



Service Priorities and Programmes Electronic Presentations

Convention ID: 820

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Stronger hand grip strength in the newly recruited supporting staff in HKWC

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Keywords:

strength
fitness for work
supporting staff
compare to norm

Introduction

Supporting staff in hospitals requires lots of patient transfer and manual handling. Hand grip strength is reported to be the best predictor for the carrying capacity and as an important component in lifting ability. However, the hand grip strength in our supporting staff has not been systematically evaluated.

Objectives

This study aims to quantify and compare the hand grip strength in newly recruited and currently employed supporting staff in HKWC.

Methodology

The followings were compared: (i) pre-placement examination records for newly recruited supporting staff (April 2013 to December 2013), (ii) Staff Health Day 2012 hand grip strength records of currently employed staff, and (iii) local reference value in hand grip strength for both dominant and non-dominant hands. Student t-tests for grip strength, Chi-square tests for age range difference, and multiple linear regression to control age and gender were used to compare the mean in the two groups.

Result

A total of 268 supporting staff records were reviewed (111 newly recruited, 157 currently employed). Currently employed workers were older than newly recruited workers (% of worker age >50: newly recruited =30%; currently employed = 40%. $p=0.08$). Currently employed workers had significantly lower dominant hand grip strength (26.3 kgf) than newly recruited workers (30.4 kgf) and local reference values (34.7 kgf), with $p<0.05$. Newly recruited workers had higher dominant hand grip strength (adjusted mean 29.2 kgf) than currently employed workers (adjusted mean 27.1 kgf) after adjusting for age and gender ($p=0.002$). Summary: Both newly recruited and currently employed supporting staff have lower hand grip strength than local reference values. Newly recruited staff has higher hand grip strength than currently employed staff even after adjusting for age and gender. Further investigations on hand grip strength, overall physical exertion, and musculoskeletal symptoms are warranted for injury prevention.