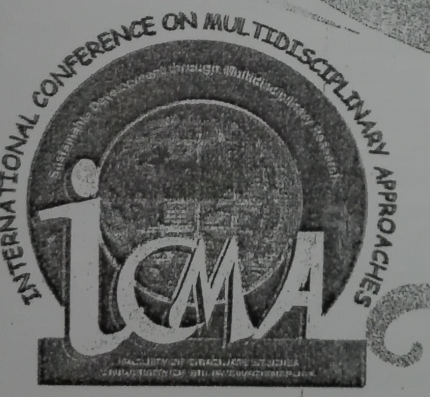
4th International Conference on Multidisciplinary Approaches - 2017

"Sustainable Development through Multidisciplinary Research"

PROCEEDINGS



JOINTLY ORGANIZED BY

FACULTY OF GRADUATE STUDIES
UNIVERSITY OF SRI JAYEWARDENEPURA

MINISTRY OF SCIENCE, TECHNOLOGY AND RESEARCH

NATIONAL SCIENCE FOUNDATION

20TH - 22ND OF SEPTEMBER, 2017

ASSESSMENT OF DIETARY MACRONUTRIENT AND ENERGY INTAKE, BODY MASS INDEX AND BODY FAT PERCENTAGE AMONG RURAL FEMALE SUBJECTS WITH OR WITHOUT TYPE 2 DIABETES MELLITUS IN SRI LANKA

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Goal of dietary management of diabetes subjects is to maintain and reach optimal metabolic and physiological outcomes including maintenance of near normal blood glucose levels, management of weight, dyslipidemia and hypertension. When a diet which is designed for diabetic subject is concerned, protein intake should be maintained ≤1 g/kg body weight. Total fat intake should be <35% of energy intake and total carbohydrate should be in between 45–60% of energy intake. Objective of the current study was to assess the dietary macronutrient and energy intake, BMI (body mass index) and BF% (body fat percentage) among a population of rural type 2 diabetic and non-diabetic females in Sri Lanka. Thirty female diabetic and 30 non-diabetic subjects were recruited. A validated food frequency questionnaire was administered and daily macronutrient intake was calculated using "NutriSurvey" software. Body mass index (BMI) and body fat percentage (BF%) of subjects were taken using anthropometry and bio impedance analysis methods respectively. Mean BMI and BF% of both groups have exceeded the cutoff value for over-weight category [$BMI_{Non\text{-}Diabetic}$ =23.81 (±3.89), $BMI_{Diabetic}$ = 25.10(±3.08), $BF\%_{Non\text{-}Diabetic}$= 33.12 (±4.37), $BF\%_{Diabetic}$= 34.37(±2.82)]. Daily Energy, protein, fat, and carbohydrate intakes of diabetic subjects were significantly lower compared to the non-diabetic group [Energy intake (kcal/day) = 2032.34(±596.96), 1478.58(±489.20) P=0.00, protein intake (g/day) = 51.52(±23.90), 38.02(±19.96), P=0.00, fat intake (g/day) = 39.27(±14.29), 29.85(±13.39), P=0.01, carbohydrate intake (g/day) = 382.55(±113.57), 270.81 (±86.91), P=0.00 respectively among non-diabetic and diabetic subjects]. Both diabetic and non-diabetic subjects have maintained recommended protein intake and was significantly higher in non-diabetic group [(P=0.00) [0.66(±0.41) g/kg body weight, 0.93(±0.55) g/kg body weight respectively among diabetics and non-diabetics]. Percentage energy intakes from carbohydrate were higher than the recommended in both groups [non-diabetic 80.31(±2.95), diabetic 77.23 (±6.31), P= 0.05]. Results of the current study indicate that it is important to increase the awareness of the concept of balanced diet not only among diabetic subjects but also among non-diabetic subjects in order to improve their quality of life since both diabetics and non-diabetic groups were not following balanced diet and were unable to maintain ideal BMI and BF%.

***Keywords**: Diabetes, macronutrient, carbohydrate, protein, fat*

Acknowledgement: Financial assistance by university research grant (ASP/06/RE/MED/2014/14)