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Body fat and serum lipid levels among a group of teachers affiliated to schools in Anuradhapura Municipal Council area

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Background: Occupational stress is associated with dyslipidemia and increased risk for cardiovascular diseases (CVD).

Objective: The objectives were to assess Total-Body-Fat percentage (TBF%) and prevalence of dyslipidemia among teachers in schools in Anuradhapura Municipal Council (AMC) area. **Method:** A convenient sample of healthy school teachers were selected from three schools in AMC. Using bio-impedance analyzer (HBF-375, Karada-scan) TBF was measured and manual cutoffs were used. Serum total-cholesterol (TC), triacylglycerol (TAG) and high-density lipoprotein-cholesterol (HDL-C) were measured by enzymatic colorimetry (BIOLABO-Enre). Let a David Lipoprotein Chalacterol (LDL-C) were measured by enzymatic colorimetry.

France), Low-Density Lipoprotein-Cholesterol (LDL-C) was calculated (Friedewald formula) and categorized under ATP-III guidelines (National-Cholesterol-Education-Program). Data were analyzed using SPSS software. Ethical clearance was obtained from Ethics Review Committee, Faculty of Medicine and Allied Sciences, Rajarata University of Sri Lanka.

Results: Of the sample (n=135), mean age was 46.4±7.8 years and 112 (87%) were females. Mean TBF% was 36.9±4.1 % in females and 28±2.9 % in males. Of them 95.5% (106 females and 23 males) had high/very-high TBF%. Means of serum TC, TAG and LDL-C were 184±29.9 mg/dl, 98.6±39.2 mg/dl and 117.2±33.2 mg/dl respectively. Mean HDL-C was 45.4 ±7 mg/dl in females and 43±7 mg/dl in males. Respectively, 25% and 3% had borderline-high, and high TC levels, 25%, 6.7% and 0.7% had borderline-high, high, and very high LDL-C levels while 10.4% and 0.7% had borderline-high, and high TAG levels. Based on LDL-C/HDL-C ratio, 31.1% (n=42) were at increased-risk and 25.9% (n=35) were at intermediate-risk for CVDs. Of the sample, only 23% (n=31) were normolipidemic while, 40.7%, 17.8% and 18.5% respectively had one, any-two, and three-or-more lipid abnormalities.

Conclusion: In this study 95.5% of the teachers had higher TBF%. Dyslipidemia prevalence was more than 75%, while more than 50% of the group were at intermediate/ increased risk of CVDs based on LDL-C/HDL-C ratio.

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