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**Title:** Limitations of theory based educational intervention on reducing musculoskeletal disorders? The Recommendations for health promotion approach.

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**Abstract:** Background and objective: computer users are susceptible to the development of musculoskeletal symptoms, with prevalence as high as 50%. The association between musculoskeletal disorders especially low back pain and sitting posture in the occupational setting has been confirmed in available studies. The main aim of this study was to determine the effectiveness of an educational intervention on body posture modification and psychosocial mediating variables based on the Theory of Planned Behavior (TPB).

Methods and materials: in this Quasi experimental study, 75 computer users from Qazvin university of medical science who spent at least 20 hours per week at a Video display terminals were selected to receive the ergonomic intervention, whereas 75 from Qazvin international university were assigned to a control group randomly. Both groups were evaluated at the beginning of the study and at a follow-up 3 and 6 months later. The following tools were used: the Rapid upper limp Assessment (RULA) method to assess upper-extremity work-related posture, self administrated questionnaire that evaluated TPB constructs and ergonomic knowledge quiz. The tool's reliability and validity were examined. The intervention included two program elements: theory based brochure and personalized preventive educational counseling. Data analyzed by SPSS 13.0 software and χ², independent t test, repeated measure ANOVA and Kruskal Wallis test.

Results: Total tools' psychometric value was acceptable. The intervention group had significantly higher scores than control group in ergonomic knowledge, attitudes, perceived behavior control, intention, as well as correct posture (P< 0.05). At 3 and 6 months follow up, no significant differences were found between the two groups for subjective norms. Intervention couldn't improve Rapid upper limp assessment (RULA) risk level to low and very low area (1, 2 level) and only decrease risk exposure to medium level.

Conclusions: Our findings contribute to the evidence that theory based ergonomic interventions may be able to improve work-related posture but solely couldn't decrease ergonomic risk factors to low level of risk exposure. Educations should design for increasing perceived behavioral control and attitude by skills mastery and vicarious learning, as result, target group adopt and perform recommended changes. The results suggest that preventive ergonomic campaigns would be more successful if educational intervention regarded as a part of multifaceted interventions that include at least two of the following: analysis and elimination of risk factors, engineering controls and administrative controls.

**Presentation:** Oral