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Effect of the work hardening program on work capacity in the industrial accident patients

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Purpose

The purpose of this study is to analyze the effect of the work hardening program on work capacity in the industrial accident patients.

Methods

Subjects was selected the 40 industrial accident patients undergoing work hardening program in Industrial accident hospital. Subjects were conducted the work hardening program for 2 hours per day, 5 days a week and 12 weeks. We was investigated the evaluation of bilateral carry 10Ft, cart push, cart pull, knee extension, knee flexion, job performance possibility and floor to waist lift with Eval-Tech at before and after work hardening program (Figure 1). Data analysis was used the Wilcoxon signed-rank test.

Results

Of the 40 participants in the study, 33 were males (82.5%) and 7 (17.5%) were females. There were 49.42 years of mean age, 1550.83 days of onset duration, and 351.7 days of treatment duration. The injured area was 60.0% of upper limb, 32.5% of lower limb, 5 % of head and 2.5% of spine. All variables of work capacity were significantly improved before and after the work hardening program (Table 1). 30 patients (75.0%) were returning to work, and 25% (25.0%) were not returning.

Conclusions

Therefore, it was confirmed that the work hardening program improved the work capacity in the industrial accident patients. However, further studies will be needed to confirm the effectiveness of the work hardening program in various patients.

Table 1. Changed the work capacity before and after work hardening program

Variable	Before	After	<i>z</i>	<i>P</i>
Bilateral carry 10Ft	17.23 ± 6.99	29.03 ± 8.33	-4.888	.000
Cart push	24.43 ± 7.83	29.40 ± 9.10	-4.661	.000
Cart pull	23.02 ± 6.98	28.49 ± 7.86	-4.268	.000
Knee extension	22.90 ± 10.23	37.94 ± 12.05	-5.027	.000
Knee flexion	26.46 ± 13.02	40.61 ± 13.91	-4.705	.000
Job performance possibility	1.30 ± 0.47	2.53 ± 0.68	-4.681	.000
Floor to waist lift	18.74 ± 7.98	29.80 ± 8.42	-4.942	.000



Figure 1. Appearance of Eval Tech