

P2-402 TB DIAGNOSTIC INTERVENTIONS IN RESOURCE POOR AREAS: THE ROLE OF SPUTUM FIXERS IN TANZANIA

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Introduction TB is among of the major public health problem in Tanzania. The National TB and leprosy program among of their strategy is intensive case finding which has drawbacks taking the fact that Tanzania is a developing country. The coverage of diagnostic centers is very low and some areas are located very interior that it takes hours to reach the diagnostic centers. PATH Tanzania decided to introduce a cadre called sputum fixers; these are community owned resource persons. They screen the community looking for TB suspects. These TB suspects are those with complain of cough. They fix their sputum on slides and send them to the diagnostic centers. These sputum fixers are given bicycles to transport these slides to the laboratories for analysis.

Methods Ten sputum fixers were identified in five districts in Tanzania whereby the sputum of suspects were fixed and sent to laboratory for analysis. Two sputum specimens were taken to the laboratory from each suspect. Any sputum positive of the two slides taken was regarded TB patients.

Results Out of 1195 suspects whose sputum were taken to laboratory for analysis 137(8.7%) were AFB sputum positive.

Conclusion Introduction of community owned resource persons (sputum fixers) helps in case identification and increase case detection and hence reducing incidence rate after proper treatment.

P2-403 DETERMINANTS OF BED NET USAGE IN CHILDREN UNDER 5 AND HOUSEHOLD BED NET OWNERSHIP IN BIOKO ISLAND, EQUATORIAL GUINEA

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Background As part of the strategies the Bioko Island Malaria Control Project has implemented in recent years, around 80 000 insecticide treated nets (ITN) were delivered to the population in 2007. This study assesses the determinants of bed net usage and bed net ownership in children under 5.

Methods Data were selected from 2008 and 2009 annual surveys of households who had at least one child under 5. Outcome variables were: sleeping under a net/ITN the night prior to the survey and household ownership of at least one net. The explanatory variables were household characteristics and caregiver's knowledge of malaria.

Results A total of 3210 households with 5151 children under 5 were analysed. Higher bed net usage was associated with being sick in the last 14 days prior to the survey, urban area, more years of education of head of households, household ownership of at least one ITN and the year 2009. The proportion of households that owned at least one net in 2009 declined by 32% when compared to 2008. Knowing how malaria is prevented and transmitted, having fewer children under 5 and having more children sick in the previous 14 days were associated with higher household net ownership.

Conclusions The fall in bed net usage from 2008 to 2009 is attributable to the striking decline in ownership. Although ownership is similar in rural and urban areas, rural households are less likely to protect their children with nets. Knowledge about malaria seems an important determinant of bed net ownership.

P2-404 HIGH HIV PREVALENCE RATES IN A SEMI-RURAL AREA OF SOUTHERN MOZAMBIQUE: POPULATION-BASED DATA COMPARED WITH ANTENATAL CLINIC PREVALENCE ESTIMATIONS

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Introduction Southern African countries bear an inordinate burden of the global HIV/AIDS pandemic. Monitoring the epidemiology dynamics is critical to identify populations at greatest risk for the infection and assess the maturity of the epidemic.

Methods A cross-sectional population-based study was designed to determine age and sex-specific community HIV prevalence in adults aged 18–47 years old living in Manhiça district, in southern Mozambique. Study candidates were randomly selected from the Demographic Surveillance System in place at the Centro de Investigação em Saúde de Manhiça (CISM) and home-based testing was conducted. The population-based HIV prevalence results were compared with those obtained prospectively from the antenatal clinics (ANC) of Manhiça Health Center.

Results In total, 722 adults participated in the cross-sectional survey. The overall HIV prevalence found in adults aged 18–27 years was 23.61% (95% CI 18.13 to 29.08), increasing to 42.62% (95% CI 36.39 to 48.85) in those aged 28–37 years and to 45.31% (95% CI 39.05 to 51.56) in the 38–47 years age-group. HIV prevalence estimates were higher in women than in men, especially in younger adults. The overall HIV prevalence found in the study participants was of 37.40% (95% CI 33.86 to 40.93). Analysis of the ANC data showed an HIV prevalence of 29.35% (95% CI 26.70 to 32.00) in 952 pregnant women from the same area.

Conclusions Our results show higher HIV prevalence in the population-based survey than in the ANC surveillance system of the same district. This raises issues as to the applicability of ANC prevalence data to estimate overall HIV prevalence, and stresses the need for innovative prevention strategies in sub-Saharan countries.

P2-405 SELF-REPORTED DISCRIMINATION IN EARLY ADOLESCENCE IN A BRAZILIAN BIRTH COHORT: PREVALENCE AND ASSOCIATED FACTORS

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Objective To assess the prevalence of and associated factors with self-reported discrimination among adolescents.

Methods Cross-sectional analyses were carried out with data from the Brazilian 1993 Pelotas Birth Cohort Study. Of the 5249 live born children, data on self-reported discrimination, socio-demographic factors and physical attributes were collected on 4452 adolescents interviewed in 2004–2005. Poisson regression was used in crude and adjusted analyses to estimate prevalence ratios (PR).

Results The prevalence of self-reported discrimination attributed to any reason was 16.3%. In adjusted analyses, discrimination was more likely to be reported by girls (PR=1.27, 95% CI 1.27 to 1.48); interviewer-classified blacks (PR=1.28, 95% CI 1.28 to 1.57); poor respondents (PR=1.58, 95% CI 1.23 to 2.02); those who perceived themselves as very thin or very fat (RP=1.81 and 1.54, respectively); with family economic problems (PR=1.76, 95% CI 1.49 to 2.08); wearing glasses (PR=1.74, 95% CI 1.45 to 2.10); with worse self-perceived dental appearance (PR=1.58, 95% CI 1.21 to 2.07); with

school flunking (PR=1.23, 95% CI 1.01 to 1.51) or aggressive behaviour (PR=1.62, 95% CI 1.36 to 1.94). The association between self-reported discrimination and nutrition status (using BMI-for-age z-score) varied according to sex (p for interaction=0.009). Thin boys were more likely to report discrimination (PR=1.94, 95% CI 1.05 to 3.56), while overweight and obese ones showed lower prevalence (PR=0.65 and 0.67, respectively). Higher prevalence of discrimination was observed in obese girls (PR=1.54, 95% CI 1.12 to 2.10), and this effect was stronger among wealthiest than in the poorest females (PR=2.14 and 1.48, respectively; p for interaction 0.083).

Conclusions Self-reported discrimination was prevalent, and unevenly distributed among the population. Interventions to reduce discriminatory experiences should be implemented in early stages of the life cycle.

P2-406 INFLUENCE OF SKIN COLOUR AND LIFE-COURSE SOCIOECONOMIC POSITION ON ABDOMINAL OBESITY AMONG ADOLESCENTS IN A BRAZILIAN BIRTH COHORT

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Objective To evaluate the effects of skin colour and life-course socioeconomic indicators on waist circumference (WC) and waist-to-height ratio (WHtR) in adolescence in a population-based birth cohort study.

Methodology All the 5249 individuals born in Pelotas (southern Brazil) in 1993 were repeatedly visited from birth to age 15 y. In 2008 the whole cohort was traced. The analysis was restricted to individuals located and measured at age 15 y (2004 males, 2094 females).

Results WC was higher in men than in women (72.4 and 68.9 cm, respectively, $p < 0.001$), but WHtR showed no difference (0.43 in both cases, $p = 0.9$). In men, family income at birth and at age 15 y were positively associated with WC, but only the former was associated with WHtR. After adjustment for current family income and maternal education, men born to better-off families remained with larger WC in adolescence, but the association with WHtR was missed. Skin colour was not associated with any outcome. In women, neither skin colour nor family income (at birth or at age 15 y) were associated with WC or WHtR. All the associations in men remained even after adjustment for adolescent's behavioural variables (physical activity, fat intake, smoke and alcohol intake).

Conclusions In men, early and current socioeconomic position are directly associated with abdominal obesity. The effects of early socioeconomic conditions on WC persist even after adjustment for maternal education, adult wealth and current behavioural variables, highlighting the importance of interventions during the first years of life.

P2-407 PERCEIVED SOCIAL SUPPORT AND LEISURE-TIME PHYSICAL ACTIVITY LEVELS IN ADULTS LIVING IN A LARGE URBAN CENTER: SAÚDE EM BEAGÁ STUDY - BELO HORIZONTE CITY, BRAZIL

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Introduction Leisure Physical Activity (LPA) is an important health determinant. Alarming rates of sedentarism are observed in world's population.

Objective To investigate the influence of Social Support for Physical Activity (PASS) and individual factors on the LPA levels in adults of a large urban center.

Methods Household survey was carried out with 4048 adults. Demographic, social determinants and health information were collected. The LPA levels were categorised into *inactive*, *insufficiently active* and *active*, according to the *International Physical Activity Questionnaire*. The PASS scale was constructed using three indicators: *PASS neighbourhood*, *encouragement* and *commitments from friends and family*, with responses ranging from "no" to "high support". Associations between LPA levels and PASS were investigated using multivariate ordinal logistic model.

Results Our study consisted of 3453 adults aged 18–69 yo (1595 men; 1858 women); 59.9% (n=2171) were classified into inactive, 23.3% (n=727) insufficiently active, and 16.8% (n=555) sufficiently active. Participants were more likely to be male (OR=1.53), no partners (OR=1.30), education level higher than nine years (OR=1.97), and highest family income (≥ 5 minimum wage) (OR=1.76), were more likely to be in a better level of LPA. Moreover, those participants no PASS were more likely to be in a worse LPA levels than those with highest PASS (*low*:OR=1.80; *medium*:OR=2.51; *high*:OR=2.73).

Conclusion Participants with highest PASS were more likely to achieve the current recommendation for LPA (≥ 150 min/week). Social Support may be an important aspect for Physical Activity interventions and some encouragement from family and friends may have a positive impact in the behaviours changes.

P2-408 PREVALENCE OF AND ATTITUDES TOWARDS SMOKING AMONG MIDWIVES IN NORTHWEST RUSSIA

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Introduction Smoking is the leading cause of premature mortality and Russia is among the countries with the highest prevalence of smoking. Pregnancy is considered as a good time-point for smoking cessation and midwives can play an important role in this process. However, it is generally unknown how prevalent is smoking among midwives in Russia. The aim is to assess the prevalence of and attitudes towards smoking among midwives in Northwest Russia.

Methods A questionnaire on smoking and attitudes was sent to all 83 midwives in the city of Arkhangelsk and 72% of them responded. All data were analysed using χ^2 tests.

Results The prevalence of smoking among midwives was 43.5%. Eighty-five percent of midwives considered that it is necessary to implement antismoking program in antenatal clinics. Most midwives (72.6%) did not agree that nurses should be involved in smoking prevention program for pregnant women. Only 17% of smokers counselled women on smoking cessation while among non-smokers this proportion was 52.0% ($p = 0.024$). Surprisingly, 67.0% of midwives stated that it might be harmful to immediately quit smoking during pregnancy. Midwives reflected lack of knowledge to counsel pregnant women about tobacco. Many could not list main negative effects of smoking. Only 35.1% of midwives mentioned that smoking during pregnancy can cause fetoplacental insufficiency, 24.6% named low birth weight and 5.0% mentioned miscarriage, intrauterine infections and lung diseases in infants.

Conclusions A high proportion of midwives are smokers themselves and many are poorly informed about effects of smoking.