related to socio-economic changes in the country in the following years a doubling of the cases of tuberculosis up to 49.9/100 000 was observed in 1998. Recently there has been a tendency to arrest and slowly reduce incidence - up to 37.1/100 000 in 2007. One of the most affected groups at risk for the development and spread of tuberculosis in Bulgaria are the people from the Roma community. According to the National Statistical Institute (2001) 9% of the population identified themselves as Roma. In Bulgaria there is no registration and analysis of health indicators by ethnic groups, therefore the assessment of the health of these communities is difficult. TB in Roma communities is higher than the national average prevalence. The goal of this study was to establish the prevalence and determinants characterising this distribution process. Preventive measures should be targeted at early development and improvement of living and working conditions to overcome social exclusion. Targeted epidemiological studies of morbidity among people in the Roma community, identification of risk factors and the development of preventive strategies are needed to combat tuberculosis.

P2-439 MIGRANTS AND REFUGEES MENTAL HEALTH: A SYSTEMATIC REVIEW

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Introduction Migrants mental health is an issue of concern worldwide. We aimed to review studies on prevalence rates of depression and/or anxiety among refugees and labour migrants; to evaluate associations between the Gross National Product (GNP) of the immigration country and depression and anxiety.

Methods Systematic literature for population based studies reporting prevalence rates of depression and/or anxiety according to DSM- or ICD- criteria; and calculation of combined estimates with the Dersimonian-Laird estimator for proportions with the respective CI.

Results 348 records; with 37 on 35 populations meeting the inclusion criteria. 35 studies were included in the final analysis. Combined prevalence rates for depression among labour migrants were 20% (95% CI 14% to 26%) vs 44% (95% CI 27% to 62%) among refugees; for anxiety among labour migrants 21% (95% CI 14% to 29%) vs 40% among (95% CI 23% to 49%) (n=24 051). Higher GNP in the country of immigration was related to lower symptom prevalence of depression and/or anxiety in labour migrants; but not in refugees.

Conclusion Depression and/or anxiety in labour migrants and refugees needs to be considered separately. The GNP of the host country appears to be related to better mental health in labour migrants but not in refugees.

P2-440 ORGANISATIONAL AND HEALTH FACTORS AMONG WORKERS AND THEIR SUPERVISORS IN EXPORT PROCESSING ZONES IN THE PHILIPPINES

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Introduction We investigated the relationship between organisational/management factors at work with health factors in the manufacturing sector.

Materials and Methods A survey was undertaken in 23 establishments, including 630 workers, and 47 supervisors. In addition, 10 focus group discussions (FGDs) for workers, and 5 FGDs for supervisors were undertaken.

Results Workers and supervisors both reported illnesses and job dissatisfaction. The survey found that the most prevalent issues among workers were: the need to upgrade skills (76.3%), feeling pressured in doing work (60.5%), fast paced work (60.5%), repetitive work (63%), and that work is both physically and mentally tiring (59.7%). Among supervisors the issues raised included: work described as challenging and stimulating (66%), needing regular upgrading of skills (46.8%), and needing literature on information technology (31.9%). Focus group discussions showed that workers and supervisors were confronted with stress, fast-paced work, the need to upgrade skills in order to accommodate new information technology into the work production, fatigue, re-engineering and downsizing by management, low job control and difficult worker-supervisor relationship.

Conclusions This study was able to show that health of workers and supervisors is affected by both organisational and management factors at work.

P2-441 OCCUPATIONAL HAZARDS AND ILLNESSES OF FILIPINO WOMEN WORKERS IN EXPORT PROCESSING ZONES

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This was a baseline study on the occupational exposures and health problems among women workers in Export Processing Zone with employers from foreign multinationals such as Americans, Europeans Japanese, Chinese, and Indians. Physical, chemical and ergonomic hazards were evaluated and measured through workplace ambient monitoring, survey questionnaires, and interviews among 24 industries, and 500 respondents (majority were female at 88.8%). The top 5 hazards were ergonomic hazards (72.2%), heat (66.6%), overwork (66.6%), poor ventilation (54.8%) and chemical exposure (50.8%). The most common illnesses were gastro-intestinal problems (57.4%), backache (56%), headache (53.2%) and fatigue/weakness (53.2%). Logistic regression shows association between certain work-related factors and occupational illnesses, and psychosocial problems. Highly significant associations were hearing loss with years spent in the company ($p=0.005$) and gender ($p=0.006$); headache and dizziness with poor ventilation ($p=0.000$); backache with prolonged work ($p=0.003$). These results will have implications for policy and program formulation for women worker's concerns and issues in the export zones.

P2-442 EUROPEAN ANCESTRY, PHENOTYPIC CHARACTERISTICS AND RISK OF CUTANEOUS MELANOMA: A CASE-CONTROL STUDY IN SAO PAULO, BRAZIL

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Cutaneous melanoma shows high rates of mortality and its incidence has increased worldwide over the last century. This also is the trend for Brazil. Identified risk factors for melanoma include the pattern of sun exposure, family history of melanoma, number of nevi and phenotypic characteristics. Ethnicity could also influence the outcome of melanomas like European ancestry in different populations. We carried out a hospital-based case-control study in Brazil to evaluate the contribution of phenotypic factors and European ancestry to melanoma risk. A total of 412 subjects (202

cases and 210 controls) were analysed regarding phenotypic characteristics for risk of melanoma as well as number of grandparents born in Europe. European ancestry (Spanish, Italian, Germanic or Slavic, and 2 or more European country), eye colour (light brown and green or blue), presence of nevi, use of sunscreen, referred episodes of sunburn in adolescence or not, were independently associated with melanoma. Portuguese ancestry was not associated in multivariate logistic regression analysis. Our data confirmed the importance of European ancestry as a susceptibility factor. The higher tendency to develop melanoma in persons with those ancestries could be related not only to the phenotypic but probably also to other genetic characteristics.

P2-443 A RETROSPECTIVE EPIDEMIOLOGICAL STUDY OF ENDEMIC WATERBORNE ILLNESS IN A PASTORAL COMMUNITY IN KENYA

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Case-patients for a retrospective epidemiological cum microbiological study in Njoro Town, Kenya were selected after self-report of water-borne illness within 7 days of exposure through drinking water. Controls were matched for location, household income and type of drinking water source. Households with piped water in one high-income district reported considerably lower illness rates compared to unconnected households in two low-income districts. Analysis of the ORs identified water from the stream to be associated with the highest risk of illness (OR=3.95, p=0.03) compared to untreated rainwater (OR=2.45, p=0.02), untreated water from boreholes (OR=1.90, p=0.02) or treated water from any source (OR=0.62, p=0.01). Bacteria densities in water obtained from the stream were generally 1–3 log units higher compared to other sources, staying within 3–4 log units for HPC (cfu/ml) and TC (cfu/100 ml), 2–3 log units (cfu/100 ml) for *Escherichia coli* and intestinal enterococci and within 1 log unit (cfu/100 ml) for *Salmonella*. Several confounding risk factors other than contaminated water were identified. Their detection for over 50 % of all illness cases was significant. It was concluded that the importance of drinking water quality as the most likely source of endemic waterborne illness in the community may have been previously overestimated. Therefore, interventions on water supply in the town should include strategies that address confounding risk factors, especially, poor hygiene and occupational hazards, as well as piped water distribution to low-income households.

P2-444 INCIDENCE AND CORRELATES OF "GROWTH FALTERING" AMONG 0–6 YEAR'S CHILDREN: A PANEL STUDY FROM RURAL WARDHA, INDIA

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Objectives To study the magnitude and determinants of growth faltering among 0–6 year's children in adopted villages of rural medical college.

Material and Methods A total 305 children of <6 years were followed monthly for 1 year to assess the growth faltering. At each visit, the mothers/caretaker of children were interviewed and information regarding immunisation, morbidity profile, dietary history and child feeding practices collected using a pre-tested interview schedule. Monthly anthropometric measurements of child were taken.

Growth faltering has been defined as failure to gain weight or actual loss of weight, and weight gain <300 g over a period of three consecutive months.

Results The cumulative incidence of growth faltering among 0–6 years children was 930 per 1000 children per year (95% CI 900.8 to 959.2). The number of growth faltering episodes per child per year was 3.1 (95% CI 2.9 to 3.3). In the multivariate analysis we found presence of anaemia, presence of any illness & improper household ventilation as significant predictors of growth faltering.

Conclusion Our finding suggests more focus should be given on early detection and timely correction of growth faltering rather than just identification and treatment of severely malnourished children.

P2-445 MATERNAL RISK FACTORS ASSOCIATED WITH LOW BIRTH WEIGHT IN WARDHA, INDIA

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Objective To evaluate the maternal risk factors associated with low birth weight.

Material and Methods A case control study was carried out on 307 cases (mothers of neonate weighing <2500 g) and 307 controls (mothers of neonate weighing ≥2500 g) in District Hospital Wardha. Information was obtained by maternal interview, from medical records and by anthropometric measurement of mother and infants.

Data entry and Analysis The data entry and analysis was done in Epi-Info 6.04. OR was calculated to find out the association of various factors under study with low birth weight.

Results Among various determinants of low birth weight studied, the determinants which were found associated with high odds of LBW were - maternal age <20 years or >30 years, maternal weight <40 kg, gestational weight gain of less than 6 kg, BMI<18.5 kg/m² and MUAC <23 cm, previous history of giving birth to LBW babies, maternal anaemia.

Conclusion Significant determinants of LBW were maternal age <20 years or >30 years, maternal weight <40 kg, gestational weight gain of less than 6 kg, BMI<18.5 kg/m² and MUAC <23 cm, previous history of giving birth to LBW babies, maternal anaemia.

P2-446 WITHDRAWN

P2-447 RISK FACTORS OF MULTI-DRUG RESISTANT TUBERCULOSIS (MDR TB) IN NEPAL

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Introduction Multi-drug resistant (MDR) tuberculosis is defined as disease caused by *Mycobacterium tuberculosis* with resistance to atleast two anti-tubercular drugs isoniazid and rifampicin. Recent surveillance data have revealed that prevalence of the drug resistant tuberculosis has risen to the highest rate ever recorded in the history. The most powerful predictor of the presence of MDR-TB is a history of treatment of TB. Shortage of drugs has been one of the most common reasons for the inadequacy of the initial anti-TB regimen, especially in resource poor settings.

Method A case control study was carried out to among diagnosed MDR TB cases and Non-MDR TB cases to explore the risk factors. A total of 55 cases and 55 controls were enrolled for the study from central Nepal.