

of NAFLD is almost entirely the result of transition between absence to light NAFLD for subjects in the range 18–30 years old. A small effect of BMI was also seen in post-menopause women.

Conclusions The implications of this alarming and silent prevalence of NAFLD derived from the fact that this liver condition may progress to more severe liver disease.

P2-230 OVERWEIGHT AND OBESITY: PREVALENCE AND THEIR ASSOCIATION WITH SOME SOCIAL AND LIFE-STYLE CHARACTERISTICS IN A RANDOM SAMPLE POPULATION-BASED STUDY IN SOUTHERN ITALY

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Introduction Obesity has become a threat to public health, as the epidemic is not confined to developed countries but is affecting many developing ones.

Objectives To estimate overweight and obesity prevalence and their association with some social characteristics in a population older than 18 years of age.

Methods The survey was conducted from July 2005 to January 2007 in Putignano, Bari, Apulia. A systematic random sample of 2301 subjects from the list of records maintained by general practitioners was drawn. Subjects were asked to complete a questionnaire regarding sociodemographic characteristics and life styles, underwent anthropometric measures and liver echography. A fasting blood sample was drawn. A quantile regression model was fitted to the data (conditional quantiles: 0.47 overweight and 0.83 obesity) with 500 bootstrapped replications.

Results Overall prevalence of overweight was 50.1% (male 59.5%, females 14.6%) whereas obesity prevalence was 16.1% (male 18.0%, females 14.6%). Overweight and obesity steady raised with age. Overweight was associated positively with age at enrolment, being a male, number of household members, daily alcohol intake, married status and high socio-economic status. Obesity was associated positively with age at enrolment, being a male and daily alcohol intake.

Conclusion There is little doubt that socio-cultural and life-style factors operate to influence overweight and obesity but it is important to investigate the factors and their interaction on obesity as well as the pathway linking them. This approach may support the development and implementation of effective public health strategies.

P2-231 STOMACH CANCER MORTALITY AMONG AGRICULTURAL WORKERS: RESULTS FROM A BRAZILIAN DEATH CERTIFICATE-BASED CASE-CONTROL STUDY

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Introduction The use of pesticides in Brazil has been high. It is important to assess the risks related to the use of these substances. Some studies have reported an association between agricultural work and stomach cancer. This study aimed to estimate the risk of death from stomach cancer among agricultural workers in an intensive pesticide-use area in Brazil, 1996–2005.

Methods Cases were men and women aged ≥ 20 years old that died of stomach cancer. For each case two age and sex matched controls were randomly selected, from all possible controls where the cause of death was not cancer or haematological disease. Crude and adjusted ORs were estimated to evaluate the magnitude of the risk.

Results Agricultural workers living in the Serrana Region of Rio de Janeiro State were at higher risk of death from stomach cancer (OR: 1.41 (95% CI 1.10 to 1.82)) compared to non-agricultural workers. Stratified analysis revealed that the risk was higher among younger (OR: 3.34 (1.58 to 7.08)) agricultural workers.

Conclusion These results suggest that agricultural workers living in the Serrana Region of the state of Rio de Janeiro were at statistically significant higher risk of death from stomach cancer compared to non-agricultural workers.

P2-232 CARDIOVASCULAR DISEASE CONDITIONS: PREVALENCE, AWARENESS, TREATMENT AND CONTROL AMONG THE URBAN POOR IN NAIROBI

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Introduction The burden of Non-communicable diseases, including cardiovascular diseases (CVD), and their risk factors are rising in Sub Saharan Africa. In Kenya, prevalence of overweight and obesity among reproductive-age females almost doubled over a fifteen-year period (13%–23%) between 1993 and 2008. This may be attributable to rapid urbanisation and unhealthy lifestyles. Little is known about prevalence and awareness levels of CVD in Sub Saharan Africa. This study describes burden and treatment patterns of common CVD conditions (diabetes and hypertension) among adults in two urban slum settlements in Nairobi, Kenya.

Methods We conducted a cross-sectional survey on a stratified random sample of 5190 adults aged 18 years and older in an area under the Nairobi Urban Health Demographic Surveillance System. Data collected included self-reported diagnosis and treatment history of hypertension and diabetes, blood pressure and glucose measurements.

Results The prevalence of hypertension and diabetes was 12.3% and 4.3% respectively. Only one in five of those diagnosed with diabetes or hypertension was aware of their condition. Among those aware of having hypertension, less than one third were on treatment, and only 10% were controlled (blood pressure $< 140/90$ mm Hg). Among those who were aware of being diabetic, just over half were on treatment and one-fifth had Random Blood Sugar < 7.7 mmol/dl.

Conclusion The burden of common CVD among these poor communities is quite high. Worse, the level of awareness, treatment and control are dismally low. Interventions to increase awareness for example, through routine adult screening are needed to avert an impending CVD epidemic.

P2-233 ASSOCIATION BETWEEN SLEEP DURATION AND BLOOD PRESSURE IN ADOLESCENTS

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Background In adults, sleep has showed an important role on health namely in cardiovascular risk factors. The purpose of this cross-sectional study was to evaluate the association between sleep duration and blood pressure, at 13 years of age.

Methods We evaluated 1771 adolescents at 13 year old as part of a population-based cohort study (EPITeen). Sleep duration was estimated by the difference between self-reported usual bedtimes and wake-up times and adolescents were classified in three categories: ≤ 8.5 h (reference class), > 8.5 h and < 9.5 h and ≥ 9.5 h. Blood pressure (BP) was measured with a mercury sphygmomanometer using the auscultatory method, and hypertension was defined according to the American Academy of Pediatrics criteria. To evaluate the association between BP and sleep duration, OR and respective 95% CI, were computed, using the binary regression models adjusted for parents' education, BMI and caffeine intake.

Results The mean (SD) sleep duration was 9.04 (0.80) hours per day. The prevalence of hypertension was 22.4% and it was significantly higher among males (54.8% vs 45.2%; $p=0.001$). After adjustment, in females, a positive association was found between sleep duration and hypertension (> 8.5 h and < 9.5 h: OR=1.61, 95% CI 1.07 to 2.44; ≥ 9.5 h: OR=1.75, 95% CI 1.13 to 2.70). Among males an inverse association was found, significant only in those who slept ≥ 9.5 h (OR=0.62, 95% CI 0.40 to 0.95).

Conclusion Sleep duration was positively associated with the odds of hypertension occurrence in females, but the opposite association was found in males.

P2-234 SELF-REPORTED HEARING LOSS AND USE OF HEALTH SERVICES FOR ELDERLY: A POPULATION BASED STUDY IN SÃO PAULO CITY, BRAZIL

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Introduction Hearing loss has been identified as one of the most frequent chronic conditions affecting elderly people and can be result in social isolation, depression and increased dependency. The use of health services to preventive ends it is important to evaluate the health behaviours of elderly with disabilities.

Methods Data are from the Survey of Health of São Paulo (ISA-Capital), a population-based cross-sectional study ($n=3357$). We analysed the subgroup of elderly (60 years and above - $n=872$) to determine the association between reported hearing loss and use of health services: immunisation against *influenza* in last year, participation in prevention programs: prostate cancer, breast cancer and cervical cancer. We used the χ^2 test of association and analysis of Poisson regression (significance level: 0.05).

Results The prevalence of hearing loss in elderly people was 11.2% and it was higher in men than women ($p=0.00$). 60.5% of the elderly related to take immunisation against *influenza*, 82.9% of the women referred to participate the program of prevention of cervical cancer and 64.1% referred to participate the breast cancer one. There was an association between self-reported hearing loss and participate in programs to prevent prostate cancer (RP: 1.8; $p=0.03$).

Conclusion Self-reported hearing loss can be itself a revelation indicator of handicap and it is quick and inexpensive to be performed. These data should be a tool to evaluate of the use of health services and moreover they could help to plan of hearing rehabilitation services.

P2-235 VERBAL FLUENCY TESTS RELIABILITY IN A BRAZILIAN MULTICENTRIC STUDY, ELSA BRASIL

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Introduction Because of the pronounced and fast population ageing of low and middle-income countries, dementia is now a leading cause of disability. Verbal Fluency Tests (VFT) were used to assess cognitive functions in ELSA (Longitudinal Study of Adults' Health - Brasil), a cohort that investigates incidence and predictors of chronic diseases among 15 000 civil servants (35–74 years old). The performance in VFT needs to be evaluated by a trained investigator, in order to count the words excluding repetitions and intrusions. As multicentric studies have to concern about the homogeneity of their interpretation, this study investigates the reliability of VFT scoring by supervisors of the six ELSA research centers, who independently judged 120 category (animals) and 120 phonemic (F letter) tests.

Methods The scores were compared to a reference standard score obtained by independent judgement of two experts and ratings reliability obtained by Intraclass Correlation Coefficient (ICC) and Bland-Altman plot.

Results Scores were very similar among centers and a high level of agreement was observed between each center and the reference standard. ICC values for both tests varied from 0.979 (95% CI 0.970 to 0.985) to 0.987 (95% CI 0.981 to 0.991). The Bland-Altman plot showed that the mean difference is small for both tests, and 95% of scores are located between the mean and 2 SDs.

Conclusion These results show the importance of the implemented measures of quality assurance and control and allow ELSA to proceed upon its main objective, to identify social, psychological and biological predictors of cognitive decline in a Brazilian adult population.

P2-236 BETTER COGNITIVE FUNCTION ASSOCIATED WITH WHO RECOMMENDED FRUIT AND VEGETABLE INTAKE IN A LOW-INCOME ELDERLY POPULATION IN BRAZIL

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Globally, cognitive deficit and dementia are among the major age-related chronic disorders. Daily consumption of fruit and vegetables has been associated with a diminished risk of cognitive deficit later in life. We examined whether the WHO recommendations of a daily intake of five servings of fruit and vegetables (≥ 400 gm) were associated with cognition in a low-income elderly population in the city of São Paulo. We explored the influence of socio-demographic characteristics, lifestyle factors and health measures on this association.

Methods We performed a cross-sectional analyses with 1849 participants ≥ 65 years old, free of dementia, at the baseline of the population-based prospective SPAH study. Cognition function was assessed using the Community Screening Instrument for Dementia (CSI-D), (scored as 0–30). Few cases with scores =0 were excluded. Cognitive deficit was defined as scores ≤ 1.5 SDs of the mean population (CSI-D scores ≤ 20.93). Fruit and vegetable intake was estimated using a Food Frequency Questionnaire. The association between cognition and fruit and vegetable intake was investigated using multiple linear and logistic regression models.

Results Multivariate analyses showed that a higher intake of fruit and vegetables was associated with higher cognitive scores. Individuals who consumed ≥ 400 g/day presented a significant 42% lower risk of cognitive deficit. Nevertheless, adjusting for education significantly attenuated this association.