

Therapeutic Compliance for Calcium Supplements and Its Related Factors in Rural Osteoporotic Women

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= ABSTRACT =

This study was conducted to examine the therapeutic compliance and its related factors in rural women with osteoporosis.

A questionnaire survey was performed from April to May in 2000 for 140 osteoporotic patients who were diagnosed from April to June in 1999 through community health program. The study employed the health belief model for predicting and explaining sick role behavior. The analysis techniques employed included contingency table analysis and path analysis using LISREL.

The major results of this study were as follows:

Of the subjects, 12.1% were continuously compliant, 53.6% were intermittently compliant, and 34.3% were non-compliant to calcium supplement therapy.

As the result of path analysis, the therapeutic compliance was significantly higher($|T|>2.0$) as patients had higher perceived severity of disease, lower perceived barriers of treatment, and when patients thought their disease status as severe. As the patients had higher educational level, more experience of mass media contact or health education about osteoporosis, and when family had more concern for patient treatment, they had higher perceived susceptibility of complication(bone fracture)($|T|>2.0$). The patients had higher perceived severity($|T|>2.0$) as they had more educational

level, more advice for treatment from their doctors, and when family had more concern for their treatment. As the patients had more advice for treatment from their doctors and when family had more concern for their treatment, they had higher perceived benefit of treatment and lower perceived barriers to treatment($T > 2.0$).

In order to improve the therapeutic compliance in rural osteoporotic women, it would be necessary that the patient should recognize their disease severity properly. And the perceived barriers should be removed through supportive environments for osteoporosis treatment such as doctor's more advice and family's more concern for treatment. In addition, effective and continuous management system for osteoporotic patients should be established.

KEY WORDS: Compliance, Rural Osteoporotic women, Health belief model

가 , 가 (, 1988; , 1989; , 1992; , 1994), 50 12%가 , 34%가 가 (, 1997), 가 (, 1994). , / , 54%가 (, 1993; , 1994; , 30%가 가 가 , 1995) , , 40%가 가 , 1,500mg 가 , National Institute of Health 60- 100 (Kanis , 1994; Health Mel- ton, 1995; Ross, 1996). 1994 National 1,000mg Institu- tes of Health(NIH) (Krane Holick, 1998), 45 2,500 1,500mg (NOS, 2000). 가 가

(Sackett, 1976), 가
(Haynes, 1979)

1.
1999 4 6

가
(Addington, 1979; Duldley, 1979). 3 40 69

355
, , - , , 197

(noncompliance) 1

가 , 2000 4 5

(Robbins, 1980; Eraker

, 1984),

가 (Griffith, 1990). 가 140 71.1%

가

(, 1998;

1999; , 1999)

가

2.

가

PRELIS version
 2.12A polychoric correlation
 coefficient matrix, 가
 가 (weighted least square method)

1.

1 12.1%, 53.6%, 34.3%

2) 가 40
 (p<0.05), (p<0.01),
 (p<0.01)

(가) (가) 가 (2).

가 , 가)

3 .
 , 가

가

(p<0.05), /

(p<0.05), 가
 (p<0.01)

가

(p<0.05), (p<0.01),
 /

SAS version 6.12 , (p<0.05), 가
 LIS- (p<0.05) () 가

REL for windows version 8.12A .
 , 가 (p<0.01), (p<0.01),

2.

: (%)

()				
40-49	15	-	6(40.0)	9(60.0)*
50-59	71	14(19.7)	35(49.3)	22(31.0)
60	54	3(5.6)	34(63.0)	17(31.4)
	31	3(9.7)	16(51.6)	12(38.7)
	94	9(9.6)	51(54.2)	34(36.2)
	15	5(33.3)	8(53.4)	2(13.3)
	62	6(9.7)	37(59.7)	19(30.6)
	62	10(16.1)	31(50.0)	21(33.9)
	16	1(6.2)	7(43.8)	8(50.0)
/	6	-	-	6(100.0)**
	9	12(13.2)	44(48.4)	35(38.4)
	4	5(11.6)	31(72.1)	7(16.3)
	81	11(13.6)	34(42.0)	36(44.4)**
	59	6(10.2)	41(69.5)	12(20.3)
가				
	/			
	25	3(12.0)	10(40.0)	12(48.0)
	115	14(12.2)	65(56.5)	36(31.3)
가				
	108	11(10.1)	56(51.9)	41(38.0)
	32	6(18.8)	19(59.4)	7(21.8)
	140	17(12.1)	75(53.6)	48(34.3)

* p<0.05, ** p<0.01.

가 (p<0.01), 가 ,
 (p<0.05) 가 (value) ()
) 가
 (4).
 가
 (p<0.01), 가
 (p<0.05) 가 ,
 () 가
 50 40 60 (p<0.05),
 (p<0.05),
 (p<0.01),
 가 (p<0.01) polychoric correlation coefficient matrix 8 .
 (5).
 2.
 6 가 ,
 가 () , 0.90
 가 , , 0.95
 가 가
 . , 0.988, 0.960
 () 가 . Root mean square residual(RMR)
 (p<0.05),
 (p<0.01), 가
 (p<0.01), 가 0.1
 (p<0.01) 가 가
 (RMR) 0.0839,
 3. (standardized Root mean square residual)
 0.0841 .
 (9).
 가 , ,
 10 () 가 /
 7 , , ,
 가 , 가 正
 (expectation) ,

3.

: (%)

()			
40-49	5(33.3)	9(60.0)	1(6.7)
50-59	17(23.9)	41(57.8)	13(18.3)
60	10(18.5)	39(72.2)	5(9.3)
	12(38.7)	15(48.4)	4(12.9)*
	20(21.3)	63(67.0)	11(11.7)
	-	11(73.3)	4(26.7)
	9(14.5)	45(72.6)	8(12.9)
	19(30.7)	34(54.8)	9(14.5)
	4(25.0)	10(62.5)	2(12.5)
/	2(33.3)	4(66.7)	-
	22(24.2)	54(59.3)	15(16.5)
	8(18.6)	31(72.1)	4(9.3)
	16(19.8)	52(64.2)	13(16.0)
	16(27.1)	37(62.7)	6(10.2)
가			
	11(44.0)	13(52.0)	1(4.0)*
	21(18.3)	76(66.1)	18(15.6)
가			
	23(21.3)	75(69.4)	10(9.3)**
	9(28.1)	14(43.8)	9(28.1)
	32(22.8)	89(63.6)	19(13.6)

* p<0.05, ** p<0.01.

4. 가 : (%)

		() 가			
()					
40-49		4(26.7)	11(73.3)*	7(46.7)	8(53.3)**
50-59		17(23.9)	54(76.1)	29(40.9)	42(59.1)
60		24(44.4)	30(55.6)	39(72.2)	15(27.8)
		11(35.5)	20(64.5)	18(58.1)	13(41.9)
		31(33.0)	63(67.0)	49(52.1)	45(47.9)
		3(20.0)	12(80.0)	8(53.3)	7(46.7)
		28(45.2)	34(54.8)**	42(67.7)	20(32.3)**
		16(25.8)	46(74.2)	29(46.8)	33(53.2)
		1(6.3)	15(93.7)	4(25.0)	12(75.0)
/		3(50.0)	3(50.0)	3(50.0)	3(50.0)
		27(29.7)	64(70.3)	43(47.3)	48(52.7)
		15(34.9)	28(65.1)	29(67.5)	14(21.5)
		25(30.9)	56(69.1)	54(66.7)	27(33.3)**
		20(33.9)	39(66.1)	21(35.6)	38(64.4)
가		/			
		13(52.0)	12(48.0)*	17(68.0)	8(32.0)
		32(27.8)	83(72.2)	58(50.4)	57(49.6)
가		40(37.0)	68(63.0)*	68(63.0)	40(37.0)**
		5(15.6)	27(84.4)	7(21.9)	25(78.1)
		45(32.1)	95(67.9)	75(53.6)	65(46.4)

* p<0.05, ** p<0.01.

5.	가				: (%)
40-49	4(26.7)	11(73.3)	2(13.3)	13(86.7)*	
50-59	28(39.4)	43(60.6)	28(39.4)	43(60.6)	
60	26(48.2)	28(51.8)	12(22.2)	42(77.8)	
	15(48.4)	16(51.6)	5(16.1)	26(83.9)*	
	40(42.6)	54(57.4)	29(30.9)	65(69.1)	
	3(20.0)	12(80.0)	8(53.3)	7(46.7)	
	29(46.8)	33(53.2)	17(27.4)	45(72.6)	
	25(40.3)	37(59.7)	21(33.9)	41(66.1)	
	4(25.0)	12(75.0)	4(25.0)	12(75.0)	
/	2(33.3)	4(66.7)	1(16.7)	5(83.3)	
	40(44.0)	51(56.0)	26(28.6)	65(71.4)	
	16(37.2)	27(62.8)	15(34.9)	28(65.1)	
	45(55.6)	36(44.4)**	17(21.0)	64(79.0)**	
	13(22.0)	46(78.0)	25(42.4)	34(57.6)	
가					
	/				
	14(56.0)	11(44.0)	8(32.0)	17(68.0)	
	44(38.3)	71(61.7)	34(29.6)	81(70.4)	
가					
	51(47.2)	57(52.8)*	24(22.2)	84(77.8)**	
	7(21.9)	25(78.1)	18(56.3)	14(43.7)	
	58(41.4)	82(58.6)	42(30.0)	98(70.0)	

* p<0.05, ** p<0.01,

6. : (%)

	32	3(9.4)	18(56.2)	11(34.4)
	89	10(11.2)	47(52.8)	32(36.0)
	19	4(21.1)	10(52.6)	5(26.3)
가				
() 가				
	45	1(2.2)	24(53.3)	20(44.5)*
	95	16(16.8)	51(53.7)	28(29.5)
	75	4(5.3)	39(52.0)	32(42.7)**
	65	13(20.0)	36(55.4)	16(24.6)
가				
	58	5(8.6)	23(39.7)	30(51.7)**
	82	12(14.6)	52(63.4)	18(22.0)
	42	11(26.2)	29(69.0)	2(4.8)**
	98	6(6.2)	46(46.9)	46(46.9)
	140	17(12.1)	75(53.6)	48(34.3)

* p<0.05, ** p<0.01.

7.

	(X ₁)	() 가	(Y ₁)
	(X ₂)		(Y ₂)
	(X ₃)		(Y ₃)
	(X ₄)		(Y ₄)
	(X ₅)		(Y ₅)
	/		
가	(X ₆)		
	(X ₇)		

8. polychoric correlation coefficient matrix

	X ₁	X ₂	X ₃	X ₄	X ₅	X ₆	X ₇	Y ₁	Y ₂	Y ₃	Y ₄	Y ₅
X ₁	1.000											
X ₂	-0.042	1.000										
X ₃	-0.618	0.070	1.000									
X ₄	0.295	0.077	-0.129	1.000								
X ₅	-0.173	-0.166	-0.054	-0.178*	1.000							
X ₆	-0.002	0.256	0.229	0.403	-0.170	1.000						
X ₇	-0.412	0.364	0.366	-0.076	0.266	0.066	1.000					
Y ₁	-0.260	0.121	0.425	0.001	-0.053	0.350	0.371	1.000				
Y ₂	-0.346*	0.053	0.400	-0.244	0.467	0.251	0.575	0.666	1.000			
Y ₃	-0.189	0.209	0.185	0.052	0.519	0.249	0.388	0.268	0.527	1.000		
Y ₄	0.068*	-0.332	-0.031	-0.137	-0.369	0.039	-0.505	-0.326	-0.280	-0.601	1.000	
Y ₅	0.078**	0.220	-0.086	0.364*	0.228**	0.164	0.250	0.326	0.357	0.382	-0.643	1.000

* p<0.05, ** p<0.01.

9.

(GFI)	0.988						
(AGFI)	0.960	> 0.9					
Root mean square residual(RMR)	0.0839	< 0.1					
Standaredized root mean square residual(RMR)	0.0841	< 0.1					

10.

	()						
	가						
	0.280	0.178	-	-0.199	0.204	0.154	0.358*
	-	-	-	-0.319	-	0.167	0.167
	0.483*	0.439*	-	-	-	0.123	0.123
	-	-	-	-	0.429*	-	0.429*
	-	0.541*	0.533*	-0.430*	-0.042	0.378*	0.336*
/	0.211*	-	-	-	-	-	-
가	0.390*	0.280*	0.349*	-0.439*	-	0.309*	0.309*
() 가	-	-	-	-	-	-	-
	-	-	-	-	0.281*	-	0.281*
	-	-	-	-	-	-	-
	-	-	-	-	-0.525*	-	-0.525*

* |T| > 2.0.

가 , 1997; , 2000) 가
 가 , , ,
 , 1
 , 12.1% (1998)
 , 12
 , 40 가 45% . 가
 , (1998)

가 가

가

20-45% (,
 1981; , 1986; , 1994;
 , Becker(1974b) 1994; , 1999; , 2000;
 , 2000; , 2000) ,
 (12.1%)

가

가

가

가

가

(1994, 1995) , Ali Twibell 가
 가 ,

가

(p<0.05).
가 , 가
(p<0.01).
() 가 , , ()-
가 正 / , 2010 Task Force,
, 가 正 2. , , . 21
, 가 正 (I). 2010」 -. 1998
. 가 正 3. , . 1981; 3(1): 45-54
가 正 4. , , , , . 1994; 20(1): 91- 100
, 가 負 . 1999; 21(2):
119- 129
正 , 가 負 5. , , , , . 1997; 23(1): 79- 100
, , , , 가 6. , , , , , , . 2000;
. 正 가 33(1): 56- 68
, , , , 7. , , , , , . 50
가 , , , . 1997;
, 가 4(2): 65- 71
가 . 8. , , , . 가.
- 1994; 1(1): 61- 69
9. . 3:
, 가 1993; 26(4):
508-533
10. , , , , . 1999; 32(2): 215-

- 227
11. 8(1): 23-36
12. 1994; 4(1): 1993; sup(1): 25-48
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16. 1995; 28(3): 609-622
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