

causal relationship with the activities evaluated. Of the 26 participants evaluated in the group, 53% had no limitations in the range of spinal movements at the time of examination, 73% reported improvement in quality of life, and only 15% said they had the same pain and limitation as when they started to do the accompaniment in the column program. When questioned, 80% of the participants reported that improvement in both physical examination and in quality of life was due to the treatment and follow-up done in the spinal group.

Conclusion The study found an improvement in the quality of life, a significant reduction in functional limitation and absenteeism in the participants of the group. These results are compatible with those obtained by the group in previous years and are also in agreement with those cited in the literature.

1571 DEVELOPMENT OF A PROGRAM FOR PATIENTS WITH FUNCTIONAL RESTRICTIONS IN A BRAZILIAN COSMETIC INDUSTRY

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Introduction The group of people with functional restrictions in industries needs special care and is a management challenge for any manager in occupational medicine. Being them just restricted for a limited period of time or restricted for a long period like rehabilitated for other functions by the social security institute, Readmitted (returned from medical leave longer than 15 days for diseases related to work) or Judicially reintegrated; A Brazilian cosmetic industry decided to improve the way they handle with this group of people. Trying to find the compatible areas for each of the necessary restrictions and evaluating the medical follow-up that was being performed

Methods Ergonomic evaluation with job mapping by visiting workplaces with the ergonomist and the occupational physician. Definition of the list of most common restrictions and the development of a follow-up model for these patients. First the physician evaluated the patient and understood the current restrictions. Second determined the compatible area after visiting and understanding the function. And then created a Job mapping based on the Medical recommendations/restrictions. The Patients needed to be evaluated in 15, 30 or 45 days based on the occupational physician evaluation.

Result The program provided 467 medical attendance; 61 employees were accompanied by the occupational physicians; 35 employees were diagnosed with Osteomuscular disease; 17 (27,8%) recovered from illness during a year;

Discussion This pilot program proved to be effective in monitoring and helping workers with restriction.

725 WALKING, SITTING AND STANDING TIME MEASUREMENT SYSTEM WITH FOOT PLANER PRESSURE TO EVALUATE A RISK FACTOR OF LOW BACK PAIN

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Introduction Prolonged walking, sitting and standing were thought a risk factor of low back pain. We wanted to measure the prolonged walking, sitting and standing time among workers at the workplace to evaluate their low back pain. But it was difficult to measure these times. Foot planter pressure shifts according to the walking, sitting and standing modes. We handmade an insole typed foot planter pressure data logger and algorithm to presume the walking, sitting and standing time from the foot planter pressure data.

Methods The foot planter pressure data logger was composed by two resistive pressure sensors, a microcontroller, a micro SD card memory and a lithium ion battery. The foot planter pressure data downloaded to a personal computer and analysed to presume walking, sitting and standing time using visual basic software. We validated the presumption time of walking, sitting and standing from 10 min real activity time of running, walking, static sitting, dynamic sitting, static standing, dynamic standing, and taking off the shoe, respectively. This protocol did three times by one parson.

Results Concordance rate between the presumption time and the real activity time was running 83%±12%, walking 100%±0%, static sitting 96%±6%, dynamic sitting 100%±0%, static standing 93%±6%, dynamic standing 73%±38%, and taking off the shoe 97%±6%, respectively. To join the running and walking time to the walking time, the static and dynamic sitting time to the sitting time, the static and dynamic standing time to the standing time, the concordance rate was up to 98.5%±3%, 100.2%±3%, and 100.2%±7%, respectively.

Conclusion The insole typed foot planter pressure data logger had almost 98% concordance rate between the presumption time and the real activity time of walking, sitting and standing. We could measure the walking, sitting and standing time of workers during their working time.

112 INJURIES AND MUSCULOSKELETAL DISORDERS AMONG YOUNG WORKERS IN THE BRICK KILNS OF NEPAL

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Introduction Brick manufacturing is a labour intensive informal industry using young workers as the major work force in Nepal. Young workers are required to use physical strength, carry heavy loads and remain in a squatted posture for longer periods doing repetitive tasks posing threats to musculoskeletal system. The objective of this study was to study prevalence of musculoskeletal disorders and injuries among young workers in the selected brick kilns in Nepal.

Methods This was a cross sectional study design involving young workers 17 years and below of age working in brick kilns in Bhaktapur and Sarlahi districts of Nepal. Study group included 101 young workers from Bhaktapur district and 97 from Sarlahi district, whereas, 64 nonworking children from Bhaktapur and 43 from Sarlahi districts were selected as the comparison group. Standardised Nordic questionnaires for the analysis of musculoskeletal symptoms and questions on injuries were administered.

Result Lack of adequate physical infrastructures, poor working conditions with nonexistent safety procedures have posed risk to physical, metal and overall well-being of children. The risks