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HASIL PENILAIAN SEJAWAT SEBIDANG ATAU PEER REVIEW
KARYA ILMIAH: JURNAL ILMIAH

Judul Artikel Ilmiah	:	**Plant-based Diet and Iron Deficiency Anemia in Sundanese Adolescent Girls at Islamic Boarding Schools in Indonesia**
Nama semua penulis	:	Mohammad Zen Rahfiludin, Septo Pawelas Arso, **Tri Joko,** Alfa Fairuz Asna, Retno Murwani, Lilik Hidayanti
Status Pengusul (coret yg tidak perlu)	:	~~Penulis Utama/ Penulis Utama & Korespondensi / Penulis Korespondensi/~~ **Penulis Anggota**

Status Jurnal:

• Nama Jurnal	:	**Journal of Nutrition and Metabolism**
• Tahun terbit/Vol/No/halaman	:	2021/Volume 2021/No. 1 / Page 1-7
• Edisi (bulan, tahun)	:	September 2021
• ISSN	:	P-ISSN:2090-0724 E-ISSN:2090-0732
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• Terindex di	:	Scopus coverage years : from 2010 to Present Q2 SJR 2020 = 0,789

Kategori Publikasi (beri tanda V yang sesuai)

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a	Kelengkapan unsur isi artikel (10 %)	4	4
b	Ruang lingkup & kedalaman pembahasan (30 %)	12	10,5
c	Kecukupan dan kemutahiran data/informasi dan metodologi (30 %)	12	10,5
d	Kelengkapan unsur dan kualitas jurnal (30%)	12	11
	Nilai Total	**40**	36
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Catatan Penilaian artikel oleh Reviewer

a	Kelengkapan unsur isi artikel	Unsur artikel ini sudah memenuhi panduan dari jurnal yang dituju yang terdiri dari judul, abstrak, *introduction*, *methods*, *results*, *discussion*, *conclusions*, dan *references* dengan jumlah 45.
b	Ruang lingkup & kedalaman pembahasan	Pembahasan fokus pada pola makan pangan nabati dengan anemia pada remaja putri, penjabaran tiap variabel cukup detail dengan referensi internasional serta adanya perbandingan dengan penelitian sebelumnya.
c	Kecukupan dan kemutahiran data/informasi dan metodologi	Metode artikel dijabarkan desain penelitian, lokasi dan waktu penelitian, populasi dan teknik pengambilan sampel, pengukuran yang dilakukan dan *cut-off point*, serta analisis statistik yang digunakan.
d	Kelengkapan unsur dan kualitas jurnal	Artikel ini dipublikasikan pada jurnal berindex scopus Q4 dengan *impact factor* SJR 2020: 0,789.

Surabaya,   2021
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HASIL PENILAIAN SEJAWAT SEBIDANG ATAU PEER REVIEW
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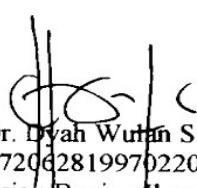|		
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c	Kecukupan dan kemutahiran data/informasi dan metodologi (30 %)	12	12
d	Kelengkapan unsur dan kualitas jurnal (30%)	12	12
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b	Ruang lingkup & kedalaman pembahasan	Topik yang diangkat mengenai konsumsi/pola makan berbasis sayuran yang dikaitkan dengan anemia pada remaja putri di *boarding schools*. Pembahasan cukup baik dengan mengambil referensi dari database internasional seperti scopus, untuk merangkum hasil penelitian dan kesimpulan.
c	Kecukupan dan kemutahiran data/informasi dan metodologi	Metode *literature review* dengan sumber database yang digunakan sangat baik yaitu scopus dan beberapa database lainnya yang terbit selama 2010-2020. Penyajian sangat baik, teknik pengambilan *literature* dijelaskan dengan baik.
d	Kelengkapan unsur dan kualitas jurnal	Artikel dipublikasikan pada jurnal internasional bereputasi dan memiliki *impact factor* Q2 SJR 2020: 0,789.

Lampung,   2021
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Plant-based Diet and Iron Deficiency Anemia in Sundanese Adolescent Girls at Islamic Boarding Schools in Indonesia

Rahfiludin M.Z.[a] ✉ ,   Arso S.P.[b] ✉ ,   Joko T.[c] ✉ ,   Asna A.F.[a] ✉ ,   Murwani R.[d] ✉ ,   Hidayanti L.[e] ✉

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Abstract

Background. Adolescent girls are at risk for iron deficiency anemia (IDA) due to the higher demand of iron for growth and the loss of blood during menstruation. Consumption of foods containing iron that have higher bioavailability can reduce the risk of IDA although diets that are largely plant-based, like those consumed by many Sundanese people, may not contain sufficient bioavailable iron. Here, we

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18500162600	21st Century Music	15343219		Inactive	2002-2011		ENG
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21100447128	3 Biotech	2190572X	21905738	Active	2014-ongoing, 2012		ENG
21100779062	3D Printing and Additive Manufacturing	23297662	23297670	Active	2014-ongoing		ENG
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19700200922	3L: Language, Linguistics, Literature	01285157		Active	2008-ongoing		ENG
21101005201	452F		20133294	Active	2020-ongoing		CAT;SPA
145295	4OR	16194500	16142411	Active	2003-ongoing		ENG
16400154734	A + U-Architecture and Urbanism	03899160		Active	2002-ongoing		JPN, ENG
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21100399164	A&A case reports	23257237		Inactive	2015-2017		ENG
21100881366	A&A practice		25753126	Active	2018-ongoing		ENG
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5800207606	AAA, Arbeiten aus Anglistik und Amerikanistik	01715410		Active	2002-ongoing		GER
28033	AAC: Augmentative and Alternative Communication	07434618	14773848	Active	1985-ongoing		ENG
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26408	AACN clinical issues	10790713	15389812	Inactive	1995-2006		
51879	AACN clinical issues in critical care nursing	10467467		Inactive	1990-1994		
26729	AANA Journal	00946354		Active	2002-ongoing, 1995-2000, 1986, 1978		ENG
66438	AANNT journal / the American Association of Nephrology Nurses and Tech	07441479		Inactive	1982-1984		
5100155055	AAO Journal	23755776		Active	2006-ongoing		ENG
27096	AAOHN Journal	08910162		Inactive	1986-2011		
30787	AAPG Bulletin	01491423		Active	1968-ongoing		ENG
24508	AAPG Memoir	02718529		Active	2016-ongoing, 2009-2014, 2004-2006, 2000-2001, 1996-1998, 199		ENG
21100199540	AAPP Atti della Accademia Peloritana dei Pericolanti, Classe di Scienze Fi	03650359	18251242	Active	2005-ongoing, 2003		ENG, ITA
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21100853564	AAPS Advances in the Pharmaceutical Sciences Series	22107371	2210738X	Active	2014-ongoing, 2011		ENG
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Research Article

Is Calorie Labeling on Menus Related to Weight Disturbances among Females in Saudi Arabia?

Hala Al-Otaibi [1], **Tahani Al-Sandal,**[1] **and Haiam O. Elkatr**[1,2]

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[2]*Department of Home Economics, Faculty of Specific Education, Ain Shams University, Cairo, Egypt*

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Calorie labeling is a recent initiative from the Saudi Food and Drug Authority (SFDA) aimed to reduce the prevalence of noncommunicable diseases (NCDs) by influencing people to make healthier food choices when they eat out and can also help people with weight disturbances to be more aware of their calorie intake. The present study aimed to investigate the association between the use of calorie labeling on restaurant menus, calorie intake, weight concern, body weight perception, and weight-control behaviors among young women. A quasi-experimental study was conducted among female students at a university restaurant. Participants were assigned to two groups: food menus with (experimental group) and without (control group) calorie labeling. The logistic regression model assessed the predictors of using calorie information separately for the experimental and control groups. Calorie labeling had a significant effect on reducing calorie consumption in the experimental group by 59 calories compared to the control group. The higher weight concern in the control group (OR = 0.410; 95% CI 0.230–0.730; $P \le 0.002$) was a predictor for using calorie information. The experimental group had higher weight concern (OR = 1.530; 95% CI 1.107–2.115; $P \le 0.01$) and body weight perception (OR = 4.230; 95% CI 1.084–6.517; $P \le 0.038$) and lower calorie intake (OR = 1.005; 95% CI 1.001–6.517; $P \le 0.008$) predictors for using calorie information. Weight-control behaviors did not significantly predict the use of calorie information in the groups. Calorie labeling might increase the weight disturbances among young females. More investigation is needed across various populations to gain a better understanding of calorie labeling as an effective food choice among people who are vulnerable to weight disturbances or already have weight disorders.

1. Introduction

Obesity is an excessive accumulation of fat inside the body's tissues, which is harmful to a person's health. It has been classified as a chronic disease and a major public health problem [1] as it increases people's susceptibility to many chronic diseases such as cancers and cardiovascular diseases. These diseases account for approximately 71% of deaths worldwide [2]. Globally, studies have shown that obesity rates have risen dramatically, nearly tripling between 1975 and 2016. In 2016, more than 1.9 billion adults were overweight and more than 650 million people were obese [2]. If no action is taken to counter the spread of obesity, it is estimated that approximately half of the world's population will be overweight or obese by 2030 [3].

Saudi Arabia has witnessed significant cultural development over the last few decades, which has led to a difference in lifestyle, an increase in the prevalence of obesity to 33.7%, and an increase in the proportion of overweight inhabitants by 68.2% [4]. Thus, obesity has become a major public health concern, and seven of ten people in Saudi Arabia are either obese or overweight [5]. This is attributed to the spread of sit-down restaurants, fast-food restaurants, coffee shops, and home delivery services, which contribute to a higher calorie intake than the daily requirement.

In recent years, many government initiatives have emerged that aim to raise public health awareness among individuals and communities. In addition, they addressed the quality of food required to help reduce the prevalence of obesity among citizens and maintain healthy lifestyles. One

Research Article

Dietary Vitamin C and Age-Induced Lipid and Hormonal Metabolic Changes in a Humanized Mouse Model Not Synthesizing Vitamin C and Producing Lipoprotein(a) [Gulo (−/−); Lp(a)+]

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The lack of ability to produce vitamin C innately and the ability to synthesize human lipoprotein(a) (Lp(a)) are two unique metabolic features present in humans, compared with most other animal species. The Gulo (-/-) and Lp(a)+ mouse model displays these two features and is therefore suitable for the study of metabolic aspects relevant to human metabolism. It is a well-known fact that vitamin C is essential in collagen synthesis, and in maintaining extracellular matrix integrity, as well as being a powerful antioxidant and cofactor in many metabolic pathways, which makes it a critically important micronutrient for health and healthy aging. In this study, we investigated the effects of a long-term intake of high and low doses of vitamin C on age-related metabolic lipid and hormonal changes in young (eight to nine months), mid-aged (one year), and old (two years) Gulo (−/−) and Lp(a)+ mice. We observed that chronic vitamin C deficiency resulted in a less healthy metabolic lipid profile, impaired serum insulin-like growth factor (IGF-1), and sex-hormones secretion, all of which can accelerate the development of various pathological conditions in the aging process. The most susceptible to the negative impact of vitamin C deficiency were the young (eight to nine months) and old (two years) mice. Our study conducted in this humanized mouse model indicates that sustained adequate vitamin C intake is essential in maintaining a healthier metabolic profile, important in preventing age-related pathologies throughout the aging process.

1. Introduction

One of the distinct features of human metabolism compared with about 99% of other animals is the lack of internal vitamin C synthesis and the production of human lipoprotein(a).

Humans and a few animal species, including nonhuman primates and guinea pigs, are not able to manufacture vitamin C internally, owing to a loss of gene coding for L-gulonolactone oxidase. At the same time, humans, unlike the majority of animals, with only few exceptions (primates, guinea pigs, and hedgehogs) can synthesize lipoprotein(a) (Lp(a)). Lp(a), a variant of low-density lipoprotein (LDL), has been associated with the development of coronary heart disease and proven to be an atherosclerosis risk factor [1]. The Lp(a) molecule contains LDL, linked by a disulfide bridge to a large protein, apolipoprotein(a) (apo(a)), making it more adhesive, and its vascular deposition parallels the progression of atherosclerosis [2, 3].

These two unique aspects of human metabolism appear related, since internal production of Lp(a), which occurred about 60 million years ago in our primate ancestors, coincided with a loss of the ability to synthesize vitamin C innately. In the most rational explanation of these overlapping genetic events, Rath and Pauling proposed [4] that Lp(a) functions as a physiological surrogate for vitamin C. It aims primarily at protecting the integrity of the vascular wall compromised by vitamin C deficiency, through its vascular deposition. In this function, vascular deposits could prevent the deadly consequences of blood loss from scurvy [4]. However, with sustained long-term vitamin C deficiency, various pathological conditions develop, leading to

Research Article

Effects of Fermented *Houttuynia cordata* Thunb. on Diabetic Rats Induced by a High-Fat Diet with Streptozotocin and on Insulin Resistance in 3T3-L1 Adipocytes

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Houttuynia cordata Thunb. (*plukaow* in Thai language) exhibits several biological properties, and many products of *H. cordata* are therefore commercially available for human consumption, such as fermented juice or tablets as food supplements. This study aimed to investigate the antidiabetic effects of fermented *H. cordata* (HC) in high-fat diets and streptozotocin-induced diabetic rats. Oral administration of HC at a dose of 100 mg/kg.bw not only maintained bodyweight, food intake, and water consumption but also reduced blood glucose levels and improved glucose tolerance ability in the diabetic rats. Moreover, HC also decreased oxidative stress markers in serum and inflammatory-related mediators in pancreas tissues, indicating the improvement of pancreatic beta-cell function in the diabetic rats. In order to clarify the mechanism of HC, the effects of ethanolic extract of HC (HCE) on insulin resistance were determined in 3T3-L1 adipocytes. FHE could recover glucose uptake and decrease lipolysis in palmitate-treated 3T3-L1 adipocytes. Taken together, these results demonstrate that HC can improve diabetic symptoms by enhancing insulin sensitivity, reducing oxidative stress, and suppressing inflammation.

1. Introduction

Type 2 diabetes mellitus is dramatically increasing worldwide and causes morbidity and mortality, as well as economic burdens on countries [1]. Epidemiologic studies have demonstrated the relationship between an increased incidence of type 2 diabetes and obesity-associated insulin resistance [2]. High accumulation of fat in adipose tissue plays an important role in chronic low-grade inflammation, leading to an increase in proinflammatory cytokine production [3]. These proinflammatory cytokines can also reduce insulin sensitivity in adipocytes, which cause the release of free fatty acids into the bloodstream [4–6]. Consequently, free fatty acids, especially palmitate, can induce muscle cells

and liver cells to become insulin resistant, resulting in hyperglycemia [7, 8]. The goal of treating diabetes as a medical condition is to reduce blood glucose levels, which can prevent or delay the occurrence of complications relating to the disease [9]. Nevertheless, common types of oral medication used for the treatment of diabetes have demonstrated side effects and caused adverse reactions [10]. Currently, many herbal medicines have been recommended for the prevention and treatment of diabetes, in addition to conventional medication [11].

Houttuynia cordata Thunb., commonly known in Thai as plukaow, is a natural herb indigenous to local areas of Northern Thailand that is used in cooking in the region. It has been recognized in folk medicine for being used to

Research Article

High-Prevalence Stunting in Preschool Children (1–5 Years) Attending Selected Health Centers in a Food Rich Area-Bushenyi District Southwestern Uganda

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The prevalence of stunting among children in Uganda and Sub-Saharan Africa is still high, and if Uganda is to achieve the food-related Sustainable Development Goals (SDGs), it must urgently invest in improving nutrition and sanitation. In a food rich area like Bushenyi, chronic undernutrition could be due to several other factors than mere scarcity of food. *The Objective(s).* This study was carried out to determine the prevalence and socioclinical factors responsible for chronic undernutrition (stunting) among preschool children aged 1–5 years in selected Health facilities in Bushenyi district. *Methodology.* This was a cross-sectional study assessing the prevalence of stunting and its associated factors among children aged 1–5 years attending selected health centers in Bushenyi District. Data was collected using a pretested questionnaire, taking anthropometric measurements (height/length), and stool analysis for eggs of soil-transmitted helminthes. Prevalence of stunting was presented as percentages. Logistic regression with adjusted prevalence ratio was performed to test the association between the sociodemographic and clinical factors and stunting at bivariate levels of analysis. *Results.* Most of the children were female, with a median age of 2.1 years and resided in semiurban areas of Bushenyi with their parents. Prevalence of stunting was 89.3%. Only 10.7% of the children were infested with soil-transmitted helminthes. Children likely to be stunted were those who drank unboiled water and were exclusively breastfed. *Conclusion.* There is a high prevalence of chronic malnutrition in Bushenyi district associated with parents'/care takers' low level of knowledge.

1. Introduction

Under nutrition is an underlying cause of over half of child deaths. It is associated with lower school enrollment and poor cognitive functioning among children with subsequent effects on performance, and social wellbeing of communities in developing countries like Uganda [1]. Undernutrition indicators include wasting, stunting, and underweight. Stunting or low height-for-age (HAZ) is a good indicator of undernutrition and represents a status of chronic nutritional stress in children [2].

In 2010, it was estimated that 171 million preschool aged children were stunted; 95% of whom lived in developing countries [3]. In Uganda, data from the 2016 Uganda Demographic and Health Survey indicate that 3 in 10 children under the age of 5 are stunted [4]. The proportion of stunted children is highest in Western Uganda with a prevalence of 34.9% [5].

Despite the high levels of malnutrition, 89% of Uganda is defined by the Food and Agricultural Organization (FAO) as being food secure with the Northern and Eastern parts being most vulnerable to food insecurity [6, 7]. However, the

Research Article

Identification of Salty Dietary Patterns of the Japanese Macroregion

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Objective. The traditional Japanese dietary pattern, "Washoku," is considered to provide an ideal nutritional balance. However, it tends to have a high salt intake. To reduce population-level salt intake, it is important to review the overall dietary patterns over a wide area. *Methods.* To identify dietary patterns with high salt intake, partial least squares regression analysis was conducted using population-based household survey data from 52 cities. Annual salt consumption was set as the target variable, and the annual purchase weight of 109 foods was set as the explanatory variable. *Result.* At least three dietary patterns (traditional, urban, and local) accounted for more than 90% of the variation in salt consumption and 29% of the explanatory variables (food purchases). Traditional patterns explained the salt consumption and regional differences in energy and protein consumption; however, their relationship to fat consumption was weak. The results reconfirmed that "Washoku" has an ideal nutritional balance but has high salt intake. The distribution of scores for traditional Japanese food patterns was high in northeast Japan and low in southwest Japan, with a geographical gradient. This pattern is thought to have formed over a long period of time because of the influence of environmental factors, such as local climate.

1. Introduction

In 2018, the traditional Japanese dietary pattern, "Washoku," was registered as a UNESCO World Intangible Cultural Heritage. The Japanese eating style based on "Ichiju Sansai" (one soup and three side dishes) is considered to provide an ideal nutritional balance. By using "Umami" (dashi stock) skillfully, those who consume this diet ingest low levels of animal fats and oils, which is beneficial for longevity and for the prevention of obesity in Japanese people [1–8].

In contrast, Japanese dietary patterns tend to have high salt content [9, 10]. The Japanese Society for Hypertension Guidelines for the Management of Hypertension (JSH2014) recommends limiting salt intake to less than 6 g/day [11], and the Japanese Dietary Reference Level (2015) recommends a salt intake of less than 7.5 g/day [12]. However, according to the

"Outline of National Health and Nutrition Survey" conducted by the Ministry of Health, Labor, and Welfare, the daily salt intake of Japanese people was 10.8 g for men and 9.1 g for women in 2017 [13]. These values are far from the World Health Organization guidelines of less than 5 g/day.

The levels of salt intake in Japanese people are high in the northeast region, which may be due to differences in eating habits, food culture, and food availability, depending on the region [13]. To reduce salt intake, it is important to not only reduce the use of salt and the intake of foods with high salt content, but also review the overall dietary pattern.

However, there are challenges in conducting a national survey to understand the differences in eating habits and food culture in different regions. For example, in Japan, there is an annual National Health and Nutrition Examination Survey [13]. However, this study aimed to investigate

Research Article

Short-Term Influence of Caffeine and Medium-Chain Triglycerides on Ketogenesis: A Controlled Double-Blind Intervention Study

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Background. Ketone bodies are a highly relevant topic in nutrition and medicine. The influence of medium-chain triglycerides (MCT) on ketogenesis is well known and has been successfully used in ketogenic diets for many years. Nevertheless, the effects of MCTs and coconut oil on the production of ketone bodies have only partially been investigated. Furthermore, the increased mobilisation of free fatty acids and release of catabolic hormones by caffeine suggest an influence of caffeine on ketogenesis. *Methods.* In a controlled, double-blind intervention study, seven young healthy subjects received 10 mL of tricaprylin (C8), tricaprin (C10), C8/C10 (50% C8, 50% C10), or coconut oil with or without 150 mg of caffeine, in 250 mL of decaffeinated coffee, over ten interventions. At baseline and after every 40 minutes, for 4 h, ßHB and glucose in capillary blood as well as caffeine in saliva were measured. Furthermore, questionnaires were used to survey sensory properties, side effects, and awareness of hunger and satiety. *Results.* The interventions with caffeine caused an increase in ßHB levels—in particular, the interventions with C8 highly impacted ketogenesis. The effect decreased with increased chain lengths. All interventions showed a continuous increase in hunger and diminishing satiety. Mild side effects (total = 12) occurred during the interventions. *Conclusions.* The present study demonstrated an influence of caffeine and MCT on ketogenesis. The addition of caffeine showed an additive effect on the ketogenic potential of MCT and coconut oil. C8 showed the highest ketogenicity.

1. Introduction

Coffee has been a popular beverage worldwide for centuries. There are many reasons for coffee consumption, such as social aspects, wellbeing, enjoyment, and with increasing relevant positive health effects [1, 2]. The main active ingredient in coffee is caffeine, a trimethylated xanthine derivate belonging to the group of alkaloids [3]. Caffeine has a high bioavailability of nearly 100% and is mainly degraded by cytochrome P450 in the liver. The half-life of caffeine is 2.5–4.5 h [4]. Caffeine has a stimulating effect on the central nervous system, which is associated with a release of

catecholamines [5, 6]. An increase in thermogenesis was described as early as 1915 and was confirmed in later studies [7–10]. In this context, an increased lipolysis and the release of free fatty acids were also described [10–13]. In addition to its influence on energy balance, coffee also has antioxidant, anti-inflammatory, antidiabetic, and other effects on health [2, 14, 15].

In association with the health effects of coffee, the trend beverage "bulletproof coffee" is under scrutiny. The development of bulletproof coffee goes back to an American biohacker who claims that the drink increases energy, performance, and satiety [16]. The composition of

Research Article

Incidence of Diabetic Nephropathy and Its Predictors among Type 2 Diabetes Mellitus Patients at University of Gondar Comprehensive Specialized Hospital, Northwest Ethiopia

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Background. Although the rate of diabetic nephropathy which is the leading cause of end-stage renal disease (ESRD) continues to rise, there is limited information about the problem. This study aimed to assess the incidence and predictors of diabetic nephropathy among type 2 DM patients. *Methods.* Institution-based retrospective follow-up study was conducted at UGCSH with 462 newly diagnosed type 2 DM patients from January 2001 to February 2016, and the data were collected by reviewing their records. The Schoenfeld residuals test was used to check proportional hazard assumption. The best model was selected by using Akaike information criteria (AIC). Hazard ratios (HR) with its respective 95% confidence interval were reported to show significance and strength of association. *Results.* The incidence rate of diabetic nephropathy was 14 (95% CI 10.8–17.7) cases per 10,000 patient-month observation. In addition, 63 (13.6%) DM patients developed diabetic nephropathy. The median time to develop diabetic nephropathy was 94.9 months with interquartile range (IOR) of (64.1–127.4) months. Type 2 DM patients who had coronary heart disease (AHR = 2.69, 95% CI 1.42–5.13) and anemia (AHR = 1.94, 95% CI 0.97–3.87) were at higher hazard for developing diabetic nephropathy. Besides this, having a long duration (>10 years) (AHR = 0.24, 95% CI 0.11–0.56) and being female (AHR = 0.44, 95% CI 0.26–0.73) was found to be protective against diabetic nephropathy. *Conclusion.* The incidence of diabetic nephropathy among type 2 diabetes patients remains a significant public health problem. Duration of diabetes >10 years and female sex reduced the risk of diabetic nephropathy. Coronary heart disease and anemia increased the risk of diabetic nephropathy among type 2 DM patients. In light of these findings, early screening for diabetes complication is needed, and health professionals should give targeted intervention for type 2 DM patients with coronary heart disease comorbidity and anemia.

1. Introduction

Diabetic nephropathy (DN) is one of the most common microvascular complications of diabetes and a leading cause of morbidity and mortality in diabetic patients [1, 2]. This condition is a result of vascular abnormalities that accompany diabetes and increases mortality risk [3]. It is also the leading cause of end-stage renal disease (ESRD) worldwide and a leading cause of DM-related morbidity and mortality

[4, 5]. The proportion of ESRD attributable to diabetes alone ranges from 12% to 55% [1].

The rise in DN prevalence corresponds to the dramatic rise in diabetes prevalence around the world. Approximately 463 million adults aged 20–79 years are currently living with diabetes. Almost half (46.2%) of deaths associated with diabetes occur in people under the age of 60 years [6]. Due to the effect of globalization and epidemiologic transition, it is estimated that 79.4% of adults with diabetes live in low- and

Research Article

Income Level but Not Nutrition Knowledge Is Associated with Dietary Diversity of Rural Pregnant Women from Northern Ghana

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Essential nutrients are necessary for reducing the risk of maternal mortality, prenatal mortality, and low-birthweight infants. Dietary diversity can play an important role in supplying essential nutrients to both the mother and the foetus. We evaluated nutrition knowledge, attitudes, and dietary diversity of pregnant women. In addition, we investigated the sociodemographic determinants of dietary diversity among pregnant women from a rural district in Ghana. Participants were pregnant women receiving antenatal care from a rural district hospital in Ghana. Dietary diversity was measured using a 24-hour dietary recall questionnaire. Multiple linear regression was used to determine the sociodemographic characteristics of dietary diversity. About 85% of the pregnant women knew that they should eat more in comparison to nonpregnant women, and only 16.9% knew the importance of folic acid supplementation during pregnancy. Mean (SD) dietary diversity score of the participants was 5.27 (1.35), 85.4% did not consume any fruits, and 82.3% did not take milk and milk products. Almost all participants took at least one food item in the starchy staples and green leafy vegetables food groups. Moreover, 53% consumed vitamin A-rich fruits, vegetables, and tubers; 7.7% organ meats; and 30.8% eggs. Those who earned a monthly income of ≥GHC 500 or US$ 87 ($B = 1.82$; 0.90–2.73; $p < 0.001$) significantly had higher dietary diversity scores compared to those who earned less. Dietary diversity of the pregnant women was suboptimal. The consumption of vitamin A- and iron-rich foods was inadequate. Income was an important determinant of the dietary diversity of pregnant women from Northern rural Ghana.

1. Introduction

Nutrition during pregnancy is a basic determinant of foetal growth, birthweight, and infant morbidity as poor nutrition often leads to long-term, irreversible, and detrimental consequences to the foetus [1]. Evidently, various studies show that inadequate intake of energy or particular nutrients

during pregnancy can have a negative impact on the health of the newborn later in life [2]. Malnutrition in infancy and childhood is greatly influenced by foetal malnutrition which may result in intrauterine growth restriction (IUGR) [1].

Pregnancy is a critical period that requires the intake of varied and diverse diets in order to meet the high nutrient needs of the developing foetus and the mother. Dietary

Research Article

Food Addiction, Saturated Fat Intake, and Body Mass Index in Peruvian Adults: A Cross-Sectional Survey

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Background. Cardiovascular diseases (CVDs) constitute one of the main public health problems and represent a greater risk of mortality and morbidity for the world population. The objective of the study was to determine food addiction, saturated fat intake, and body mass index (BMI) in Peruvian adults. *Materials and Methods.* A cross-sectional online survey was applied to 394 Peruvian adults over 18 years old residing in the three regions of the country. Participant data was collected through a pre-structured online electronic survey. Food addiction was assessed using the Yale Food Addiction Scale self-administered questionnaire. A validated food frequency questionnaire was used to measure saturated fat intake. Finally, the sociodemographic and anthropometric variables were collected through a registration form. *Results.* There were no significant differences in food addiction between men and women ($p < 0.05$). More than half of the participants who presented food addiction are overweight (54.1%, $p < 0.001$). The highest proportion of those who had a high intake of saturated fat had a food addiction (62.6%, $p < 0.001$). The highest percentage of men who were overweight was higher compared to women (49.7% vs. 38.4%, $p < 0.05$). *Conclusion.* The findings of this study suggest that addictive eating behaviors and high saturated fat intake should be considered as part of efforts to prevent problems related to eating, obesity, and CVD.

1. Introduction

Cardiovascular diseases (CVDs) constitute one of the main public health problems and represent an increased risk of mortality and morbidity for the world population [1]. The prevalence of CVD is steadily increasing in both developing and developed countries [2]. According to available evidence, in 2012, 17 million deaths related to these pathologies were reported. In fact, they represent almost a third of the deaths that occur worldwide [3]. Peru is not far from this reality. CVDs are the leading cause of death [4]. A report published in 2016 estimated that 16% of the Peruvian population over 20 years of age suffers from CVD and more than 2,000 Peruvians die from a type of heart failure [5].

Among the most important risk factors for CVD are high blood pressure, BMI, and high cholesterol and saturated fat intake, which are conditioned by inappropriate eating habits

[6, 7]. In fact, the consumption of a diet based on meat and with a higher content of cholesterol, saturated and trans fat can increase serum cholesterol concentrations leading to an increased risk of CVD [8]. Faced with this situation, the Peruvian state approved the Manual of Advertising Warnings within the framework of what is established in Law Nᵒ. 30021, Law for the Promotion of Healthy Eating, whose objective is to inform the population about the nutritional content of processed and ultra-processed foods to reduce diseases linked to overweight, obesity, and CVD [9]. Faced with this scenario, the national food production industry was forced to put a nutritional warning front label on processed foods with a high content of sugar, sodium, and saturated fats and to eliminate the content of trans fats in products.

On the other hand, the concept of food addiction has always existed in popular culture [10], even though there is

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KETERANGAN LOLOS KAJI ETIK
DESCRIPTION OF ETHICAL APPROVAL
"ETHICAL APPROVAL"

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Protokol penelitian yang diusulkan oleh :
The research protocol proposed by

Peneliti utama   : Dr. M. Z. Rahfiludin, SKM, M.Kes
Principle Investigator

Nama Institusi   : Universitas Diponegoro
Name of the Institution

Anggota Peneliti   : 1. DR. Septo Pawelas Arso, S.KM., MARS.
Member   2.Dr. Ir. Tri Joko, M.Si. 3.Alfi Fairuz Asna, S.Gz., M.PH.

Dengan judul   :
Tittle

"**POLA MAKAN BERSUMBER PANGAN NABATI (PLANT BASED DIET) DAN STATUS BESI PADA REMAJA SANTRIWATI SUKU SUNDA**"

"**PLANT BASED DIET AND IRON STATUS IN ADOLESCENT SANTRIWATI SUNDA TRIBE**"

Dinyatakan layak etik sesuai 7 (tujuh) Standart WHO 2011, yaitu 1) Nilai Sosial, 2) Nilai Ilmiah, 3) Pemerataan Beban dan Manfaat, 4) Risiko, 5) Bujukan/Eksploitasi, 6) Kerahasiaan dan Privacy, dan 7) Persetujuan Setelah Penjelasan, yang merujuk pada Pedoman CIOMS 2016. Hal ini seperti yang ditunjukkan oleh terpenuhinya indikator setiap standar.

Declared to be ethically appropriate in accordance to 7 (seven) WHO 2011 Standards, 1) Social Values, 2) Scientific Values, 3) Equitable Assessment And Benefits, 4) Risks, 5) Persuasion/Exploitation, 6) Confidentiality and Privacy, and 7) Informed Concent, referring to the 2016 CIOMS Guidelines. This is as indicated by the fulfillment of the indicators of each standard.

Pernyataan Laik Etik ini berlaku selama kurun waktu tanggal 23 March 2020 sampai dengan tanggal 23 March 2021

This declaration of ethics applies during the period March, 23th 2020 until March, 23th 2021

Semarang, 23 March 2020
Professor and Chairpersor,

dr. M. Sakundarno Adi, M. Sc, Ph.D.
NIP. 196401101990011001