THE UNIVERSITY STAFF SURVEY: NUTRITIONAL STATUS AND FOOD CONSUMPTION BEHAVIOR

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ABSTRACT

The objective of cross-sectional descriptive study was to investigate the nutritional status and food consumption behavior of staff in a university. The sample was 317 of staff whom obtained by accidental sampling in Suan Sunandha Rajabhat university (SSRU). Questionnaires were used to collect data. Frequency, percentage, mean and standard deviation were used for statistical analysis.

The results of the study showed 52.7% of participants had over nutritional status (BMI $\geq$ 23.0 kg/m^2). The first and second health problem of the participants were hyperlipidemia (25.9%) and hypertension (12.3%). Food consumption behaviors were not good by the way of over calories intake from sweetened beverage, bakery and high fat food but a little vegetables.

In conclusion, the nutritional status of the staffs in SSRU were overweight that was the health problems of these staffs. Their health behaviors was high energy intake, these are the risk factors of chronic diseases. Therefore, life style modification for promoting health of the staffs in SSRU specifically in the aspect of low-sugar and low-fat diets is needed.

Keywords: nutritional status, staff, Suan Sunandha Rajabhat University

INTRODUCTION

Working-age population is defined as persons aged 15-60 years. [1]. It is well-known that this group of people is the most important population to induce productivity and earn money for their family. Moreover, they are the key success factors on the organization development and also the nation. So, the health survey, health monitoring, and health promotion for working-age population has traditionally been on all the companies and Ministry of Public Health (Thailand).

In the previous reports of the routine medical checkup in the 300 staffs of SSRU per year between 2014 and 2015 found that mean age of the sample was 30-40 years and the highly prevalent health risk of disease were high blood cholesterol (Chol > 200 mg.%) (59.0-77.5%), high LDL-cholesterol (LDL>100 mg.%) (80.5-92.0%), and obesity (BMI> 23.0 kg/m^2) (47.3-53.5%) [2]. These factors increase risk for non-communicable chronic diseases (NCDs.) including cardiovascular diseases (CVD), hypertension, diabetes, stroke, and cancer that lead to the lower quality of life and the majority cause of death. And these factors associated with inappropriate life style, especially dieting behaviors. In addition, the Thailand National Health and Examination Survey 2014 demonstrated that about one-third of working-age population had an unhealthy dietary pattern such as sugar-sweetened beverage consumption that caused to increase the prevalence of overweight and obesity in this group of people [3]. However, studies describing the nutritional status and food consumption behavior of some group of population, for example: staff in the university are scare and less clear. Therefore, the aim of this study

was to investigate the nutritional status and food consumption behavior of staff in SSRU for providing evidence and health promotion plan in the future.

METHODOLOGY

Study design

Our research is a cross-sectional descriptive study that approved by the Institutional Ethics Committee of the Suan Sunandha Rajabhat University Institutional Review Board, Thailand and the informed consent was obtained from each participant. The survey was conducted between February 2017 and April 2017.

Participants

The samples consisted of 317 staffs estimated size by using Cohen and Morgan Statistic [4]. They were consisted of academic and supportive staff in Suan Sunandha Rajabhat University and selected by accidental sampling.

Questionnaire

The questionnaire was developed from the standard test of The Health Education Division, Ministry of Public Health (Thailand) [5] that was validity tested and found reliable consisting of 2 part of self-assessment: the health status including general information (sex, age, marital status, education level, position, health problems, body weight, height, waist circumference, etc.). then the BMI was calculated by the standard formula: BMI = BW (kg)/ height (m^2) [6]. The food consumption behavior over the past 1-months that was formed by 12 Likert-type items with a scale of 3 points scoring method has been used, assigning 0 points to answer "Rarely or never", 1 point to answer "1-2 times per week", 2 points to answer "3-4 times per week", and 3 points to answer "$\geq$ 5 times per week", and then calculated mean points ($\overline{X}$) of each 12 item. It has been considered lower mean score was practice for food consumption more often) [7].

Statistical analysis

Statistical analyses were carried with the SPSS Version 20.0 program. Overall characteristics of the sample are reported as mean ± standard deviation, frequency and percentages.

RESULTS

Table 1 shows the characteristics of the studied samples, showing the distribution of the study participants along the categories of the selected variables. Of the total sample of 317 participants, 85 (26.8%) were men and 232 (73.2%) were women and a mean age (SD) of the samples was 39.4 (10.8) years. The first and second health problem of the participants were hyperlipidemia (25.9%) and hypertension (12.3%).

Nutritional status

The BMI categories in table 1 shows that 23.0% of the sample was at risk of obesity (BMI=23.0-24.9 kg/m^2), 22.1%, was obesity I (BMI=25.0-29.9 kg/m^2), and 7.6% were obesity II (BMI $\geq$ 30.0 kg/m^2), totaling 52.7% of the sample were overweight, and the average BMI shows the prevalence among the men was much higher than that among the women (25.0± 5.1: 22.6±5.3 kg/m^2). The waist circumference shows 25.6% of the samples were abdominal obesity.

Table 2 shows mean score of consumption behavior of the samples based on frequency of food group consumed per week over the previous 1-month, The lower scores means did the practice more often. Top 5 of the lowest score of dietary pattern were eating sugar-sweetened beverage (sparkling water, iced coffee), bakery (cake, cocky) (1.46±0.75), eating deep fried food (chicken, pork) (1.55±0.64), and no eating various vegetables

every day (1.59±0.72), eating salty diet (always add fish sauce in food) (1.62±0.89), and eating coconut milk food (dessert, curry) (1.67±0.58).

Table 1
General characteristics of the samples

	Data	n =317	(%)
Sex	Men	85	26.8
	Women	232	73.2
Age (years)	< 30	64	20.2
	30 – 39	125	39.4
	40 – 49	76	24.0
	50 – 59	45	14.2
	≥ 60	7	2.2
		$\overline{X}$ = 39.4, SD=10.8	
Marital status	Single	168	53.0
	Married	130	40.9
	Widowed	6	1.9
	Separated or divorced	13	4.1
Education	Primary	5	1.6
	Secondary or high school	15	4.7
	Vocational diploma	6	1.9
	Bachelor's degree	110	34.7
	Master's degree	126	39.7
	Doctor's degree	55	17.4
Position	Lecturer/ Instructor	162	51.1
	Supportive	139	43.8
	Others	16	5.0
Salary (THB)	< 10,000	10	3.2
	10,000 – 20,000	91	28.7
	20,001 – 30,000	70	22.1
	30,001 – 40,000	64	20.2
	40,001 – 50,000	51	16.1
	> 50,000	31	9.8
Health problem	Hyperlipidemia	52	16.4
	Hypertension	34	10.7
	Diabetes	15	4.7
	Cardiovascular disease	7	2.2
BMI (kg/m²)	Underweight (<18.5)	30	9.5
	Normal (18.5-22.9)	120	37.9

	At risk of obesity (23.0-24.9)	73	23.0
	Obese I (25.0-29.9)	70	22.1
	Obese II (≥ 30.0)	24	7.6
	Men $\overline{X}$ = 25.0, SD=±5.1 Women $\overline{X}$ = 22.6, SD = ±5.3		
Waist circum.	Normal (man≤90 cm. women≤80 cm.)	236	74.4
	Obesity (man>90 cm. women≥80 cm.)	81	25.6

Food Consumption Behavior

Table 2

Food Consumption Behavior of the samples

No	Dietary pattern	$\overline{X}$	SD
1.	Sugar-sweetened beverage (sparkling water, iced coffee, 3 in 1 drink), bakery (cake, cocky, donut)	1.46	0.75
2.	Deep fried food (chicken, pork)	1.55	0.64
3.	Not various vegetables every day	1.59	0.72
4.	Salty diet (always add fish sauce in food)	1.62	0.89
5.	Coconut milk food (dessert, curry)	1.67	0.58
6.	More than 500 grams of fruit and vegetables	1.70	0.73
7.	Snacks (fried potatoes, cracker, popcorn)	1.72	0.63
8.	Low fat food (cooked by steaming, baking, boiling, grilling)	1.77	0.66
9.	High fat food (skin of chicken, fatty pork)	1.79	0.57
10.	Deep grilled food (burnt food, scorched meat)	1.81	0.68
11.	Deep salty food (dried salted fish & meat)	1.95	0.61
12	Half cooked meat	2.12	0.73

CONCLUSION AND FUTURE WORK

The important findings in the present study were mean age of the sample was 39.4 (±10.8) years, almost all sample (52.7%) were overweight or obesity (BMI ≥23.0 kg/m^2) [6]. This shows that Suan Sunandha Rajabhat University (SSRU) is facing the obesity epidemic. And also, the study shows that the samples had inappropriate dieting behavioral including eating diet with high calories; sugar-sweetened beverage (sparkling water, iced coffee, 3 in 1 drink), bakery (cake, cocky, donut), deep fried food (chicken with skin, pork) and coconut milk food that positively associated with overweight and obesity [8]. At this status, the risk factors of morbidity and mortality from non-communicable chronic diseases (NCDs.); cardiovascular diseases (CVD), hypertension, diabetes, stroke, and cancer [9] will be increasing in the staff SSRU and these will be increasing if the age is more than 45 years, especially in women [10-11]. Therefore, it is very important that health promoting project or work organizations should take interest in caring for overweight and help them improve food consumption behavior, specifically in the aspect of low- sugar and low- fat diets, increase physical activities and exercise, additionally should built an environment that promotes active life style and decrease excessive high calories intake to get the goal of "healthy eating" and "active living"

For the future studies, the relationships between the specific variables should be examined for better explanation of the specific factors related nutritional status and showing the need to adopt political and strategy to promote healthy behavior of staffs in Suan Sunandha Rajabhat University.

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