(n=122) was measured in whole blood via LC-MS/MS. Data were analysed with a one-Way ANOVA.

Results We found statistically significant differences in maternal global DNA methylation (p=0.008) and global DNA hydroxymethylation (p=0.004) at 20 weeks of pregnancy. Post hoc tests revealed that global DNA methylation and global DNA hydroxymethylation level was significantly lower when the mother had an intellectual/scientific/artistic profession (6.36% and 0.13%) as opposed to being a manager (7.77%, p=0.007% and 0.22%, p=0.002) or administrative staff (7.71%, p=0.003% and 0.2%, p=0.005). No significant differences between different working groups were found for global DNA (hydroxy)methylation in the first and third trimester of pregnancy and at delivery.

Conclusion The mother's occupation was associated with maternal global DNA (hydroxy)methylation levels only in the second trimester of pregnancy. The change in maternal global DNA (hydroxy)methylation in the second trimester of pregnancy could be due to hormonal changes during pregnancy, a shift in the one-carbon metabolism in the middle of pregnancy, but based on these results we also have to take into account maternal occupational exposure.

1290 THE ASSOCIATION BETWEEN METAL CONCENTRATION IN HUMAN BODY AND SERUM ADVANCED GLYCATION END-PRODUCTS (AGES) AMONG METAL WORKERS

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Introduction Advanced glycation end-products (AGEs) are the products formed by physical adhesion of serum glucose to some serum macromolecules such as proteins or nucleotides after a series of chemical reactions. Based on past studies, AGEs are associated with many diseases, especially cardiovascular diseases such as T2DM and atherosclerosis. Therefore, we conducted a study to explore the association between metal concentration in human body and serum AGEs.

Methods This study is a cross-sectional design, and its study population is composed of 283 workers exposed to metal in northern Taiwan. We used questionnaires to obtain the basic demographic data of the workers. Also, we collected the blood and urine samples from the workers, and we used appropriate methods to analyse the serum and urine samples including the concentration of metal, markers about metabolic diseases and serum advanced glycation end-products. We performed statistical methods containing mainly multivariable regression to analyse the data.

Result According to the study results, we found the serum nickel (Ni), serum lead (Pb), and serum thallium (Tl) are statistically crucial to the dependent variable serum AGEs concentration even after adjusting the possible covariates comprising age, gender, HbA1C, total cholesterol, BMI, diet habits, the smoking habit, medical history of hypertension, medical history of coronary artery disease and medical history of chronic obstructive pulmonary disease. The regression coefficients B for Ni, Pb, and Tl are 0.15 (95% CI: 0.06~0.24; p<0.001), 0.17 (95% CI: 0.10~0.24; p<0.001), and 0.20 (95% CI: 0.02~0.38; p<0.05) respectively. Besides, we acquired significant positive associations between serum AGEs concentration and any of the Framingham risk score.

Discussion According to our research findings, we suggested the positive association between serum Ni, Pb and Tl levels with serum AGEs concentration. Furthermore, the workers with higher serum Ni, Pb and Tl levels might increase 10 year risk of cardiovascular disease via the pathogenic processes of AGEs.

961 COPENHAGEN PSYCHOSOCIAL QUESTIONNAIRE-3 (COPSOQ-3): TURKISH VALIDATION STUDY

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Introduction The Copenhagen Psychosocial Questionnaire-3 (COPSOQ-3), has been developed to assess psychosocial risks in the workplace. questionnaire consisted 25 dimensions as follows: work pace, quantitative demands, emotional demands, demands for hiding emotions (DHE), influence at work, possibilities for development, degree of freedom at work (DFW), meaning of work, commitment to the workplace, predictability, recognition, role-clarity, role-conflicts, quality of leadership, social support from colleagues, social support from supervisors, sense of community, insecurity over employment, insecurity over working conditions, work-life conflict, trust, organisational justice and job satisfaction. In total, COPSOQ-3-TR version included 78 items and 23 dimensions. The aim of the study was validation of the form of the COPSOQ-3 to Turkish language.

Methods This is a methodologic study. The field study has been carried out in three workplaces (Call centre, plastic and metal industry) Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy and Bartlett's Test of Sphericity were used to assess the suitability of the sample for factor analysis. Validity of the dimensions were investigated with exploratory factor analysis. The principal component analysis and varimax rotation methods used to identify the factor structure. The internal consistency was assessed by the Cronbach's alpha coefficient.

Results 807 respondents' questionnaires were evaluated. Fifty-seven percent of them were men. Mean age of men and women were 32.1±7.4, 27.1±6.6, respectively.Sampling adequacy was considered adequate (KMO=0.884). The factor analysis of COPSOQ-TR identified seventeen factors with eigenvalue higher than one and explained%63.6 of the total variance.The Cronbach's alpha values of 20 dimensions were found between 0.705 and 0.884. The Cronbach's alpha values of two dimensions (DHE and DFW) were found 0.638 and 0.643. The model is found that excellent fit (Chi-Square=5860.80, df=2672, P-value=0.00000, RMSEA=0.038, SRMR=0.05, CFI=0.97).

Discussion Findings have shown that Turkish version of the Copenhagen Psychosocial Questionnaire-3 is a reliable and valid instrument that can be considered useful tool to measure the psychosocial risks in Turkish population.

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950 HEALTH AND SAFETY OF TEMPORARY CONSTRUCTION WORKERS: EVIDENCE FROM TEACHING TEMPORARY EMPLOYEES ABOUT COMPETENCIES IN HEALTH AND SAFETY (TTEACHS) STUDY

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Introduction Despite the high-risk nature of construction jobs, this blue-collar workforce continues to provide unique opportunities for contingent (e.g., temporary) work. Compared to payroll workers, there is evidence suggesting temporary construction workers have a relatively higher risk of being injured at work, which may in part be as a result of inadequate safety training, high job demands, and low job control. Using a semi-structured focus group script, we collect qualitative data to characterise the workplace health and safety experiences, attitudes, and perceptions of temporary workers employed in the construction industry.
Methods Eight focus groups with 7–10 temporary construction workers per group will be conducted. The discussions will be conducted in English or Spanish and will be audio recorded and transcribed. Data collection began in March 2017 and will conclude July 2017. Focus group audio files will be transcribed verbatim and analysed using a general inductive approach to identify emergent themes.
Result Preliminary findings indicate that participating temporary workers (n=20) were mostly male (95.0%), non-Hispanic (84.2%), Black/African American (78.9%) with a mean age of 42.8 years (standard deviation [SD]=11.9), and employed as a temporary construction worker for an average of 2.9 years (SD=2.4). Among all participants, 40% had been injured at the construction site in the past 12 months, 52.6% reported receiving safety training at the start of their job, and 41.2% were trained when asked to conduct new job tasks. Major themes that emerged included: assessment of jobsite risk at the worker- and organizational- level; visual safety cues in risk assessment process; worksite protective factors.
Discussion Temporary construction workers in this ongoing pilot study reported high rates of worksite injuries. Strategies to improve training opportunities for temporary construction workers during new jobsite orientation and upon being asked to complete new job tasks are needed.

443 WORKPLACE RISK FACTORS AND MIGRANTS' HEALTH

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Introduction In the last two years thousands of migrants have entered Bulgaria as a boundary country to the EC. Though many of them transferred to other European country a part of them stayed at migrants' campuses. As their qualification and health literacy differs they present a high risky group as a working force and are more prone to work accidents and occupational diseases.

The aim of the study was to assess the health literacy about work related risk factors among migrants in campuses in Bulgaria and to support the integration of foreigners in the labour market.
Methods A questionnaire was distributed among migrants in campuses and was fulfilled with the help of special trained social workers.
Results A questionnaire was distributed in 3 campuses in Bulgaria and was fulfilled by 45 migrants. Most of them were from Iraq (47%), followed by those from Afghanistan (24%). The prevailing part (80%) were men in the age group 25–25 years old. Most of the men (94,2%) had high school degree as well as 66,6% of the women. All of the men had work experience compared to 22,2% of the women. The predominant part of the participants declared they were willing to work in Bulgaria (88,8% of the women and 76,5 of the men). Half of the women were aware of more of the risk factors mentioned in the questionnaire compared to 58,8% of men.
Discussion The analysis of the results shows that half of the participants have insufficient knowledge about health risk factors including those at the workplace. That is why informational materials and activities are needed in order to prevent work accidents and occupational diseases.

1329 PREDICTING OCCUPATIONAL INJURIES AT THE COMMUNITY LEVEL

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Introduction Low wage, minority, and immigrant workers suffer a high and inequitable rate of traumatic workplace injury. These workers are difficult to reach. We hypothesised that these workers cluster in communities that could be predicted on demographics.
Methods We assembled a database of severely injured workers by postal zipcode, as well as demographic variables for those zipcodes for Illinois from 2000–2009. We conducted a spatial cluster analysis, and multivariable regression of demographic features of a community that could be used to target high-risk populations for occupational health interventions.
Results Among the 23 200 occupational injuries, 80% of cases were located in 20% of zip codes and clustered in 10 locations. After component analysis, numbers and clusters of injuries multiple regression showed a positive association with 'immigrants' and a negative association with 'urban poverty.'
Discussion Traumatic occupational injuries were clustered spatially by home location of the affected workers and in a predictable way. This puts an inequitable burden on communities and provides evidence for the possible value of community-based interventions for prevention of occupational injuries. Work should be included in health disparities research. Stakeholders should determine whether and how to intervene at the community level to prevent occupational injuries.

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