ROCK SOLID@WORK™

A Study On Reducing Musculoskeletal Pain and Perceived Stress, While Increasing Movement Competency and Productivity In 7-10 Minutes Per Day

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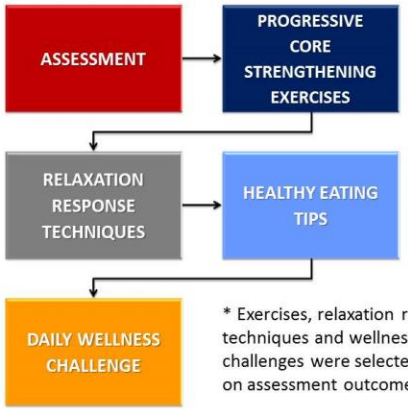
PURPOSE

Muscular imbalance and unmanaged stress lead to fatigue, pain, reduced activity levels and lost productivity. The purpose of this study was to assess if a start-of-shift exercise program, coupled with relaxation response techniques, could reduce musculoskeletal pain and perceived stress, while increasing movement competency and productivity.

PROGRAM SUMMARY

Rock Solid@Work ™ is a daily, start-of-shift, customized* and progressive core strengthening exercise program designed to counter the muscular imbalances which occur from prolonged sitting. It is facilitated by peer trainers and incorporates relaxation response techniques, healthy eating tips, and a daily wellness challenge into each session.



* Exercises, relaxation response techniques and wellness challenges were selected based on assessment outcomes.

METHODS

A quasi-experimental research design was used to measure the benefits of a start-of-shift, peer led, core strengthening and stress management program. Two work units, performing the same job functions and reporting high turnover, stress, and work related musculoskeletal injuries were selected by management from the Weld County Department of Human Services: a Pilot Group (n=53) and non-equivalent Control Group (n=22). Data were collected at baseline and 12 weeks later using the Functional Movement Screen (FMS), 0-10 Numeric Pain Rating Scale, Stanford Presenteeism Scale (SPS-6), Depression Anxiety and Stress Scale (DASS), Stress in General (SIG), Barriers to Activity Quiz and blood pressure. Data were analyzed using percentage change from baseline. The FMS scores were further analyzed using a Paired T-test.

RESULTS

Pilot Group participants experienced the following changes after 12 weeks of participation, while Control Group members experienced no significant changes.

INCREASED MOVEMENT COMPETENCY

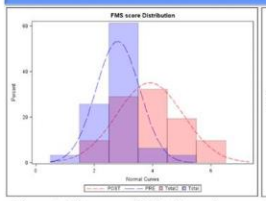


Figure 1: Histogram of Pilot Groups' pre and post FMS score

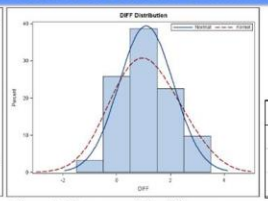
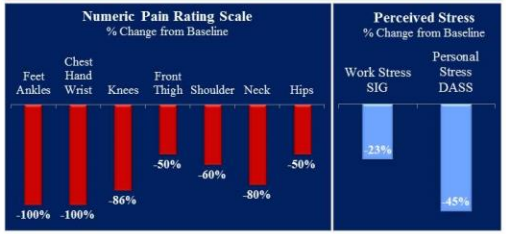


Figure 2: Histogram of the difference between Pilot Groups' FMS score

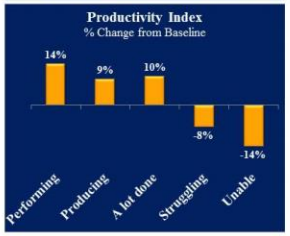
Test	Statistic	P-value
Student's T	T 6.035609	< .0001
Sign	M 10.5	< .0001
Signed rank	S 131	< .0001

Table 1: Univariate test for Pilot Groups' pre and post FMS score

REDUCED MUSCULOSKELETAL PAIN AND PERCEIVED STRESS

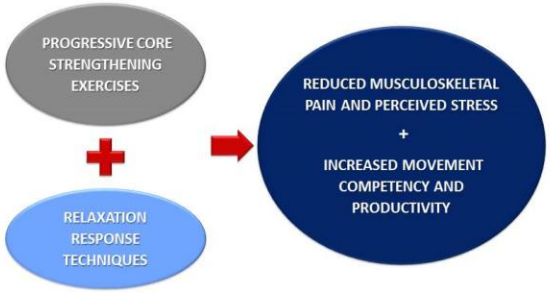


INCREASED PRODUCTIVITY



Additional Findings: Diastolic BP decreased 6%, Productivity increased 12% (SPS-6)
Barriers to Physical Activity were reduced 3-17%, depending on the barrier.

CONCLUSIONS



This study indicates that combining progressive core strengthening exercises with relaxation response techniques daily, for 7-10 minutes duration, results in an effective intervention for increasing movement competency and productivity, while reducing musculoskeletal pain and perceived stress.

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ROCK SOLID@WORK™:
http://www.rocksolidatwork.com

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