THYROID CANCER INCIDENCE IN BRAZIL: AN APPROACH USING POLYNOMIAL MODELS

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Introduction Thyroid cancer represents almost 1% of malignant neoplasms, corresponding to 0.5% of total deaths caused by cancer. Despite a low and progressive reduction in mortality rate, thyroid cancer is a public health issue because of its increasing incidence, as shown in various studies worldwide.

Methods This ecological study to estimate thyroid cancer incidence according to age and sex in Brazil in 2006. We employed polynomial models, which take into account age and birth cohort effects in estimate process.

Results We estimated 6066 new cases of thyroid cancer, of which 1065 among men and 5001 among women. The incidence rates were, respectively, 1.16 and 5.27 per 100 000 inhabitants. There was an increase in rates according to age for both sexes, especially from 30 years old onwards.

Conclusion The rates’ magnitude and profile according to age and sex suggest the method employed yields plausible estimates.

JOB STRESS, WORKPLACE SOCIAL SUPPORT AND OCCUPATIONAL ACCIDENTS IN THE PRO-SAÚDE STUDY, BRAZIL

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Introduction The objective of this study was to investigate the association between job stress and the occurrence of occupational accidents using multilevel modelling in order to take into account clustering of participants at their workplaces.

Methods Analyses were based on 3572 university employees ≤70 years of age during the second phase of data collection of a longitudinal study (Estudo Pró-Saúde). The period of recall for accidents was the 12 month before answering the self-reported questionnaire. Psychosocial stress at work was approached considering the interplay between high psychological demand and low control over the labour process. These dimensions were taken by means of the summarised version of the Karasek scale, which also contains information about the social support at work. Isolated dimensions of job stress (demand and control), the ratio between scores of psychological demand and control over the work process (ratio D/C) and social support at work were measured at individual level and at the level of the workplace.

Results The total prevalence of accidents in the 12 month period was 26%. Results indicate that high psychological demands measured at the individual level was an important factor associated to the occurrence of occupational accidents, particularly among those with scores above the population average, independently of the level of control that the subject might have over the work process. Social support at work was inversely associated to the prevalence of occupational accidents. At the workplace level, this association was characterised by a curvilinear relationship more evident among female worker.

THE EMERGING EPIDEMIC OF OBESITY IN PUNJAB (INDIA): A POPULATION BASED STUDY

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Introduction Obesity is a complex, multifactorial chronic disease involving genetic, physiological, metabolic, behavioural, psychological and environmental components. The global epidemic of overweight and obesity—“globesity”—is rapidly becoming a major public health problem. It has reached epidemic proportion in India in the 21st century.

Methods The present population based study has been conducted in rural and urban areas of Ludhiana district, Punjab State (India). The study included 1615 Punjabi adults comprising 875 from rural and 740 from urban area. Demographic variables (age, sex, SES, lifestyle) and anthropometric parameters—height, weight, waist circumference and hip circumference were recorded. Biochemical analysis viz. cholesterol, Na and K were also done.

Results Out of 1615 subjects, 44% were males and 56% were females. Half of the subjects were in the age group of 20–40 years. Overall prevalence of overweight and obesity has been found be 18.8% and 46.6%, respectively. Prevalence of obesity is slightly higher in rural subjects than the urban. The percentage of obese subjects is 54%, 55.35% and 56.44% in the age groups of ≤30 years, 31–40 years and 41–50 years, respectively. Prevalence of obesity has been computed in relation to sex, SES and lifestyle. Serum
cholesterol level was significantly (p=0.007) higher among obese (192.24±41.39) than non-obese (179.27±39.57) subjects. No significant difference of Na and K was observed between obese and non-obese subjects.

**Conclusion** The prevalence of obesity is alarmingly high in adult population of Punjab.

**P1-408** PREGNANCY PLANNING AND THE ROLE OF SOCIAL INEQUALITIES IN HEALTH AND DEVELOPMENTAL OUTCOMES AT 5 YEARS

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**Objective** To examine the effects of unplanned pregnancy on cognitive, behavioural and health outcomes of children at 5 years.

**Design** Population-based cohort (Sweep 1 and 3 of the UK Millenium Cohort Study).


**Exposure measure** Mothers reported whether their pregnancy was planned, and their feelings when first pregnant. The population was divided into “unplanned” pregnancies (unplanned and unhappy), “mistimed” pregnancies (unplanned but happy) and “planned”.

**Outcome measures** At 5 years mothers answered questions about their child’s health and behaviour (Strength and Difficulties Questionnaire). Children completed cognitive tests (British Abilities Scales II), including a component to measure verbal abilities.

**Results** 17% of pregnancies were unplanned, 31% mistimed, and 52% planned. On average, children from unplanned pregnancies had cognitive scores indicating a delay of 5 months; were more likely to have behavioural problems (OR 2.9 (95% CI 2.3 to 3.5)); and more likely to be in poor health than the planned group (OR 2.5 (95% CI 1.9 to 3.0)). After adjustment the effects were reduced, though likely to be in poor health than the planned group (OR 2.3 (95% CI 1.8 to 3.0)). After adjustment the effects were reduced, though effects were smaller in the mistimed group, and after adjustment for confounding by socioeconomic and demographic factors, these effects disappeared.

**Conclusions** While the adverse outcomes associated with mistimed pregnancies can be explained by confounding of socioeconomic circumstances, there remains a significant effect on the health and behaviour of children born after unplanned pregnancies. Potential confounding by other contextual or family factors will be examined.

**P1-410** EVALUATION OF INFANT MORTALITY RISK FACTORS IN AN EASTERN AREA OF IRAN: A CASE-CONTROL STUDY- 2009

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**Introduction** Infant Mortality Rate (IMR) is one of the most important indicators of community health situation and especially children health status. This study was conducted for determination of IMR risk factors in Shahroud Township (which is located in the east of Iran).

**Methods** This study was carried out as a Case- Control study and all infant deaths (117 cases) from 2007 to 2009 in Shahroud Township were selected. For each case two controls were entered the study by matching on time and place of birth (234 controls). After data collection of all related variables, data analysis was performed using relevant statistical methods (Univariate and multivariate conditional logistic regression).

**Results** Univariate analysis of risk factors showed statistical significance (P Value<0.05) between infant mortality and low birth weight (<2500 g) with OR=15.14, prematurity (<37 weeks of gestational age) with OR=9.85 and high risk pregnancy with OR=3.13. Multivariate analysis resulted in significant statistical association (p value<0.05) between infant mortality and low birth weight (OR=8.04) and prematurity (OR=3.51).

**Conclusion** Based on our findings Low Birth Weight (LBW) and prematurity are the most important risk factors for infant mortality and prevention of these two risk factors will reduce a majority of infant mortalities. Determination of underlying causes of LBW and prematurity needs serious attention of public health investigators.