

LUBA

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LUBA

Musculoskeletal Disorders (MSDs)

(
LUBA
(

(% /)

LUBA
(% /)
(p< /)

(p< /)
(p< /)

LUBA

Spielholz)

(et al. 2001

(awkward posture)

(Jafry and O'Neill 2000; Bernard 1997)

(OSHA 3125)

(MSDs)

Johansson 1994)

Musculoskeletal Disorders

(Malchaire et al. 2001; Battenvi 1998

Shahnavaz 2003)

(1987; Maul et al.

(Miedema 1997; Aaras and Stranden 1988

Quintana 1999)

; (and Pawlowitz

-

(

(

(LUBA

(Kee 2001 ; Kemmlert 1994)

- US Department of (BLS)

% labor

(Mattila, Vilkki

-

. 1999)

%

; (Shahnavaz 1987)

(d = %)

/...

Postural Loud Index (PLI)

$$\left(n_0 = \frac{z^2_{1-\alpha}}{d^2} p (1-p) \right)$$

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(

(Kuorinka et al. 1987)

.148mm

12X

NVB

(

(

) LUBA

LUBA

(

LUBA

(Kee 2001)

STATA

SPSS (ver 11/5) (Release 7)

MSDs

MSDs

MSDs

MSDs

($p < /$)

: MSDs

(

(Cut off)

MSDs

(% /) (% /)

(% /) (% /)

(% /)

MSDs

($p < /$)

Hussain 2004; Bao 1995)

/

(Lin 1991 ; Chee and Rampal 2004;

/

: MSDs

(

O'sullivan and Gallwey)

(2002; Chee and Rampal 2004 .(p< /)

.(p< /) (OR)

: (LUBA) (.(/)) /

/

/

.(% /)

/

/

.(p< /)

.(p< /)

(Bernard 1997; Bao 1995)

/

MSDs /

Malchaire)

et al. 2001; Battenvi et al. 1998; Johansson
(1994; Lin 1991; Chee and Rampal 2004

/

.(Hussain 2004)

/

.(=)

$$\begin{array}{c} \hline (\quad) \\ \hline (\ /) / & (\quad) \\ (\ /) / & \end{array}$$

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.(=)

/ / / / / / / /

/...

(=)

$\approx - \hat{z} - \hat{z}^* - \hat{z} - \hat{z} ()$

(Cut off) *

(=)

() () (/) (/) (/) ()

(=)

() () ()

(/)	(/)	(/)	>
(/)	(/)	(/)	<
()	()	()	

P-value < /

Chi-squar Test:

.(=)

95% CI**	OR*
/ /	/ ()
/ /	/
/ /	/ ()
/ /	/
/ /	/ ()
/ /	/ ()
/ /	/ ()
/ /	/ ()
/ /	/ ()
/ /	/ ()
/ /	/ ()
/ /	/ ()
/ /	(NEC)
/ /	()
/ /	()
/ /	()

*

confidence interval**

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