

relationships between levels of physical activity and other behaviours as well as specific health indicators in students attending college.

Methods A convenience sample of 147 college students, ages 18 to 24 years, participated in this research study at Imam Abdulrahman Bin Faisal University. The data were obtained through interview questionnaire and trained investigators collected weight, height, blood pressure and blood sugar measurements.

Results Forty-five percent of the students were either overweight or obese (21.8% and 23.1%) while 17.0% of the students were current smokers and 7.5% of them were ex-smokers. The majority of the students (91.8%) had fast food (hamburger, French fries, and soft drink) and out of these 62.9% had it three times or more weekly. Furthermore, 35% or more of the students did not have breakfast or drink milk or have vegetables on a daily basis. Also, 22.4% of the students were inactive. Ten percent of the participants were hypertensive while 1.4% had impaired random blood sugar with increased risk for diabetes mellitus. All of these students were unaware that they had hypertension or high random blood sugar. There was a significant statistical relationship between living in-campus at university and frequency of consumption of fast food ($p=0.003$).

Conclusion This study shows that there were high rates of risky lifestyles, namely, obesity, smoking, unhealthy diet, and inactivity among health sciences students, while some have health issues such as hypertension and high risk of diabetes.

1094

TRANSFÓRMATE: WORKPLACE HEALTH PROMOTION AND WELLNESS PROGRAM AT GRUPO PROGRESO

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Objective Reduce chronic non-communicable disease risk factors associated to poor diet and physical inactivity, plus increase knowledge about healthy lifestyles in employees at Grupo Progreso.

Methods Chronic diseases kill more than 38 million people every year, and almost three quarters of deaths occur in low and middle income countries. Metabolic syndrome is a cluster of risk factors that increase the risk to present cardiovascular disease and is becoming a public health problem. In Latin American the prevalence is 25%.

Metabolic syndrome is a set of 3 or more altered factors, for example:

Waist circumference, HDL cholesterol 'also known as good cholesterol', blood pressure, Triglycerides, Fasting glucose or pharmacotherapy for the last 3 factors. We decided to implement a wellness program called Transfórmate.

Labour intervention study in 1308 employees. We implemented a health promotion and wellness program, previously validated in a pilot project. Educational workshops were given where the main topics were: Dietary Guidelines for Guatemala, physical activity, pedometer program and stress management. All participants received personalised dietary treatment, practical sessions of physical activity, weekly text messaging, educational material, analysis of lipid profile, fasting glucose and drug treatment when needed. An assessment of initial and final knowledge was performed. Effectiveness in reducing risk

factors for chronic non-communicable disease was calculated for people who had metabolic syndrome at the start of the program (N: 301). The data were analysed in STATA SE 13.0. measures of central tendency and dispersion were calculated. Hypothesis tests were performed using the Wilcoxon test for quantitative and McNemar Chi 2 for qualitative variables.

Results Of the 301 employees, 90.7% was men and 9.3% women with a median age of 40 (IQR 35–47). The set of strategies achieved a 47% reduction of the metabolic syndrome. Compared to other programs, in Korea they reported 30% of reduction and in Italy 35%. The combination of educational, behavioural and biomedical interventions may explain this high percentage. The chronic non-communicable disease risk factors that reduced significantly were: low HDL-cholesterol 18% ($p\leq0.001$), high triglycerides 14% ($p\leq0.001$), low consumption of fruits and vegetables 13% ($p\leq0.001$) and physical inactivity 8% ($p=0.025$). The median of daily steps were 8559 (IQR: 5,813–10,765), the median of the initial knowledge assessments were 70 (IQR: 50–80) and final 90 (RIC: 80–100).

Conclusion A significant reduction in metabolic syndrome and chronic non-communicable disease risk factors associated with an unhealthy diet and sedentary lifestyle was observed, in addition to an increase in knowledge about healthy lifestyles after implementing the program at the corporate level.

1147

DEVELOPMENT AND EVALUATION OF A TRAINING PROGRAMME ON SCIENTIFIC RESEARCH AND OCCUPATIONAL HEALTH SURVEILLANCE IN TURKEY

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Introduction The general aim of the programme is to strengthen the occupational health expertise and scientific capacity of the Public Health Institution of Turkey (PHIT) by organising trainings, mentoring, exchange visits and networking.

Methods Following the ADDIE model (Analysis, Design, Development, Implementation and Evaluation), five training modules have been developed and implemented in the course of 2016. At present, we evaluate the training programme to see if the learning objectives have been met and to gather information in order to further enhance the efficiency and success rate of the project. Qualitative evaluation forms questioning the content and format of the trainings, the organisation and the trainers were filled in by the 44 participants from PHIT after each training module. Trainees also rated quantitatively on a scale from 0 to 10, all parts of the training. To measure changes in knowledge and skills regarding occupational health surveillance and research, a self-efficacy questionnaire was developed and administered three times. Descriptive statistics were computed.

Results Overall, very high rankings and positive comments were generated. No major recommendations for improvement of the trainings were formulated. Some minor issues concerned the amelioration of the learning environment and conditions e.g. a better time management to assimilate the new

information. The level of self-efficacy in occupational health surveillance and research increased significantly after the trainings. The highest increase was observed for research skills. Female students scored significantly higher on self-efficacy than men while no effect of age was demonstrated.

Conclusion Feedback on the implemented training programme was generally very favourable and participants were able to acquire competencies in the subject matter. Further details on the project and the different learning materials can be obtained free of charge and under Creative Commons licenses, at the project website <http://www.esprit-ohs.eu/en/>.

1721 INNOVATIONS IN EDUCATION AND TRAINING IN OSH

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Aim of the session is to accelerate development, share and adopt innovative programs, processes and strategies in education in OSH Theodor Valerian Haratau¹, Lena Kurtz², Amanda Wolgast³, Miwako Nagasu⁴, Anna Rask-Andersen⁵, Hans Thore Smedbold⁶

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1721a TRAINING OCCUPATIONAL MEDICINE PHYSICIANS AND OSH EXPERTS WHO ARE PROVIDING THEIR SERVICES IN AGRICULTURE – AGROSH+

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Introduction Agriculture as a sector has a tremendous impact on the European economy, it account for almost 40% of the EU budget, it is making use of almost 50% of the EU land, and its share of GDP has been increasing almost continuously for the past 5 years.

Nevertheless as the Eurofound (2016), Sixth European Working Conditions Survey has revealed, agriculture it is the least covered sector in terms of OSH. Moreover a research produced by the authors revealed the fact that in most of the EU-28 countries there are no specific training courses, crafted for agriculture, for occupational medicine physicians and for OSH experts.

Methods The AGROSH +project, is implemented by a consortium of 5 partners from 4 countries, countries to which agriculture is highly relevant -Bulgaria, Greece, Ireland and Romania, and produced two highly specific training courses dedicated to occupational medicine physicians and to OSH experts.

Results The training courses produced are blended, modular, of 40 hours each, and enclose modules such as musculoskeletal diseases, extreme temperatures, mental health in agriculture, health hazards in agriculture, toxicology, occupational cancer, etc. The courses are accredited, tested and benefit of a highly specific evaluation package based on the comprehensive Kirkpatrick four stages evaluation approach (it analyses the evolution of trainees' knowledge, skills, attitude and behaviour).

Conclusion The agriculture sector it is changing at a pace unseen before in terms of new chemical substances being used, of new technologies incorporated within classical tools, of climate changes and new environments where it is unfolded. Therefore the training of those experts who are providing their services (occupational medicine and OSH services) to agriculture needs to be performed using a specific and updated curriculum, using highly interactive platforms, using practical activities based on Case Studies, and especially by incorporating multidisciplinary expertise.

1721b TRAINING IN OCCUPATIONAL SAFETY AND HEALTH: AN EFFECTIVE APPROACH TO FACE OSH CHALLENGES IN LATIN AMERICA

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Introduction In the course of fast economic growth in Latin America, a wide range of production and services have been developed whereas the importance of occupational safety and health (OSH) in these sectors still remain at a low level. To improve this situation well-trained professionals are necessary. Finding a lack of local training we established an education program for OSH professionals from Latin America who might act as regional leaders in OSH training and research (train the trainer model).

Methods Based on a needs assessment, we developed a two-year blended learning Master consisting of onsite courses, project work and interactive online modules. Students receive theoretical and practical training in the assessment of working conditions, research skills and intervention strategies applying modern teaching methods and an international framework.

Results Since 2012, 91 OSH experts from 13 Latin American countries started the Master, 43 of them already graduated. After completing the program, over 80% of the graduates rate their knowledge in the OSH-fields taught in the Master as (very) high – compared to only one third before starting the program. Almost all graduates transfer this knowledge to their professional practice – even two years after completing the master. Today the graduates act as multipliers of OSH in their home countries by teaching at local universities, holding responsible positions and forming an international network. Over 70% of the former participants are still in contact at least once per month, realising further research projects, training courses, interventions and scientific publications.