

Comparison of the Strain Index and OCRA Checklist for Risk Analysis of MSDs

JOHN ROSECRANCE ⁽¹⁾ - LELIA MURGIA ⁽²⁾ - ROBERT PAULSEN ⁽³⁾

COLORADO STATE UNIVERSITY, OCCUPATIONAL SAFETY AND ERGONOMICS, FORT COLLINS, United States (1) - UNIVERSITY FO SASSARI, AGRICULTURAL ENGINEERING, SASSARI, Italy (2) - COLORADO STATE UNIVERSITY, OCCUPATIONAL SAFETY ADN ERGONOMICS, FORT COLLINS, United States (3)

Introduction

The purpose of this study was to characterize the inter-method reliability of two physical exposure assessment methods, the Strain Index (SI) and Occupational Repetitive Actions (OCRA) Checklist, often used in occupational health studies to assess the risk of musculoskeletal disorders.

Methods

Eight raters used the SI and OCRA Checklist to assess task-level physical exposures to the upper extremity of workers performing 21 cheese processing tasks. Inter-method reliability was characterized using proportion of overall agreement, Bowker's test of symmetry, Cohen's weighted kappa, and Spearman correlations.

Results

Strain Index and OCRA Checklist assessments classified job tasks into similar risk categories. Inter-method reliability was moderate overall but poor for more complex tasks.

Conclusion: The SI and OCRA Checklist are similar physical exposure assessment methods and either may be appropriate when assessing repetitive job physical exposures to the upper limbs.



**Organized by International Centre for Rural Health of the
University Hospital San Paolo of Milan, Department of
Health Sciences of the University of Milan and Department
of Surgical Specialties, Radiological Sciences and Public
Health of the University of Brescia.**



UNIVERSITÀ DEGLI STUDI DI MILANO
DIPARTIMENTO DI
SCIENZE DELLA SALUTE

