

in this study population (22.2% in male and 20.9% in female). Mean percentages of energy from saturated, monounsaturated, and polyunsaturated fatty acids were 6.8%, 6.9%, and 5.1%, respectively. About 27% of adolescents exceeded the AMDR for fat (30% of energy) whereas 4.7% exceeded among older adults. In children and adolescents, about half of the subjects obtained $\geq 8\%$ of energy from saturated fatty acids. Among adults, proportion of subjects who consumed $\geq 7\%$ of energy from saturated fatty acids decreased across age groups (50.5% in 19–49y, 25.8% in 50–64y, and 14.8% in $\geq 65y$).

Conclusions: Our findings suggest current information on total fat and fatty acids intakes in Koreans and can be used to provide dietary guidelines for the improvement of public health.

Occupational Health

Objective measures of sleep duration and quality with ankle brachial index in police officers



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Purpose: Poor sleep quality and sleep duration have been shown to be associated with subclinical cardiovascular disease (CVD). Ankle brachial index (ABI), a common measure of peripheral artery disease (ABI < 1.0), is a strong risk factor for CVD. Our aim was to investigate whether sleep duration and quality are associated with ABI among police officers.

Methods: Participants were officers who enrolled in the Buffalo Cardio-Metabolic Occupational Police Stress study (2010–2015). Objective sleep measures were obtained from actigraphy. ABI was calculated as highest systolic blood pressure (SBP) of right ankle divided by highest SBP of right arm. Mean values of ABI were compared across categories of the sleep measures using ANOVA/ANCOVA.

Results: Officers ($n=210$; 70% men) ranged in age from 28 to 65 years (mean \pm SD=46.3 \pm 6.7 years). Thirty (14.3%) officers had low ABI (< 1.0). Sleep duration was significantly associated with ABI after adjustment for age, sex, physical activity, metabolic syndrome, high sensitivity C-reactive protein, and smoking status: < 7 hours (mean ABI=1.062 \pm 0.010) vs. ≥ 7 hours (1.090 \pm 0.010); $p=0.009$. Race/ethnicity significantly modified this association (interaction $p=0.012$). Race-stratified analyses showed that the association between sleep duration and ABI was only significant among White/Hispanic officers; < 7 hours (ABI=1.052 \pm 0.012) vs. ≥ 7 hours (1.093 \pm 0.011); $p=0.002$. Two measures of sleep quality (sleep efficiency and latency to persistent sleep) were not significantly associated with ABI.

Discussion: Longer sleep duration (i.e., ≥ 7 hours) was significantly associated with higher (i.e., better) mean ABI among White/Hispanic but not among African American officers. Reasons for the racial differences are unclear.

Shiftwork and symptoms of anxiety and depression in police officers



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Purpose: Shiftwork is a necessity in the police occupation. Shiftwork may be accompanied by circadian rhythm disruption and changes in body functions, including those that influence mental health. This study evaluated the association between shiftwork and symptoms of anxiety and depression in urban police officers.

Methods: Cross-sectional data were from the Buffalo Cardio-Metabolic Occupational Police Stress (BCOPS) study, 2004–09. Electronic work history records were used to identify the dominant work shift [day (D), afternoon (A), or night (N)]. Symptoms of anxiety and depression were assessed with the Beck Anxiety Inventory (BAI) and the Beck Depression

Inventory (BDI-II). Analysis of covariance was used to examine trends in mean symptom scores across shift. Models were adjusted for age, gender, race/ethnicity, smoking status, alcohol intake, sleep quality, and overtime hours.

Results: Among 361 officers (73.1% men), day shift officers had the highest adjusted mean anxiety symptom score (D:7.54 \pm 0.57, A:6.38 \pm 0.72, N:4.84 \pm 0.74; $p=0.023$). Differences in adjusted mean depressive symptom scores across shift were not significant (D:6.99 \pm 0.48, A:5.39 \pm 0.61, N:5.27 \pm 0.64; $p=0.067$). Similar to anxiety symptoms, day shift officers had the highest adjusted mean depressive symptom score.

Conclusion: Although higher police-specific work stress has been associated with the afternoon and night shifts in this group of officers, day shift officers had the highest anxiety and depressive symptoms in the current study. Our results may indicate a tendency for officers with anxiety and depressive symptoms to self-select to day shift or departmental assignment to day shift as a more tolerable shift for officers prone to or exhibiting symptoms.

Pediatrics

The impact of parental job loss during the great recession on biomarkers in children



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Purpose: Evidence is limited on the biological pathways between socioeconomic shocks and child health. This study examines associations between parental job loss during a recession and children's biomarkers.

Methods: The sample includes 5482 children enrolled in the Generation XXI cohort study, based in Porto, Portugal, with data collected at birth (2005–2006), 4 years (2009–2011), and 7 years (2012–2014). The outcomes were inflammatory, metabolic, cardiovascular, and anthropometric biomarkers measured at 7 years. The exposure variable indicated whether the child was exposed to any parental job loss between birth and 7 years. We analyzed each biomarker outcome individually using ordinary least squares regression, controlling for a range of covariates and stratified by child gender.

Results: Among girls, parental job loss was associated with higher LDL cholesterol (β : 0.038mg/dL, 95% CI: 0.00,0.07), insulin resistance index (β : 0.122, 95% CI: 0.02,0.23), systolic blood pressure (β : 0.022mmHg, 95% CI: 0.01,0.03), diastolic blood pressure (β : 0.018mmHg, 95% CI: 0.00,0.03), heart rate (β : 0.018bpm, 95% CI: 0.00,0.04), weight (β : 0.028kg, 95% CI: 0.01,0.05), body mass index (β : 0.028kg/m², 95% CI: 0.01,0.05), waist circumference (β : 0.019cm, 95% CI: 0.01,0.03), hip circumference (β : 0.013cm, 95% CI: 0.00,0.02), and waist to height ratio (β : 0.018, 95% CI: 0.01,0.03). Among boys, parental job loss was associated with lower leukocytes (β : -0.054 10^9 cells/L, 95% CI: -0.09,-0.01) and glucose (β : -0.014mg/dL, 95% CI: -0.03,-0.00).

Conclusions: Findings suggest that exposure to parental job loss during the Great Recession in Portugal was associated with negative impacts on sub-clinical disease processes among girls, but not boys.

Conjoint effect of social determinants of health and injury severity score predicts survival disadvantage of black children with trauma



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Purpose: Pediatric Trauma remains one of the leading causes of morbidity and mortality among children in the United States, accounting for an estimated 12,175 deaths annually, and is related to social determinants of health (SDH). We aimed to examine racial variability in pediatric trauma and to determine the conjoint effect of SDH and Injury Severity Score (ISS).

Methods: A retrospective cohort design was used to assess the SDH associated with pediatric trauma mortality (PTM) among children 0–18 years of age using the Delaware Trauma Registry (DTR), 2000–2016. The