asean Countries. Doi : http://apps.searo.who.int/PDS_DOCS/B0239.pdf
11. Rosenfeld EG. 2004. Gender difference in height: an evolutionary perspective. Journal of Paediatric Endocrinology and Metabolism. 17(1) : 1267-1271.
12. Salas-Salvado J. et. al. 2006. Subcutaneous adipose tissue cytokine production is not responsible for the restoration systemic inflammation markers during weight loss. Intern J Obese.30: 1714-1720.
13. Lee H, Lee IS, Cho R. 2013. Obesity, inflammation and diet. Pediatr Gastroenterol Hepatol Nutr. 16(3):143-52. doi: 10.5223/pghn.2013.16.3.143. Epub 2013 Sep 30.
14. Shivappa N. et al. 2013. Designing and developing a literature-derived, population-based dietary inflammatory index. Public Health Nutr. 21 (4): 1-8.
15. Rallidis LS. et al. 2003. Dietary alpha-linolenic acid decreases C-reactive protein, serum amyloid A and interleukin-6 in dyslipidaemic patients. Atherosclerosis. 167(2):237-242.
16. Wirth M. et al. 2014. Dietary inflammatory index scores differ by shiftwork status: NHANNES 2005-2010. J Occup Environ Med. 56(2): 145-148. Doi: 10.1097/JOM.0000000000000088.
17. Lohse MJ, Engelhardts S, Danner S, Bohm M. 1996. Mechanism of beta-adrenergic receptor desensitization: from molecular biology to heart failure. Basic Res Cardiol. 2:29-34.
18. Cazzete F. et al. 2011. Obesity-mediated inflammation may damage the brain circuit that regulates food intakes. Brain Res. 1373:101-109.

INDEX 1. Food parameters included in the dietary inflammatory index, inflammatory effect scores, and intake values from the global composite data set; Dietary Inflammatory Index Development Study, Columbia, SC, USA, 2011–2012

Food parameter	Weighted number of articles	Raw inflammatory diet score	Overall inflammatory effect score	Global daily mean intake (units/d)	SD
Alcohol (g)	417	-0.278	-0.278	13.98	3.72
Vitamin B_{12} (µg)	122	0.205	0.106	5.15	2.70
Vitamin B_6 (mg)	227	-0.379	-0.365	1.47	0.74
B-carotene (µg)	401	-0.584	-0.584	3718	1720
Caffeine (g)	209	-0.124	-0.110	8.05	6.67
Carbohydrate (g)	211	0.109	0.097	272.2	40.0
Cholesterol (mg)	759	0.347	0.110	279.4	51.2
Energy (kcal)	245	0.180	0.180	2056	338
Eugenol (mg)	38	-0.868	-0.140	0.01	0.08
Total fat (g)	443	0.298	0.298	71.4	19.4
Fibre (g)	261	-0.663	-0.663	18.8	4.9
Folic acid (µg)	217	-0.207	-0.190	273.0	70.7
Garlic (g)	277	-0.412	-0.412	4.35	2.90
Ginger (g)	182	-0.588	-0.453	59.0	63.2
Fe (mg)	619	0.032	0.032	13.35	3.71
Mg (mg)	351	-0.484	-0.484	310.1	139.4
MUFA (g)	106	-0.019	-0.009	27.0	6.1
Niacin (mg)	58	-1.000	-0.246	25.90	11.77
n-3 Fatty acids (g)	2588	-0.436	-0.436	1.06	1.06
n-6 Fatty acids (g)	24	-0.159	-0.159	10.80	7.50
Onion (g)	145	-0.490	-0.301	35.9	18.4
Protein (g)	102	0.049	0.021	79.4	13.9
PUFA (g)	4002	-0.337	-0.337	13.88	3.76
Riboflavin (mg)	22	-0.727	-0.068	1.70	0.79
Saffron (g)	33	-1.000	-0.140	0.37	1.78
Saturated fat (g)	205	0.429	0.373	28.6	8.0
Se (µg)	372	-0.191	-0.191	67.0	25.1
Thiamin (mg)	65	-0.354	-0.098	1.70	0.66
Trans fat (g)	125	0.432	0.229	3.15	3.75
Turmeric (mg)	814	-0.785	-0.785	533.6	754.3
Flavan-3-ol (mg)	521	-0.415	-0.415	95.8	85.9
Flavones (mg)	318	-0.616	-0.616	1.55	0.07
Flavonols (mg)	887	-0.467	-0.647	17.70	6.79
Flavonones (mg)	65	-0.908	-0.250	11.70	3.82
Anthocyanidins (mg)	69	-0.449	-0.131	18.05	21.14
Isoflavones (mg)	484	-0.593	-0.593	1.20	0.20

Pepper (g)	78	-0.397	-0.131	10.00	7.07
Thyme/oregano (mg)	24	-1.000	-0.102	0.33	0.99
Rosemary (mg)	9	-0.333	-0.013	1.00	15.00