

P2-293 HELIUS: THE DESIGN OF A LARGE MULTI-ETHNIC POPULATION-BASED COHORT STUDY

doi:10.1136/jech.2011.142976k.26

¹K Stronks,* ¹M Snijder, ¹M Nicolaou, ¹M-L Essink-Bot, ²K Zwinderman, ³M Borgdorff, ³M Prins. ¹Academic Medical Center, Department of Public Health, Amsterdam, The Netherlands; ²Academic Medical Center, Department of Clinical Epidemiology and Biostatistics, Amsterdam, The Netherlands; ³Municipal Health Service, Amsterdam, The Netherlands

Introduction As a result of immigration, European societies are becoming increasingly ethnically diverse. In health (care) studies, however, ethnic minorities are usually excluded. There is now a growing awareness that it is necessary to redress the balance and initiate studies among ethnic minority populations as well. This applies in particular to population-based cohort studies. Therefore, a large multi-ethnic cohort study is being set up in Amsterdam, the Netherlands: HELIUS (Healthy Life in an Urban Setting). It aims to unravel the causes of the unequal burden of diseases across ethnic groups. The emphasis will be on the major contributors to the global burden of disease: cardiovascular disease, depression, and infectious diseases.

Methods HELIUS includes ethnic Dutch, and those of Surinamese (ie, South Asian and Afro Caribbean), Turkish, Moroccan, and Ghanaian origin. We strive for 10 000 participants per ethnic group (60 000 in total). A random sample aged >18 years has been drawn from the municipality register. Family members are also invited to participate. In baseline, participants are invited for a physical examination. Information on socio-economic position, migration history, lifestyle etc is collected by structured questionnaires. Additional data about health (care) will be collected by linking to registries.

Results Baseline data collection started in December 2010. Initial results will be presented at the conference.

Conclusion HELIUS will increase the etiological knowledge of cardiovascular disease, depression and infectious diseases in a multi-ethnic population. It will provide knowledge on preventable determinants of these diseases, which will give clues for public health action and targeted healthcare.

P2-294 WEIGHT CHANGE HAS A GREATER IMPACT ON CARDIOVASCULAR RISK FACTORS IN YOUNGER THAN IN OLDER MALE WORKERS

doi:10.1136/jech.2011.142976k.27

¹M Suka,* ²Y Miwa, ²Y Ono, ¹H Yanagisawa. ¹The Jikei University School of Medicine, Tokyo, Japan; ²Tokyo Health Service Association, Tokyo, Japan

Objective To evaluate the impact of weight change on cardiovascular risk factors in Japanese male workers stratified into younger (25–44 years) and older (45–64 years) age groups.

Methods Using the 2008 and 2009 health examination data of the Tokyo Health Service Association, eligible 49 587 male workers aged 25–64 years without medical treatment were examined their 1 year changes in body weight. Among those classified as normal weight or overweight, whose blood sample had been taken in the fasting state in both 2008 and 2009 (n=24 136), multiple logistic regression analyses were performed to calculate adjusted ORs of having any cardiovascular risk factors (hypertension, hyperglycemia, and dyslipidemia) at 1-year follow-up.

Results Overweight (BMI \geq 25) was more prevalent in the older group (27.5% vs 24.6%), whereas mean weight change (adjusted for baseline values) was significantly greater in the younger group (+0.26 kg vs –0.06 kg). The ORs of having cardiovascular risk factors after 1 year increased linearly with weight gain, and decreased linearly with weight loss. In terms of population attributable risk percentage, weight gain showed a greater contribution to the development and maintenance of cardiovascular risk factors in the younger group (20.1%) than in the older group (4.5%).

Conclusion Weight change was accompanied by significant changes in cardiovascular risk factors in Japanese male workers. The age-stratified estimates of population attributable risks suggest that weight control may have a greater impact on cardiovascular health in younger than in older male workers.

P2-295 SOCIO-DEMOGRAPHIC PATTERNS OF PHYSICAL ACTIVITY IN INDIA: A CROSS SECTIONAL STUDY

doi:10.1136/jech.2011.142976k.28

¹R Sullivan,* ¹S Kinra, ²U Ekelund, ³A V Bharathi, ¹T Collier, ⁴M Vaz, ⁴A Kurpad, ⁷K S Reddy, ^{5,6}D Prabhakaran, ¹H Kuper, ^{1,6}S Ebrahim. ¹London School of Hygiene & Tropical Medicine, London, UK; ²MRC Epidemiology Unit, Cambridge, UK; ³Indira Gandhi Open University, Bangalore, India; ⁴St John's Research Institute, Bangalore, India; ⁵Centre for Chronic Disease Control, New Delhi, India; ⁶South Asia Network for Chronic Disease, Public Health Foundation of India, New Delhi, India; ⁷Public Health Foundation of India, New Delhi, India

Introduction The existence of a socio-demographic patterns of cardiovascular disease (CVD) in India has been suggested, with a higher CVD risk in individuals: from urban areas, the south, higher socio-economic status (SES), and in the elderly. Whether this pattern is replicated in physical activity (PA) is unknown. We aimed to examine the socio-demographic pattern of PA in India using the Indian Migration Study (IMS); a cross-sectional sib-pair designed survey.

Methods The IMS included a PA questionnaire (IMS-PAQ). We recruited 6995 participants (41% female, 37% rural) whose PA was characterised over the last month. We estimated (i) total activity (MET hr/day), (2) PA Level defined as inactive <1.4, low active 1.4–1.59, active 1.6–1.89 and very active \geq 1.9, and (iii) sedentary behaviour (min/day). These were compared with socio-demographic status (age, sex, urban/rural, north/south) and socio-economic status (SES) using regression analyses, adjusting for confounders and clustering.

Results Total activity decreased with age and SES, and was lower in women, among urban participants and in the south (p<0.001). These findings held true for PA Level where the proportion classified as active or very active was lower in women (38% vs 54% men), in the highest SES group (37% vs 61% lowest SES group), in urban participants (40% vs 60% rural) and in the south (43% vs 52% north). This pattern reversed for sedentary behaviour as older participants, women, south and urban residents and higher SES groups were significantly more sedentary.

Conclusion PA patterning broadly mirrors that of CVD in India. Further studies should investigate how PA patterns may modify risk of CVD in India.