**P2-448** SMOKING AND BODY MASS INDEX AMONG MALES AGED 20 YEARS AND ABOVE: A SOUTH INDIAN STUDY

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**Introduction** To investigate the relationship between smoking status and Body Mass Index (BMI) in men aged 20 years and above.

**Methods** A cross sectional study was conducted in the rural field practice area of Department of Community Medicine, PSG Institute of Medical Science and Research, Coimbatore during June and July 2010. A total of 459 men aged 20 years and above were included in the study. Statistical analyses were done using General Linear Model procedure of SPSS.

**Results** Cigarette smokers weighed (kg) less, p < 0.01 (age adjusted mean ±SE = 68.64 ±0.44) and were leaner, p < 0.001 [age adjusted mean BMI (kg/m²) ±SE = 21.13±0.13] than ex/non-smokers (61.11±0.69 and 22.19±0.2 respectively). Regarding the intensity of smoking and BMI, light smokers (1–20 cigarettes per day) were leaner than ex/non-smokers (mean±SE were 21.13±0.13, 22.19±0.203 respectively, p < 0.001). Regarding the duration of smoking and BMI, a linear diminution in BMI is observed with increasing duration of cigarettes smoking compared to ex/non-smokers (mean±SE of BMI for ex/non smokers 22.19±0.208, 1–10 years of smoking 21.56±0.221 (p<0.05); 11–20 years of smoking 21.23±0.256 (p<0.01); 21–30 years of smoking 20.30±0.333 (p<0.001); 30 and above years of smoking 20.07±0.501 (p<0.001).

**Conclusion** We found significant results confirming an association between cigarette smoking and lower BMI in men.

**P2-449** MATERNAL EDUCATION AND HEIGHT GROWTH TRAJECTORIES IN CHILDHOOD: 2004 PELOTAS BIRTH COHORT STUDY

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**Introduction** The aim of this study was to explore the age at which socioeconomic inequalities in child height emerge among children from a middle-income country.

**Methods** Using data from the 2004 Pelotas cohort study from Brazil we modelled individual height growth trajectories in 2106 boys and 1947 girls from birth to 48 months using a linear spline mixed effects model. We examined the associations of maternal education on birth length and length/height growth and explored the effect of adjusting for confounding factors.

**Results** We showed linear and positive associations of maternal education with birth length and length/height growth rates in the first four years of life. By age four, the mean height of boys in the lowest education category was 100.98 cm (SE=0.21) compared with 104.23 cm (SE=0.12) in the highest education category. The equivalent predicted heights at age four for girls were 100.08 cm (SE=0.25) and 103.00 cm (SE=0.15) in the lowest and highest education categories respectively. Thus for both boys and girls there was on average a 3 cm difference between the extreme maternal education categories. Differences in postnatal growth rates persisted in the adjusted analyses.

**Conclusion** Our data demonstrate an increase in the absolute and relative inequality in height after birth indicating that height inequality, which was already present at birth, widened considerably through childhood growth. These findings differ from studies in high income countries where height inequalities at birth exist but do not widen postnatally. Our results highlight the importance of postnatal environment on infant and childhood growth in a middle-income setting.