

### **Dietary patterns, physical activity and cardiovascular disease biomarkers among female workers of reproductive age at Moi Teaching & Referral Hospital**

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#### **Abstract**

Healthy dietary patterns and physical activity reduces the risk to cardiovascular disease among women of reproductive age. This study aimed at establishing the dietary patterns, physical activity and cardiovascular disease biomarkers among female workers of reproductive age. The study adopted analytical cross-sectional design. A researcher administered questionnaire was used to collect information on socioeconomic characteristics, saturated fat intake, nutrient intake, drivers of food choice and physical activity level among 150 female workers of reproductive age at Moi Teaching & Referral Hospital. Body composition and blood pressure levels were established. Lipid profile & blood glucose levels were established among 52 participants. Majority of the participants (83.3%) were skilled manual employees, accessed food from supermarket & fast food outlets (58%) and were middle class earners (52%). Participants consumed more transitional diets than traditional diets. Selected food types for saturated fat intake were; red meat high fat cuts (64.6%), sausage (53.4%), pizza (84.7%), vegetable oil (83.6%), chips (56.7%), spreads (46%), eggs (64.7%), deep fried chicken (45.4%), cookies (43.3%). The mean intakes of all selected nutrients were above the recommended dietary reference value except for potassium (2958.8±1438.5) and magnesium (366.9±210.9) were inadequate. The mean energy intake (2444.5±820.0) was above recommended dietary reference value of 2000 Kilocalories. Drivers of food choice were sensory appeal (86%), convenience (71.3%). Majority of the participants were physically inactive (74.7%) and had elevated LDL-C (92%), Triglyceride (85%), waist circumference (94%), low HDL-C (92%). Half of the participants had elevated Total cholesterol (54%), fasting blood glucose (50%), obesity (48%), body fat percentage (48%), SBP (32.2%), DBP (36%). Chi square test on dietary patterns showed that transitional diets were significantly associated with biomarkers for elevated total cholesterol ( $p=0.004$ ), triglyceride ( $p=0.013$ ), DBP ( $P=0.002$ ), body fat percentage ( $P=0.005$ ), visceral fat ( $p\leq 0.001$ ), insulin resistance ( $p=0.019$ ). Elevated waist circumference was significantly associated with total cholesterol ( $p\leq 0.001$ ), fasting blood glucose ( $p\leq 0.001$ ), total cholesterol: HDL-C ( $p\leq 0.001$ ). Sedentary behavior was significantly associated with elevated waist circumference ( $p=0.048$ ). Socioeconomic characteristics (occupation) (skilled manual) was significantly associated with elevated fasting blood glucose ( $p\leq 0.001$ ). Workplace wellness programs entailing; education on Cardiometabolic health, promotion of healthy diets & physical activity may improve staff well-being.

**Keywords:** Dietary Patterns, Physical Activity, Cardiovascular Disease Biomarkers, Women of Reproductive Age.