

## Session: 24. Intervention lifestyle

## 348 A WORKPLACE INTERVENTION TARGETING OBESITY AND DIABETES IN LATINO FARMWORKERS

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**Objectives** To demonstrate the importance of a workplace modality in targeting a difficult to access community of Latino farm workers with the goal of preventing and reducing morbidities associated with diabetes and obesity.

**Methods** 254 Latino farm workers were recruited in a California occupational setting. Enrollees were randomly placed in the intervention or control arms (2:1 ratio). All were interviewed at baseline, anthropometric measures and fasting blood glucose were assessed. The intervention consisted of weekly participatory education classes, demonstrations and exercise over a 10-week period. Final evaluation repeated the baseline assessments. 178 farm workers (70%) completed the follow up screening.

**Results** 112 individuals, 27 males and 85 females completed the intervention for 6 weeks or more, resulting in a 63% completion rate. Amongst the female intervention cohort, all anthropometric mean measures improved. BMI decreased by 0.39 units (95%CI -0.64 to -0.15), weight decreased compared to baseline by 1.47 lb (-2.77 to -0.17), waist decreased by 1.09 cm (-1.93 to -0.26) compared to baseline. Men showed similar directional effects, yet not statistically significant, perhaps limited by smaller enrollment numbers. Significant improvement in days of exercise per week improved in males and females who received the intervention compared with controls. Comparison of intervention vs. control cohorts will also be presented.

**Conclusion** Latino farm workers are difficult to access through traditional health interventions and suffer disproportionate morbidities from increased rates of obesity and diabetes. Integrating health interventions through a culturally sensitive workplace program allows for increased access to this community and yields significant gains in health.

## 349 ALTERATIONS OF CLINICAL BIOMARKERS ON PRE AND POST EXERCISE IN OBESE ELECTRONIC WORKERS

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**Objectives** The purpose of this study was to compare the pre and post-exercise clinical indicators levels such as -GTP, ALT, AST, total cholesterol, LDL-cholesterol, HDL-cholesterol, triglyceride, fasting blood sugar (FBS) and HbA1C among obese electronic workers.

**Methods** Subjects were 26 obese workers whose average age was 31.75 year old with body mass index value over 30 kg/m<sup>2</sup>. All subjects were participated in physical exercise and diet programs during 15 weeks. Measures of clinical biomarkers such as liver function enzymes, cholesterol and diabetes indicators, blood pressure, body composition were all obtained before and after the exercise. All subjects participated in the study and gave written informed consent. Each participant completed a brief questionnaire. All data are represented as mean  $\pm$  standard deviation

and paired t-tests were done to compare biomarkers means between pre and post exercise.

**Results** The average weight showed a significant difference between before and after weight loss ( $95.67 \pm 9.05$  vs  $89.36 \pm 9.53$  kg). Clinical liver function indicators were significantly improved after 15 weeks (ex. -GTP ( $p < 0.01$ ), ALT ( $p < 0.01$ ) and AST ( $p = 0.01$ )). Levels of total cholesterol ( $p < 0.01$ ), LDL-cholesterol ( $p < 0.01$ ) and triglyceride showed a significant decrease after weight loss, however HDL-cholesterol was higher levels in after exercise. And, Fasting blood sugar ( $p < 0.01$ ) and HbA1C levels ( $p < 0.01$ ) were significantly decreased by reduction of body weight after 15 weeks exercise.

**Conclusions** In conclusion, after 15 weeks combined exercise and low calorie diet programs, body composition was improved. Liver function enzymes, diabetes biomarkers and total cholesterol were significantly decreased after weight loss. These data suggest that exercise is an effective health promotion strategy for liver function, diabetes indicators and lipid profile in obese workers.

## 350 A WORKSITE INTERVENTION TO PROMOTE A HEALTHY LIFESTYLE AMONG EMPLOYEES: A PROCESS EVALUATION

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**Objectives** Despite effectiveness of worksite health promotion programs (WHPPs), their implementation in practice is often unsuccessful. Since most research still focusses on effect evaluations, key determinants of implementation are often not identified nor reported. Therefore we aim to systematically evaluate the degree of adoption and implementation of implemented lifestyle interventions in a controlled trial by assessing recruitment, reach, dose delivered, dose received, fidelity, satisfaction and context.

**Methods** An Academic Hospital (AH) and an University of Applied Science (UAS) participated in this study. Within each company one intervention and one control department was assigned. Each company used an implementation strategy to develop and implement a WHPP consisting of several lifestyle interventions. Data on the implementation process were gathered using an adapted version of the framework of Steckler and Linnan. Data was collected after six and twelve months using questionnaires, semi-structured interviews and monitoring records.

**Results** Preliminary results show that the recruitment methods, such as email-updates (76%), were received by the majority respondents. The project reached 97.7% of the AH and 96.5% of the UAS employees. Respectively, 76.5% (AH) and 85.7% (UAS) of the interventions that were planned were also delivered and few adaptations were made. On average respondents participated in 1.5 [range 1–5] (AH) and 2.0 [range 1–3] (UAS) of the lifestyle-interventions at T1 and 0.9 [range 1–8] (AH) and 2.1 [range 1–8] (UAS) at T2. Satisfaction with the WHPP was graded positive in both companies. Perception of contextual determinants changed significantly ( $p < 0.05$ ) from neutral at T1 to positive at T2 in both companies.

**Conclusion** This study showed high rates of recruitment, reach, dose delivered and fidelity and good satisfaction levels. Lower rates were found for dose received in both companies. Overall, adoption and implementation was successful. Furthermore, perception of the contextual determinants may give valuable insights in the future investigation of the implementation process.