

: , , ,

1) . 1) . 2)
 3) . 3) . 4) . 4)

가

1.

2000 79.2 가 (1970 66.7 , 2001). 5가 (, 1996).
 40 8,998 가 5 10 2 4%
 38% 가
 가
 2001), 48.3 가 (, 가 2,000 가 (Wilson etc., 1998),
 가 1998 470 가 2000
 535 가 (, 1995).

(Margaret,

1996).

가

가

가

,

가

- 1)
- 2)
- 3)
- 4)

03. 3. 6

03. 3. 15

03. 5. 30

-2.0 ~ -2.5 : (Osteopenia), T score -2.5
 \leq : (Osteoporosis)

1.

K 40
 465 40 59
 46.69

3.

1)

2.

1)

2000 7 1 8 31
 K 485
 465

가 가

2)

5 가
 가 12
 Chronbach Alpha=0.90

2)

CUBA Clinical Bone Sonometer

4.

가

가

가

1)

2)

3)

t-test

CUBA Clinical Bone Sonometer BUA
 (Broadband Ultrasonic Attenuation:
 dB/MHz) VOS (Velocity of
 Ultrasonic: m/sec)
 BUA, VOS
 ()

1.

< 1 >

CUBA Clinical
 transducers()

CUBA Clinical
 (Gel)

40 59
 40 (59.1%), 50 (40.9%)

Clinical

CUBA

46.69 가 292
 (62.8%), 148 (31.8%), 25
 (5.4%) 81.3%가

Z score

91.0%가

T score

T score -2.0 \geq : , T score

가 244 (52.5%),

가 178 (38.3%), 가 43 (9.5%)

57.84
 5 122 (26.4%) 가
 3-4 198 (42.5%), 1-2 89 (19.1%),
 가 56 (12.0%)
 5 57 (12%), 가
 149 (15.5%), 5-10 가 64 (6.35%), 10 24 (1.58%)
 가
 가 54 (11.6%)

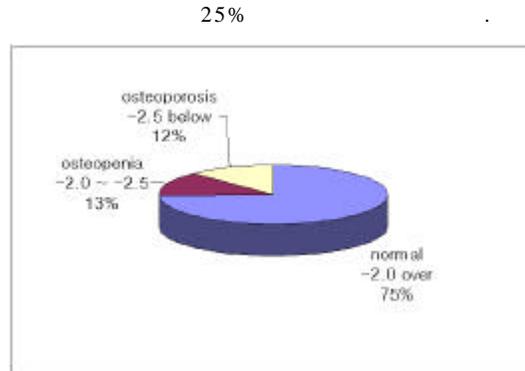
< 1> (N = 465)

	()	(%)
40-49	275	59.1
50-59	190	40.9
Mean±SD	46.69±4.42	
	292	62.8
	148	31.8
	25	5.4
	378	81.3
	61	13.1
	26	5.6
	43	9.3
	244	52.5
	178	38.2
	42	9.0
	203	43.7
	220	47.3
0	56	12.0
1-2	89	19.1
3-4	198	42.5
5	122	26.4
	228	49.1
	237	50.9
5	149	15.5
5-10	64	6.4
10	24	1.6
가	54	11.6
	367	98.4

2.

CUBA Clinical Bone Sonometer

< 1>
 , -3.52
 3.06 -1.30(:1.09)
 가
 가
 57 (12%), 가
 60 (13%)



< 1> BMD according to T score

< 2>

가
 (t = 22.05, p = 0.000).

< 2>

	()	t	p
	228 -1.22 0.55	22.05	0.000***
	237 -1.52 0.78		

3.

< 3>
 가 385 (82.8%)
 가 291 (62.6%) 37.4%
 가 415 (89.2%),
 가 50 (10.8%)

'가 283 (60.9%), '가 182 (39.1%),
'가 446 (93.5%) 가

(t = 10.80, p = .001),

가 (t = 10.23, p = .001).

20% 가
가 80%

171 (36.8%),
294 (63.2%)

< 4 >

< 3 >

(N = 465)

()	(%)
385	82.8
80	17.2
291	62.6
174	37.4
415	89.2
50	10.8
283	60.9
182	39.1
446	93.5
19	6.5
93	20.0
372	80.0
294	63.2
171	36.8

	t	p
36.63 2.22	5.63	0.018*
37.25 1.72		
36.54 2.15	6.65	0.010**
37.08 2.12		
36.67 2.19	3.82	0.051
37.30 1.81		
37.00 2.04	10.80	0.001***
36.34 2.27		
36.80 2.11	10.23	0.001***
35.27 2.68		
37.17 2.06	2.37	0.094
36.63 2.14		
36.31 2.94	1	0.317
36.76 2.12		

* p<.05 ** p<.01 *** p<.001

12

5

12 60
41.17, 3.43
가

-3.52 3.06

-1.30 (:1.09)

가 12.3%,

4.

가 12.9%

가

25.2%

< 4 >

가 가

T-score -1.82

(t = 5.63, p = .018).

(2001)

가

T-score -1.54

(t = 6.65, p = .010).

가

63.2%

가

(, 2000),

가

(, 1996; Sandler , 1985).

'가 82.8%

, 1021

Gallup

가

가

(The Gallup

Organization, 1993)

37.4%

20

가

19.8%

(, 2000)

41.17

(, 1994),

가

10.8%

Laurie(1996)

100

65.03

6.5%,

39.1%

(1999)

60

1995

41.20

5.6%

(1998)

26.6%

1989

23.6%

가

(, 1995)

가

가

가

가

가

가

Laurie(1996),

(1999)

20%

가

가 80%

(1998)

36.8%,

(,

1996)

4. 12 60 12 5
41.17, 3.43
가

, 가 (t = 5.63, p = .018; t = 6.65, p = .010; t = 10.80, p = .001; t = 10.23, p = .001).

가

1.

가

2000 7

1 8 31 K 40
465 CUBA Clinical Bone
Sonometer

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(1998).

(1998).
, 12 (1), 105-128.

(2001).

, 8(2), 287-301.
(2000).

(1996).

(2001).

, 2(1), 215-226.
(1996).

(1998).

SAS-PC Program

1. 40 59
40 (59.1%), 50
(40.9%) 46.69
57.84

2. -3.52
3.06 -1.30(
:1.09)
가 57 (12%),
가 60 (13%)

25%

3. 17.2%,
37.4%, 36.8%,
6.5%,
39.1%, 80.0%, 10.8%

- . , 5(2), 174-190.
(2001).
, 8(1), 65-85.
(1995). , 35,
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- Abstract -

Key words : BMD, Health promoting behavior, Self-efficacy, Women

Bone Mineral Density, Health-promoting Behaviors, and Self-efficacy in Middle-aged Women

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To identify osteoporosis and examine the relationship between health behavior and the self-efficacy of middle-aged women, a descriptive survey was conducted. The subjects were 465 healthy female residents of Kyunggido, Korea, who underwent ultrasound measurement and a health examination at the Kangmeung-Ci Health Center between July and August 2000. They were 40 to 60 years old, with a mean age of 46.7 years. The subjects completed a self-

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4) Graduate Student, College of Nursing Science, Ewha Womens University

reported questionnaire that consisted of seven items concerning health behavior and twelve items concerning self-efficacy related to osteoporosis. Bone density was evaluated from ultrasound measurements of the right heel. All the data were analyzed using the program SAS-PC. The study found that the mean T score related to bone density was -1.30, and ranged from -3.52 to 3.06. Based on the T score, 74.8% of the subjects were normal, 12.9% had

osteopenia, and 12.3% had osteoporosis. The mean osteoporosis self-efficacy score was 41.17 and ranged from 12 to 60. Osteoporosis self-efficacy differed significantly with health behavior related to health supplementary food ($t=5.63$, $p=.018$), exercise ($t=6.65$, $p=.010$), alcohol drinking ($t=10.80$, $p=.001$), and smoking ($t=10.23$, $p=.001$). A community-based health promotion program should be developed to prevent osteoporosis in middle-aged women.