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1 2
(FACES)
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1.

,

(Kim & Yun, 1997).

(Park, Park, & Kim, 1990).

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(Kim & Yun, 1997). 1950

,

(Lim et al., 1990).

(Beaver's System model), (Family Adjustment and Adaptation Response Model),

(Circumplex Model of Family Functioning), (Family problem-solving paradigm) (Bae & Kim, 1994).

, (family genogram), (Eco-map), (family-life chronology),
(family APGAR Score),
(family environment scale, FES),
(family adaptability and cohesion evaluation scale , FACES) .
Olson FACES
,
,

(Kim et al., 1994).
Olson (1991)

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, ,

FACES .

FACES 111 50 ,
30 1985 20
FACES (Choi, 2000).
FACES Ahn(1988)
,

,
. Olson,
Russell Sprenkle(1989) , FACES

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FACES

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FACES

FACES
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1) 1 FACES
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2) 2 FACES
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1.

4-5
100
(Lee, Lim & Park, 1998).
2
105 , 210 .
1
210 , 2
Olson(1986)
105 .

2.

(FACES)

Olson (1989) FACES
Kim (1997) ,
. FACES 111 50
, 30 (FACES) 1985
20 (FACES)

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10 (2, 2, 2,
3, 1) 5 10
50 , 10 19
(rigid), 20 24 (structured), 2
5 28 (flexible), 29 50
(chaotic) . 10
(2, 1, 2, 1, 2,
1, 1) 5 1
0 34 (disengaged), 35 40
(separated), 41 45
(connected), 46 50
(enmeshed) .

Olson (1986)
Cronbach's 0.62, 0.77 ,
1 ,
Cronbach's .77 .73 2
Cronbach's .81, .77 .

3.

2001 4
, 150 , 300
105 ,
210 .
SPSS
,
. FACES
Cronbach's ,
Guttman .
2 Olson(1986)
,

,

ANOVA ,
.

,

.

,

Varimax   1

2 10

,   2

Olson(1986)

105   .

.

1.

20.7 (± 3.2)

, 1   73   (69.5%), 2

32 (30.5%)   .   90

(85.7%)   ,   15 (4.3%)

,   (101 ,

96.2%),   4 (3.8%)   .

48.7 (± 5.2)

(97 , 92.4%),   8

(7.6%)   .   (   ) 93

(88.6%),   10 (9.5%),   2 (1.9%)   .

2.

1   2

11   48   .   1

24.0(± 6.0), 31.0(±

6.3)   ,   2   24.0(± 5.0),

31.1(± 5.2)   <Table 1>.

,

,

(Ahn, 1988),   .   ,

(   )-   4.58(± 3.94),   -   3.98

(± 2.43),   4.54(± 3.74)   .

3. FACES

1)

FACES

Cronbach's   Guttman

,

.   1

Cronbach's   0.77, 0.73   Guttman

0.76, 0.71   .   2

Cronbach's   0.81, 0.77

Guttman   0.82, 0.76

<Table 2>.

<Table 2> Reliability of FACES

sub-concepts of FACES		Cronbach's	Guttman's coefficient
1 family member	FA	.77	.76
	FC	.73	.71
2 family members	FA	.81	.82
	FC	.77	.76

2   ,

Kolmogorov-Smirnov   ,

(Pearson's   correlation

coefficient)   .

0.38,   0.35   ,   2

(p<.01).

<Table 1> Means of FA(adaptability) and FC(cohesion)

		means	sd	range
1 family member	FA(adaptability)	24.0	6.0	11-48
(N = 2 10[1])	FC(cohesion)	31.0	6.3	13-47
2 family members	FA(adaptability)	24.0	5.0	12.5-43.5
(N = 105[2])	FC(cohesionC)	31.1	5.2	16.5-45.5

1) this is total numbers of family members
2) this is total numbers of families

2)

FACES   ,
2   ANOVA   ,   .

9,   15,

20   1)
<Table 3>.   1   2

0.30, 0.38(p<.01)

4. FACES   ,

.

FACES   1   2

<Table 3> Comparison of FACES   between 2 family members   N = 210[1]

	Cohesion				Adaptability		
items	family members	means(± sd)	F-value	items	family members	means(± sd)	F-value
1	student	3.2(1.1)	0.04	2	student	3.0(1.0)	0.29
	parent	3.1(1.1)			parent	2.9(1.0)	
3	student	3.2(1.2)	2.17	4	student	3.1(1.0)	0.08
	parent	2.9(1.2)			parent	3.1(1.0)	
5	student	2.8(1.3)	0.14	6	student	2.2(1.0)	0.36
	parent	2.7(1.3)			parent	2.3(1.1)	
7	student	3.1(1.2)	0.03	8	student	2.7(0.9)	0.38
	parent	3.2(1.3)			parent	2.6(0.9)	
9	student	2.7(1.1)	4.83*	10	student	1.9(1.1)	2.48
	parent	3.0(1.1)			parent	2.2(1.1)	
11	student	3.6(1.1)	0.20	12	student	2.8(1.1)	0.00
	parent	3.6(1.1)			parent	2.8(1.1)	
13	student	3.9(1.2)	1.89	14	student	2.5(1.0)	0.61
	parent	3.6(1.2)			parent	2.6(0.9)	
15	student	2.3(1.0)	4.58*	16	student	2.2(1.1)	0.44
	parent	2.6(1.1)			parent	2.3(1.1)	
17	student	2.5(1.2)	0.69	18	student	1.7(1.1)	1.12
	parent	2.6(1.3)			parent	1.9(1.1)	
19	student	3.9(1.1)	0.39	20	student	1.5(0.9)	5.94*
	parent	3.8(1.1)			parent	1.8(1.2)	

*p<0.05   1) this is total numbers of family members

<Table 4> Total-item correlations of FC and FA

FC item No.	1 family member	2 family members	FA item No.	1 family member	2 family member
1	.57**	.63**	2	.56**	.63**
3	.39**	.41**	4	.58**	.64**
5	.04	.03	6	.62**	.70**
7	.08	.08	8	.57**	.68**
9	.38**	.46**	10	.56**	.55**
11	.43**	.54**	12	.62**	.62**
13	.13	.20*	14	.58**	.60**
15	.25**	.31**	16	.53**	.53**
17	.20**	.28**	18	.61**	.66**
19	.26**	.43**	20	.48**	.53**
mean	.27	.34		.57	.61

*p<.05, **p<.01

2)

.   1

0.27(0.42-0.57),   2

0.34(0.03-0.63)   5, 7, 13

.

0.57(0.48-0.62), 0.61(0.53-0.70),

<Table 4>.

3)

,

(Bartlett)

(Lee, 1993).   P   .000

.01

.

.

<   1 >

KMO(Kaiser-Meyer-Olkin) = 0.798

Bartlett Test of Sphericity = 1176.180

Sig. = .000

<   2 >

KMO(Kaiser-Meyer-Olkin) = 0.778

Bartlett Test of Sphericity = 799.760

Sig. = .000

(1)   1

(Principle component
analysis)   (eigen value)   1.0

4   .   2

Varimax   1.0   2

0.30   2

,   3.0   5, 7

.

21.0%

16.2%

2   37.2%

<Table 5>.

11   1   0.775   ,   15

1   0.410   .

.   2

<Table 5> Factor analysis of FACES   items

1 family member (n = 210)				2 family members (n = 105)			
item No.	factor 1	factor 2	communality	item No.	factor 1	factor 2	communality
11	.775	-.210	.644	11	.808	-.175	.684
9	.678	.045	.462	9	.746	.064	.561
12	.643	.348	.534	12	.696	.322	.588
19	.629	-.284	.476	1	.683	.072	.472
3	.621	.090	.393	19	.678	-.230	.512
4	.596	.286	.437	4	.650	.351	.546
1	.593	.069	.357	3	.622	.070	.392
2	.547	.306	.392	2	.593	.358	.481
13	.545	-.354	.422	13	.550	-.264	.373
17	.417	.256	.239	17	.463	.221	.264
15	.410	.376	.309	15	.411	.344	.287
				7	.318	.104	.112
18	-.043	.730	.534	8	.099	.778	.606
6	.111	.651	.436	18	-.062	.765	.585
8	.070	.614	.381	6	.117	.748	.573
20	-.152	.600	.384	14	.077	.643	.419
14	.107	.587	.356	20	-.141	.622	.407
16	.144	.498	.269	16	.166	.488	.265
10	.329	.435	.298	10	.319	.419	.277
Eigenvalue	4.197	3.247		Eigenvalue	4.776	3.664	
Pct of Var	21.0	16.2		Pct of Var	23.9	18.3	
Cum Pct	21.0	37.2		Cum Pct	23.9	42.2	

1 2, (Lee & Lee, 1996).

12( ) 4( )
<Table 5>.

(2) 2

2 , 1

1.0 6 Cronbach's 0.77, 0.73, 2

. 2 Varimax 0.81, 0.77 , Guttman 0.76,

1.0 2 0.71, 0.81, 0.77 .

0.30 2 , Olson(1986) Cronbach's

3.0 5 0.62, 0.77 ,

. 0.63-0.67,

23.9% 0.66-0.79

18.3% 2 (Lim et al., 1990; Bae & Kim, 1994; Lee et

42.2% <Table 5>. al., 1996). Choi(2000)

0.7 0.8

1 1 1 0.9 .

1 0.808 . 7 1

0.3 18 FACES

.

1 2

2 Olson(1986) 0.25,

, 1 2, 0.14 , 0.38, 0.35 .

4 12, (

).

.

. Lim (1990)

Lee (1996) .

FACES

.

- , FACES

, Cronbach's .

, Kendall 2 FACES

(Lee et al., 1998). , 9, 15 ,

Cronbach's , 20, ”

, Cronbach's ”, “

”, “

, ”

. ,

.   Olson (1986), Lim   (1990)

          4 .54 (± 3.74)   0.03, 0.20

Ahn (1988)   7.4   (± 3.9),   Lim   (1990)   .   Bae

6.1(± 3.2)   .   Kim (1994)   1

          .   .   1

                                                Choi (2000)

                ,   .

                (Lee et   1   2

al., 1996).   0.30, 0.38

        ,   .

        ,   1   2

                ,   '

    (Lee et   ,

al., 1996)'   .   (Choi, 2000).

                            FACES

                                              (Streiner et al., 1989).

          Olson   0.3

                  .   ,   1   5, 7

                                  2   5   0.30   .

                                                    2   12,

                              4   ,

      ,   ,   /   15   10

(Lee et al., 1998).   .

              ,   Olson (1986)   ,

      1   Choi (2000)   2, 4, 10

                                              12, 16

        (Chang, Cha, Park, & Lee, 1994).   , 5, 17

                                  ,

              ,   .

0.57-0.61, 0.27-0.34   ,   ,

0.43, 0.46, 0.48, 0.51,   0.59, 0.49, 0.50,

0.49   ,   .   FACES

  (Olson, 1986; Ahn, 1988; Bae & Kim, 1994;   1

Lee et al.; 1996).   ,   2   Lee

  5, 7   13   (1996)

                                              2

        ,

                Choi (2000)   .

        .

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．

(FACES   )   ．
                FACES

1. FACES

105   ,   210   ．
            Olson   (1989)
FACES   Kim   (1997)   2.   2   FACES
       ,   ,   1
2   FACES   ．
Cronbach's   , Guttman   -
                              ，   ## References
                         ,
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                    ．   The   relationship   between   functional
1.   Cronbach's   1   dyspepsia and family function. *J Korean
      ,   0.77, 0.73,   2   Acad Fam Med* 20(7), 917-923.
      0.81, 0.77   , Guttman   Ahn, Y. H. (1988). *An analysis of the
  0.76, 0.71, 0.81, 0.77   relationship   between   male   adolescents'
            ．   *perceived family characteristics and their
          ,   *mental health*. Graduate School of Yonsei
                    ．   University. Master dissertation. Doctoral
2.   -   0.38,   Dissertation.
      0.35   ,   4.54   Ahn, Y. H. (1996). An analysis of the
  (± 3.74)   ,   2   relationship between female adolescents'
                    ．   perceived family characteristics and their
3.   mental health in Korea. *The J of Korean
            5, 7, 13   Community Nursing* 7(2), 265-280.
                ．   Bae, J. M., & Kim, Y. J. (1994). Validity and
4.   1   reliability of FACES   when applied to the
    2   .30, .38(p<.01)   ,   one of the family members. *J Korean Acad
                                          Fam Med* 15(6), 312-320.
            ．   Choi, J. H. (2000). Validity and reliability of
5.   2   Varimax   FACES   of middle school students' family
            , 2   function evaluation-when student himself
  1   37.2%,   2   42.2%   only responses. *J Korean Acad Fam Med*
          ,   21(1), 84-90.
                ．   Cleman, S. A., Eigsti, D. G., & McGuire, S. L.
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                                          health nursing*. New York: McGraw-Hill
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- Abstract -

Reliability and Validity of FACES III When Applied to One and Two of the Family Members

Kim, Jeong-Hee Park, Young-Sook ***

Purpose: The purposes of this study were to test the validity and reliability of FACES III when applied to the only one and two family members, and to use more appropriately in the nursing practice.

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** Assistant professor, Shinheung College, Dept. of Nursing

Method : Data were collected from 105 college students and 105 of their parents in two local nursing colleges. The original questionnaire, which was originally developed by Olson(1989), was modified by based on literature review and analyzed by correlation coefficient, Cronbach's , Guttmans split coefficients and factor analysis.

Result : Cronbach's of the adaptability and cohesion were .77, .73(Guttmans split coefficient were .76, .71) when applied to the only one family member, and were .81, .77 (Guttmans split coefficient were .81, .77) when applied to two. The Pearson's correlation coefficient of the adaptability and cohesion between two family members were .38, .35. The total-item correlations of the other items except for items 5, 7, 13 were significant. The correlation coefficients between adaptability and cohesion when applied to only one and two were .30, .38(p < .01). When the data was analyzed by principle component analysis and Varimax rotation with the number of factors fixed to two, two factors explained 37.2% of total variance in the case of one member, and 42.2% of total variance in two.

Conclusion : These results suggested that the concept and the construction validity of cohesion needed to be more clarified. Also It is required that the reliability and validity of FACES III should be tested in two more family members.

Key words : Family, Adaptability, Cohesion