

Abstract

The Effect of the Ratio of Standing to Sitting Height on the Spinal Forward Bending Range of Motion in Normal Subjects

Kwon Hyuk-cheol, Ph.D., P.T., O.T.

Dept. of Rehabilitation Technology, College of Rehabilitation Science, Taegu University

Jeong Dong-hoon, M.Sc., P.T.

Dept. of Rehabilitation Science, The Graduate School, Taegu University¹⁾

For spinal flexibility measurements to be meaningful to clinicians or researchers, they must have a normative information and an understanding of how different variables affect spinal range of motion (ROM). Normal spinal ROM measurements are influenced to differing degrees by many factors. These factors include age, gender, time of day, leisure activities, previous history of low back pain, warming up, and the techniques with which normative data are collected. The additional variables of standing height, ratio of standing height to sitting height, and obesity had not been previously studied extensively and were shown to have a significant effect on flexibility in the sagittal plane. These relationship cannot be explained easily. Thus, the purpose of this study was to determine the relationship between spinal flexibility and individual factors (weight, standing height, and ratio of standing height to sitting height) that influence it. Fifteen healthy subjects between the ages of 20 and 27 years were studied. Two physical therapists measured independently the spinal forward bending ROM in the sagittal plane by Remodified Schober test and Finger-to-floor test. In order to determine the statistical significance of the result the Pearson's correlation was applied at the .05 level of significance. The results of this study were as follows: 1) Significant relationship was not identified between spinal flexibility and weight. 2) Significant relationship was not identified between spinal flexibility and standing height. 3) Significant relationship was not identified between spinal flexibility and ratio of standing height to sitting height.

Key Words: Spinal flexibility; Ratio of standing height to sitting height.

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2.

Remodified Schober test Finger-to-floor test
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test Remodified Schober
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 (Sullivan , 1994),

1. (Waddell , 1992).

15 Remodified Schober test 15 cm
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 13 3 (1), Finger to floor test 가
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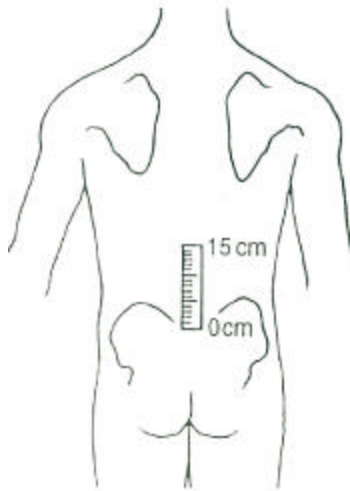
12 15 2001 1 10
 22.33 , Gauvin (1990)
 65.21 kg, 172.58 cm,
 (/) 0.53

(1). 3. SPSS/window
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1.

()	()	(kg)	(cm)	
15	22.33 ± 2.12*	65.21 ± 10.0	172.58 ± 4.54	0.53 ± 0.01

* ±



1. Remodified Schober test



2. Finger-to-floor test

scriptive statistic) (de , 가 2.

, Remodified Schober test A 가 r=.45, B 가 r=.48 .05
 , Finger-to-floor test A 가 r=.10, B 가 r=.10 (3).

1. Remodified Schober test A 가 21.91 cm, B 가 21.66 cm ,
 Finger-to-floor test A 가 16.70 cm, B 가 15.64 cm (2).
 3. , Remodified Schober test A 가 r=.09, B 가 r=.31

2. (: cm)

	()	Remodified Schober test	Finger-to-floor test
A	15	21.91 ± 0.66*	16.70 ± 5.77
B	15	21.66 ± 0.58	15.64 ± 5.60

* ±

3. (n=15)

		(r)	p
A	Remodified Schober test	.45	.08
	Finger-to-floor test	.10	.72
B	Remodified Schober test	.48	.06
	Finger-to-floor test	.10	.71

4. (n=15)

		(r)	p
A	Remodified Schober test	.09	.73
	Finger-to-floor test	.02	.93
B	Remodified Schober test	.31	.26
	Finger-to-floor test	.05	.84

5. (n=15)

		(r)	p
A	Remodified Schober test	-.13	.64
	Finger-to-floor test	.16	.56
B	Remodified Schober test	-.44	.09
	Finger-to-floor test	.17	.52

floor test A , Finger-to-
 가 r=.05 가 r=.02, B (4).
 4. to-floor test A , Remodi-
 가 r=.17 가 r=.16, B (5).

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 1 10 20 15
 2 가 Remodified Schober test
 Finger-to-floor test
 1.
 Schober test , Remodified
 $r=.45$.48
 , Finger-to-floor test
 $r=.10$
 2.
 Schober test , Remodified
 $r=.09$.31
 , Finger-to-floor
 test $r=.02$.05
 3.
 Remodified Schober test $r=-.1$
 3 -.44
 , Finger
 -to-floor test $r=.16$.17

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