

: ,

# 가

\*

\*\* .      \*\*\* .      \*\*\*\*

1.

75%

가 가 ,

가

(Cambell & McGrath, 1997;

Chamber, Reid, McGrath & Finley, 1997).

(Price, 1987).

가 , ,

(Jung, 1991; Han & Hur, 1999).

(Cerrato, 1998).

(Friedman & Jaffe, 1985; Gannon,

100 가

Luchetta, Pardie, & Rhodes, 1989; Woods, Mitchell & Lentz, 1995)

가 (Dye,

1997; Keville & Green, 1995; Tisserand, 1996).

(Kim & Won, 1998; Jung, 1991)

가

, Deuster, Adera South-Paul(1999)

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\* 2002

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\*\*\*

\*\*\*\*

2001 9 17

2002 3 18

2002 5 31

가 Lee(1992)가  
(Dye, 1997; Keville & Green, 1995; Tisserand, 1996) (SOS) 1

1. 가  
(essential oil) 가  
가 Johnson, Carr-Nangle  
Bergeron(1995)  
(follicular phase) (luteal phase)  
(perimenstruum phase)

2. 가 가  
Woods (1995), Gannon  
(1989), Kim Jung (1994)  
가 Kim  
Won(1998) 가 가  
Jung(1991)  
가 가  
가

2) 가 1  
2  
가

3. 2.  
1) (Price, 1987) (Kang, 1998),  
, 2 : 1 : 1 (King, Pettigrew & Reed,  
(carrier oil) 3% 2000). Cole Shanley(1998) 가 가

2) (aroma)

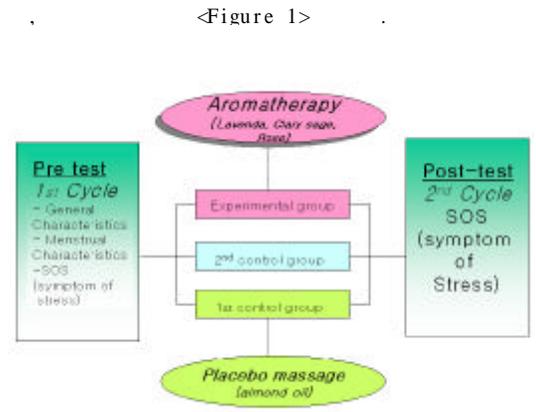
(therapy) 가 , 가 , 가 (Keville & Green, 1995; Tisserand, 1996). (Cerrato, 1998). (Passant, 1990), (Buckle, 1993; Stevenson, 1994), (Bennet, 1995; Dunn, Sleep & Collett, 1995; Anon, 1996), (Dunn et al., 1995)

가 가 가 (Dye, 1997; Keville & Green, 1995; Tisserand, 1996). 가 (Lavendula officinalis) linalyl geranyl ester, geraniol, linalol ester 가 (Salvia sclarea) linlol, linalyl acetate, sclareol 가 (Rosa damascena) 가 가 가

가 가 가 3.

1.

가 가 가 가 Choi (2000) 가 Keville Green(1995)



<Figure 1> Research design (Nonequivalent control group pretest-posttest design)

2.

1

1) 가 6  
 2)  
 3)  
 4)

Cohen  
 = 0.05, 3( 2), 0.4,  
 0.70 17 54  
 가 85  
 (Experimental  
 group)  
 (Placebo group),  
 (Control group)

20, 60 20, 1 20, 2  
 20 60

4.

1)  
 Lee(1992)  
 1977  
 Lee(1992)가 SOS  
 (symptom of stress)  
 10  
 94 0 ( ) 4 ( )  
 ) 5 . 10

3.

1 : 1 : 1  
 2 : 1 : 1  
 3%  
 1  
 15 2

Cronbach 0.96 0.97 (Lee, 1992; Yang, 1998)  
 0.96  
 2) (Menstrual cramps)  
 (Visual Analogue Scale)  
 10 cm  
 가 cm  
 가  
 5.  
 SPSS PC 8.0  
 ANOVA  $\chi^2$   
 -test  
 ANOVA  
 t-test  
 Cronbach's

0.93

가

<Table 1, 2>.

1.

20.57 ± 1.25 , 1.20 가  
 162.10 ± 4.71cm, 52.02 ± 5.54kg 1.09 1.12 가  
 가 . 가 가 0.81 .  
 13.27 ± 1.16 , 29.63 ± 5.57 2.  
 , 5.67 ± 1.13 ,  
 7.18 ± 1.37 . 60  
 44 가 , 0.79, 1 , 1.10, 2 , 1.04  
 (p = .05), 가 1  
 가 .  
 1.07 , 1 0.95 2 가

<Table 1> Homogeneity test(ANOVA) for characteristics of subjects between experimental and two control groups

Characteristics	Experimental G.	Placebo G.	Control G.	F	P
	Mean ± SD	Mean ± SD	Mean ± SD		
Age(years)	20.35 ± 0.88	20.85 ± 1.93	20.50 ± 0.51	0.83	0.44
Height (cm)	162.15 ± 5.59	162.21 ± 4.38	161.95 ± 4.24	0.02	0.98
Body weight (kg)	52.90 ± 5.23	51.80 ± 6.34	51.28 ± 5.07	0.42	0.66
Menarcheal age(years)	13.55 ± 1.28	13.20 ± 1.20	13.05 ± 1.00	0.97	0.38
Menstrual interval(days)	29.10 ± 2.66	27.88 ± 4.17	31.83 ± 8.53	2.44	0.10
menstrual duration (days)	5.95 ± 1.36	5.45 ± 0.94	5.60 ± 1.05	1.03	0.36
Menstrual cramps	7.40 ± 1.27	7.07 ± 1.26	7.02 ± 1.60	0.53	0.59
Initial SOS scale score	1.07 ± 0.38	0.95 ± 0.35	0.93 ± 0.39	0.92	0.40

<Table 2> Homogeneity test(  $\chi^2$ -test) for characteristics of subjects between experimental, placebo and control groups

Characteristics	Experimental G.	Placebo G.	Control G.	Total(n = 60)	P
	N (%)	N (%)	N (%)	N (%)	
Menstrual amount					
Heavy	6(30.00)	2(10.00)	5(25.00)	13(21.67)	3.63 0.46
Moderate	13(65.00)	16(80.00)	12(60.00)	41(68.33)	
Scanty	1( 5.00)	2(10.00)	3(13.00)	6(10.00)	
Menstrual regularity					
regular	13(65.00)	11(55.00)	9(45.00)	33(55.00)	1.62 0.45
irregular	7(35.00)	9(45.00)	11(55.00)	27(45.00)	
Use of Analgesics					
no	3(15.00)	4(20.00)	7(35.00)	14(24.33)	7.07 0.13
often	8(40.00)	13(65.00)	7(35.00)	28(46.67)	
always	9(45.00)	3(15.00)	6(30.00)	18(30.00)	
Peak of menstrual cramp					
premenstrual period	1( 5.00)	2(10.00)	0( 0.00)	3( 5.00)	8.82 0.36
the 1st day	16(80.00)	13(65.00)	15(75.00)	44(73.33)	
the 2nd day	2(10.00)	4(20.00)	2(10.00)	8(13.33)	
others	1( 5.00)	1( 5.00)	3(15.00)	5(8.33)	

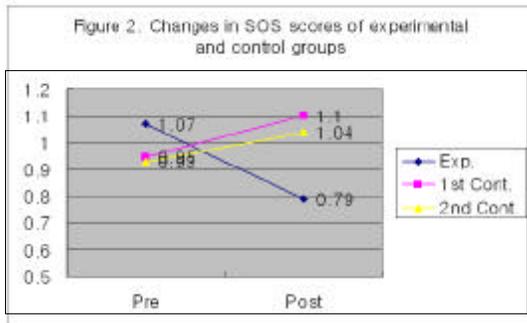
<Table 3> The difference of post-intervention SOS between three groups

Subscales	Experimental G.	Placebo G.	Control G.	F	P
	Mean ± SD	Mean ± SD	Mean ± SD		
PNS	0.66 ± 0.54	1.15 ± 0.61	1.05 ± 0.57	4.21	0.02*
Cardiopulmonary	0.74 ± 0.54	0.93 ± 0.56	0.77 ± 0.44	0.73	0.49
CNS	0.76 ± 0.54	1.10 ± 0.62	0.94 ± 0.56	1.75	0.18
GI	0.68 ± 0.39	1.14 ± 0.65	0.99 ± 0.55	3.80	0.03*
Muscle tension	0.70 ± 0.50	0.92 ± 0.63	1.20 ± 0.61	3.80	0.03*
Habit patterns	0.69 ± 0.44	1.10 ± 0.53	0.86 ± 0.38	4.12	0.02*
Depression	0.89 ± 0.65	1.30 ± 0.62	1.10 ± 0.61	2.18	0.12
Anxiety	0.97 ± 0.60	1.09 ± 0.61	1.09 ± .57	0.26	0.78
Anger	0.86 ± 0.56	1.14 ± 0.62	1.32 ± 0.70	2.65	0.08
Cognitive	0.94 ± 0.51	1.14 ± 0.64	1.06 ± 0.46	0.65	0.53
Disorganization	0.94 ± 0.51	1.14 ± 0.64	1.06 ± 0.46	0.65	0.53
Total SOS	0.79 ± 0.37	1.10 ± 0.49	1.04 ± 0.39	3.07	0.05*

Note : SOS means symptom of stress

<Table 3>.

1.07 0.79  
 1 0.95 1.10 , 2 0.93



<Figure 2> Changes in SOS scores of experimental and control groups

1 2  
 t-test

<Table 4>.

<Table 4> The difference of post-intervention SOS between the placebo and control groups

	Mean ± SD	t	df	P
Placebo G.	1.10 ± 0.49	0.45	38	0.66
Control G.	1.04 ± 0.39			

Note : SOS means symptom of stress

6  
 0.98 , Kogan  
 Betrus(1984)가  
 0.7  
 (Lee, 1992) 0.81 ,  
 가 (Yang, 1993) 0.83  
 (Choi, 1998) 1.22

3%

1 ( ) 2  
 가가

Dunn (1995)

가

(Rose & Behm, 1994), 가

(Wilkinson, 1995),

가

(Stevenson, 1994),

(Brownfield, 1998)

가

가 , 1 ( ) 2 , 2 : 1 : 1 3 % 가

, 94 SOS(Symptom of Stress)

가 1 , 1

1 가 , 1 2 가 ,

1 가

가 가 , 1 2

가 가

가 가 (almond oil) , 1 2 , 1 2 가

1 가 , , 3%

Brownfield(1998)

가 , Tate(1997)

가

가

가

가

가

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- Abstract -

### Effects of Aromatherapy on the Stress Response of College Women with Dysmenorrhea during Menstruation \*

Han, Sun-Hee \*\*, Hur, Myung-Haeng \*\*\*  
Kang, Ji-Yeon \*\*\*\*

**Purpose:** The purpose of this study was to verify the effect of aromatherapy on the stress response in menstrual period.

**Method:** A randomized, single-blind, pretest-

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\* This research was supported by the research of WonKwang Public Health Junior College  
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\*\*\* Professor, Department of Nursing, Eulji Univ School of Medicine  
\*\*\*\* Professor, Department of Nursing, Kimc Science College

posttest design was used. The study subjects were 60 college women with dysmenorrhea and they were randomized into 3 groups, experimental, 1st control(placebo) and 2nd control group. The researchers massaged treatment oil(3% dilution essential oil of Lavender, Clary sage and Rose) into the abdomen of experimental group. The placebo group used almond oil(carrier oil) instead, and the 2nd control group did not give any treatment. Baseline data including pre-treatment stress response score were obtained on the first day of usual period. Aromatherapy provided for about 7 days until the next cycle

began. Post-treatment stress responses were measured by 94 item SOS(symptom of stress) scale on the first day of the cycle.

Results: As a results, the stress response score of experimental group was significantly lower than two control groups. And there was no significant difference in stress responses of two control groups.

Conclusion: The results show aromatherapy using selected essential oils to be an effective intervention for stress response during menstruation.

Key words : Aromatherapy, Stress Response