

**P2-409 PRE-PREGNANCY BODY MASS INDEX AND SPONTANEOUS PRETERM BIRTH IN NORTHWEST RUSSIA: A REGISTRY-BASED STUDY**

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**Introduction** International studies on this topic yield controversial results. No studies from Russia have been published. We contribute by studying associations between maternal pre-pregnant BMI and the risk of spontaneous preterm birth in Northwest Russia.

**Methods** A historical cohort study using the data of the Murmansk County Birth Registry. All spontaneous singleton births in the county in 2006–2008 were included (n=23 527). All women were categorised as underweight (<18.5 kg/m<sup>2</sup>), normal (18.5–24.9 kg/m<sup>2</sup>), overweight (25.0–29.9 kg/m<sup>2</sup>), and obese ( $\geq$ 30.0 kg/m<sup>2</sup>). Crude and adjusted associations between pre-pregnant BMI and risk of spontaneous preterm birth (<37 completed weeks) were estimated by logistic regression analyses.

**Results** In total, 7.5% (95% CI 7.2 to 7.9) of all spontaneous births were preterm. The prevalence of preterm birth according to the mother's BMI was 7.3% (95% CI 6.9 to 7.7) for normal weight, 7.6% (95% CI 6.4 to 8.9) for underweight, 8.2% (95% CI 7.4 to 9.1) for overweight and 8.3% (95% CI 7.0 to 9.6) for obese women. The risk of spontaneous preterm birth was increased in overweight women compared to normal weight mothers (crude OR 1.15, 95% CI 1.13 to 1.31). After adjustment for marital status and education, increased risks of preterm delivery were found in both overweight (OR 1.18, 95% CI 1.04 to 1.34) and obese women (OR 1.21, 95% CI 1.00 to 1.45). Further adjustment for age, parity, infant sex, smoking and alcohol abuse, reduced the associations to non-significant level.

**Conclusion** Overweight and obesity are associated with preterm birth in Northwest Russia, but only before adjustment for biological factors. More detailed analyses of causal pathways are warranted. Potential mechanisms will be discussed.

**P2-410 FACTORS ASSOCIATED WITH ALCOHOL USE AND ABUSE IN RURAL COMMUNITY IN THE CITY OF RIO DE JANEIRO, BRAZIL**

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This study aimed to evaluate factors associated with use and alcohol abuse among the 1115 individuals from a rural community with coverage of the Family Health Strategy in Rio de Janeiro, Brazil. In this survey was descriptive analysis and multiple linear regression analysis. The mean score of consumption, measured by the AUDIT, was 3.8 (range 1–20, SD  $\pm$ 6.08). Multiple regression analysis showed that the factors that best explained the variability of alcohol consumption were sex ( $p=<0.001$ ), age ( $p=0.113$ ), family income ( $p=0.052$ ), education ( $p=0.382$ ), and State Civil ( $p=0.974$ ), with a coefficient of determination equal to 0.399. In another analysis, excluding the variable marital status, the variables associated with alcohol consumption were sex ( $p=<0.001$ ), age ( $p=0.113$ ), family income ( $p=0.05$ ) and education ( $p=0.380$ ) with the coefficient of determination equals 0.419. The results identified issues to be considered in developing measures to protect health, with emphasis on controlling alcohol use and harm reduction.

**P2-411 THE RURAL-URBAN DIFFERENCES AND ABUSE OF ALCOHOL USE IN THE CITY OF RIO DE JANEIRO, BRAZIL**

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Cross-sectional study involving 1115 individuals from rural and urban areas of Rio de Janeiro, Brazil, whose aim was to evaluate the effect of urbanisation of place of residence in the quantitative standard of alcohol consumption. We used logistic regression for multivariate analysis, considering the potential confounders age, age, education, income and marital status. The reasons and likely derived from the bivariate analysis, considering the first category as reference were: sex (OR=2.254, 95% CI 1.69 to 3.01), age group (OR=1.59, 95% CI 1.07 to 2.36), schooling (OR=2.80, 95% CI 0.51 to 15.4) Income (OR=2.88, 95% CI 1.42 to 5, 83), status (OR=1.40, 95% CI 1.03 to 1.90), Urbanisation (OR=1.07, 95% CI 0.75 to 1.54). In the multivariate model, the adjusted OR of association between urbanisation of the area and alcohol consumption was 0.95 (95% CI 0.63 to 1.43). The urbanisation of place of residence and therefore does not increase the risk of alcohol consumption, in quantitative terms. Health policies should therefore investigate the quality of alcohol consumed, in order to achieve the effect of addiction and work risk factors for risk reduction.

**P2-412 TEMPORAL TRENDS OF TUBERCULOSIS AND TB/HIV CO-INFECTION IN BRAZIL AND GLOBALLY, 1996–2008**

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**Background** Tuberculosis (TB) represents a major challenge for Brazil and the world, especially because of the presence of pockets of poverty and coinfection with TB/HIV. The aim of the study is to analyse the trend of prevalence, incidence and mortality of tuberculosis cases, associated or not with HIV in Brazil and worldwide.

**Materials and Methods** We used data on prevalence, incidence and mortality from tuberculosis, with or without HIV co-infection, obtained by the WHO, from 1996 to 2008, referring to Brazil and the world. The trends were estimated by linear regression.

**Results** The data suggest a reduction in the prevalence of and mortality from TB both in Brazil and worldwide, with more marked reduction in Brazil. However, TB incidence is falling in Brazil while increasing worldwide. There were increasing rates of incident TB/HIV.

**Conclusion** Social inequality, population ageing, migration, the emergence of multidrug-resistant strains and the advent of AIDS are the main causes aggravating the current TB situation. In this context, methodological approaches for assessing TB surveillance actions are welcome because they can identify situations where the TB notification data are different from the true incidence of this disease.

**P2-413 ASSESSMENT OF REFRACTIVE ERRORS AND COLOUR VISION BY VISION SCREENING AMONG SCHOOL CHILDREN IN SHIMLA DISTRICT OF NORTH INDIA**

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**Introduction** WHO introduced the global initiative for the elimination of avoidable blindness by the year 2020 known as "Vision

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2020". Refractive errors, is one of the priority areas for vision 2020 as they are so common and because corrective spectacles provide a remedy that is cheap, effective and associated with huge functional improvement.

**Aims and Objectives** To estimate the prevalence of refractive errors and colour blindness among 5–15 years school going children in Shimla.

**Materials and Methods** Cross sectional study carried out in the in urban and rural schools of Shimla. In a total of 2000 school children aged 5–15 years visual acuity was tested using ETDRS chart for refractive error and Ichihara colour plates for colour vision. Trained school teachers assessed visual acuity and colour vision. Students found having visual impairment by trained school teachers were further examined by refractionist.

**Results** Among the 2000 study subjects 956 (48%) were males and 1044 (52%) were females. The mean age of the study participants was 12.59 years $\pm$ 2.25. 4.2% were found to be having refractive error. Myopia was found to be the most prevalent type of RE followed by hypermetropia and finally astigmatism. There was no association between RE with gender. The prevalence of colour blindness was 0.3%.

**Conclusion** Because visual impairment can have a significant impact on a child's life in terms of education and development, it is important that effective strategies be developed to eliminate this easily treated cause of visual impairment.

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### SMOKING-SPECIFIC COMMUNICATION AND CHILDREN'S SMOKING BEHAVIOUR: AN EXTENSION OF THE THEORY OF PLANNED BEHAVIOUR

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**Introduction** Smoking starts and progresses rapidly during adolescence. Therefore, it is important to prevent youths from smoking. Previous research is mostly conducted on adolescent samples. This innovative study will focus on smoking of children aged 9–11 years old. The aim is to test whether parental smoking-specific communication and parental smoking add to smoking-specific cognitions derived from the Theory of Planned Behaviour (TPB) in predicting smoking onset.

**Method** A total of 1478 pairs of mothers and children participated. Structural equation models in Mplus were used to examine whether parental smoking-specific communication are important in shaping children's smoking cognitions, which affects smoking onset.

**Results** Pro-smoking attitude, higher frequency of communication and high parental smoking were associated with smoking onset. No significant association was found for self-efficacy, perceived norm of mother, (best) friends on smoking onset. We also found that a frequency of communication, quality of communication and parental smoking were related to smoking cognitions.

**Conclusion** At this age, smoking-specific communication and smoking behaviour of parents are associated with smoking cognitions. From the cognitions, only attitude is related to smoking onset. The extension of TPB is comparable with earlier research on adolescents. A difference between adolescent and child research is that cognitions have no association with smoking onset. A possible explanation can be that smoking-specific cognitions are not developed at this age because children are not engaged in smoking yet. Results can be used to develop effective family-based smoking prevention programs.

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### THE ALL IRELAND TRAVELLER BIRTH COHORT STUDY (2008–2011): EXPERIENCE FROM A NOMADIC COHORT OF FIVE HUNDRED FAMILIES

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**Introduction** Irish Travellers are a nomadic minority group in Ireland with a strong cultural identity, who experience profound socio-economic and health inequalities. The All Ireland Traveller Health Study is a multi-study project, one component of which is a birth cohort follow-up study. The aim of this study is to describe the methodology and findings to date.

**Methodology** This is a 3-year longitudinal linkage cohort study of all Irish Traveller mothers who gave birth on island of Ireland between 14 October 2008 and 13 October 2009 followed up for 1 year thereafter to assess infant mortality and health outcomes. Public Health Nurses and Traveller community health workers in Traveller Health Projects facilitated cohort ascertainment. Participating mothers carried a Parent-Held Child Record and consented to linkage to perinatal data in maternity hospitals. Infant Traveller deaths were also searched for in the General Register Office.

**Results** Of 987 Traveller births identified, 506 consented (51.2%) to participation. We retrieved 491 linkage records (97%) from the 25 maternity hospitals and 348 (68.8%) of the Parent-Held Child Record in 37 districts. 35% of participants in the cohort still travel with 19.7% lost from follow-up as a result of nomadic practice. Preliminary follow-up data suggest infant mortality was higher in the refusal group and predominantly from congenital conditions in the perinatal period.

**Conclusion** The recruitment strategy was culturally appropriate and, despite challenges to engagement, longitudinal follow-up to date has been largely successful. The experience is relevant to other indigenous minority healthcare initiatives worldwide.

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### ESTIMATING THE PREVALENCE OF HEPATITIS B INFECTION AMONG PEOPLE WHO INJECT DRUGS: RESULTS FROM A GLOBAL SYSTEMATIC REVIEW

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**Introduction** Hepatitis B virus (HBV) infection, although not as prevalent among people who inject drugs (PWID) as hepatitis C, remains a significant public health concern. We present the first detailed global review of HBV prevalence among PWID.

**Methods** As part of the WHO-funded Global Burden of Disease study, we undertook a systematic review of electronic databases (Medline, Embase, PsycINFO) and relevant conference abstracts to identify studies reporting HBV prevalence among PWID. Experts in the field were invited through a "viral email" to submit unpublished reports, to ensure inclusion of as many studies as possible. Studies were graded according to methodological characteristics and data quality, before national, regional and global prevalence estimates of specific HBV markers were calculated.

**Results** Two hundred and eighty-nine studies reporting HBV prevalence estimates from more than 50 countries were identified. Most