

가

가

2001 12



가

가

592

가

가

2001. 12

.....	i
.....	iii
.....	iii
.....	iii
.....	iv
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A.	1
B.	3
C. 가	4
D.	4
•	
A.	6
B.	8
•	
A.	14
B.	14
C.	15

D.	15
E.	16
F.	18
G.	18
H.	20
·		
A.	21
B. 가	25
C.		
	26
·	29
·		
A.	34
B.	35
	36
	41
	45

(1)22
(2)	24
(3)25
(4)26
(5)		
27
(6) 10	28

(1)14
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1.41
2.43

가

가

Y

10

2001

10

12

Drehobl(1995)

10

3

10

chi-square test

Mann-Whitney test

Mann-Whitney test

paired t-test

1.

2. 가

1 가 :

가

10

가

(U=136.50, p<.01)

2 가 :

가 .

10

, ,

가 (U=60,

p=.47, U=40, p=.09, U=71.5, p=.97, U=65.50,
p>.69).

, 10

가 ,

8.35 7.25 (t=12.27, p=<.01).

, ,

(t=8.58, p=<.01, t=7.64, p=<.01, t=13.35,

p=<.05, t=12.59, p=<.01). 가

, 가

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가

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A.

가 '95 23.5 2000 가 1000 30.9 (, 2001).

가

1000 2~2.5 (, 1997)

(Lynne, 1996).

(Nelson, 1986), , ,

,

(, 1997).

가

가

가

(, 1997) 가

(Lynne, 1996). 가

가

가

가

(, 1988).

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(, 1997).
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가
(, 1991).
,
(, 1998).
가
12 가 가
가
(, 1985),
(, 1997).
, , ,
(, 1998),
가
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가 ,

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(Walco, 1992).

,

가

(Field,T., 1997).

, , , , , , , ,

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, 가

가

(Drehobl, 1995).

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, 가

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B.

가

.

C. 가

1) 가 1

가 .

2) 가 2

가 .

D.

(1)

가 ,

(, 1998).

Kathy F. Drehobl & Mary G. Fuhr 'Pediatric Massage for the Child with Special Needs(1995)'

10

(2)

1995), (MaCain, Anderson Behavioral State Scale(Anderson et al, 1990)

(3)

, , ,

1987).

가 (,

, , .

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A.

, ,
, ,
(Lynne, 1996) 가
가 ,
, , , (Park, 1979 ; Lynne, 1996).
가
,
가 (,
1997), 4 3 (Braddom, 1996).

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(Dorlands, 1984)
가,
(Lynne, 1996). -
가
(, 1998). , ,
(
, 1999).

, 가 , , ,
, (Lynne, 1996).

,
(, 1990).

,
(Sweeny, 1986).

(, 1989).

가

가

가

가

(

, 1990).

가

가

(Sweeny, 1986).

(, 1990).

,
(Sweeny, 1986).

가

, 가

(, 1989).

가

가

(, 1990).

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가 (, 1984). 가 (Braddom, 1996) , 가 가 (Ayres, 1974).

(Lesny, 1993)

(Van-Heest, 1993).

45% (, , 1996)

, ,

(, 1998).

Bobath

가

1

.

(, 1990).

B.

(Korner, 1990) 가

가

(, 1990).

‘ , ’

(,

1998).

가

(, 2000)

(Schopler, 1996).

가

가

12

(, 1990).

가

1000-2000gm

4

Bayley

가

(Powell, 1974),

14

2-3

2

가

가

(Harrison , 1990).

1500gm

가 가

가

가

가

가

가

가

가

(Acolet, 1989).

가

가

(Drehobl, 1995).

가

(Tappan, 1988).

(Wood & Becker, 1981)

가 (Tappan, 1988),

가 가 , 가

(Drehobl, 1995).

가 (

, 1996).

(Synder, 1993), (Fraser & Kerr, 1993),

(Michelson, 1978) 가

(, 1987).

‘80

, Leduc(1992) 가

adrenal cortex가

. Harrison & Leeper(1990)

가 ,

가 . Acolet(1993)

11 20 45

adrenalin, noradrenalin, cortisol ,

가 cortisol 가 adrenalin 가 가

noradrenalin 가 가

가 . Drehobl(1991)

31 , 1.28kg 40

20

10 15 3 47% 가

가 6 3000
. Rice(1979)
4
37 30
, ,
30 4 15 .
4
가 가 Landau and labyrinthine head righting reflex
가
가 Barnard(1985) 가
34 4 16
. 가
15 2 .
30 video tape 가
. ,
가 10
. (, 1984),
(1998) (, 1996),
(1998)
(1998)
가 . (1998) 가

가 (Drehobl, 1995).

.

A.

Y
10

A ₁	X	A ₂
B ₁		B ₂

X :

1.

20

10

Anderson behavioral state scale

B.

2001 10

2001 12

Y

1) 12

2) 10

3) Anderson behavioral state scale 5-10

4)

5)

10 3 10 가

10

C.

Y

10~12

D.

1)

Anderson(1990) behavioral state scale

(1996)

가 . 1972

Parmelee Stern

12

30

가

(1),

(2),

(3),

(4),

(5),

(6),

(7),

(8),

(9),

(10),

(11

),

(12)

12

가

1~4

5~12

8

.95

가

가

(1).

2)

1

W. A. Baum

Baumanomrter

E.

Kathy Fleming Drehobl & Mary Gengler Fuhr

'Pediatric Massage for the Child with Special Needs(1995)'

가

가

가

, ,

(McClure, 1989).

(Drehobl, 1995)

가

, 가 , , ,

가

가

가

가

가

가

(Drehol,

1995)

F.

20
, 1998 9 2001
10 Y
100 50
가
가
2
가 3
가

G.

1.

Drehobl(1995) 'Pediatric Massage for the Child with Special
Needs'
, 가 5
5 3

가

가 .

가

2.

2001 10

2001 12

Y

, (, , ,)
, 10
3 가

3
9~11 , 2~4 , 7~9
2
10 10 3
가 30

2 . 10

•

A.

1.

20
10 10
가 4 , 가 6 ,
가 3 , 가 7 .
8.6 , 7.9
4~12 .
가 3 , 가 7
가 5 , 가 5 .
5.6 , 5.5
2~9 .

(1).

< 1>

		² or u p	
(n= 10)	(n=10)		
4	3		
6	7	0.22	.639
8.6	7.9		
3.65	3.14		
4~12	4~12	46.5	.782
3	5		
7	5	0.79	.374
5.6	5.5		
2.31	2.06		
2~9	2~9	47.5	.84

2.

χ^2 -test Mann-Whitney test (2).
Anderson behavioral state scale 8.62

8.77

131.66

130 .

29.16 ,

29 .

79.5 mmHg ,

79.16 mmHg .

41.66 mmHg .

43.33 mmHg

가 .

< 2 >

	(n= 10)	(n=10)	U	p
a				
8.6	8.7			
0.6	0.6	108	.27	
6~10	6~10			
b				
131.6	130			
3.0	4.6	60	.47	
124~140	124~144			
b				
29.1	29			
2.1	4.1	52	.23	
22~44	22~40			
b				
		69	.84	
79.5	79.1			
5.2	9.0			
60~90	50~90			
		60	.35	
41.6	43.3			
3.8	4.9			
30~40	30~40			

a : Anderson behaviral state scale

b : 1 , ,

B. 가

1. 가 1 : “

가

”

‘

가 ’ 가

Mann-Whitney test .

10

.05

가

. 10

가

(3).

< 3 >

.

			U	p
7.37	0.49	6 ~ 9	136.50	.01*
8.08	0.71	7~10		

*P< .05

2) 가 2 : “

가 ”

‘
 가 ’ 가 Mann-Whitney
 test .
 10
 , , .05 가
 (4).

< 4 > .

							U	p
132.67	3.13	124~140	133.16	4.18	122~144	60	.47	
27.46	2.68	24~44	28.77	3.96	22~40	40	.09	
78.5	5.26	60~90	75.69	8.16	60~95	71.5	.97	
40.68	3.91	30~50	42.60	4.84	30~50	65.5	.69	

C.

10 , (5).
 , 10 , 가
 .05 가

가
 (5). , 가

< 5 >

	(n= 10)	(n=10)	t	p
	8.62	7.26		
	0.64	0.61	12.27	.00*
	6~10	6~9		
	131.66	127.32	8.58	.00*
	3.05	3.31		
	124~140	122~136		
	29.16	28.38	7.64	.01*
	2.16	2.63		
	22~44	24~40		
	79.5	78.93	13.35	.03*
	5.22	2.97		
	60~90	60~90		
	41.66	38.33	12.59	.00*
	3.89	4.09		
	30~50	30~50		

*P < .05

< 6> 10

	(n= 10)	(n=10)		t	P
1	9.00	7.75	- 1.25	7.63	.00*
2	8.75	7.37	- 1.38	4.24	.00*
3	8.25	7.00	- 1.25	3.41	.01*
4	8.87	7.75	- 1.12	4.96	.00*
5	8.25	7.62	- 0.63	1.93	.09
6	7.87	7.00	- 0.87	2.19	.06
7	8.25	7.75	- 0.50	1.32	.22
8	8.75	8.25	- 0.50	1.00	.35
9	7.87	6.50	- 1.32	7.51	.00*
10	7.37	6.12	- 1.25	7.63	.00*

*P < .05

10 ,
 6 . 4
 가 5 8
 가 . 2
 - 1.38 가 , 7 8 - 0.5 가 .
 9, 10

•

A. 가

8.62, 8.77

10 가 7.37 8.08

. 10 5

8.25, 8.19 가

10 가 가

Field(1986) ,

가 Field(1991) ,

, Jay(1982)

10 ,

가 ,

가 8.62 7.26 .

10

1 4 9 , 10 가

, 5 8

가 -1.38 가 , 8
 2
 -1.00 가 .
 2 가 가 (1998)
 (1998) .
 가
 가
 . Anderson
 , 가
 (8), , ,
 , 가 가
 (7).

10

가

3
 , 10 . 3
 1 ~3 가 가
 ,
 . 5
 가 , 10
 가 .
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. 2

3

가

가

10

3 ,

가

, 가

가

B. 가

10
가
가
가
가
131.66 127.32 ,
29.16 28.38, 79.5/41.66 mmHg 78.93/ 38.33
mmHg . 1
가
Leduc(1992) 가
가
(Harrison & Leeper, 1990).

C.

가 , ,

1.

2.

,
가 가

가 .

3.

가 .

가

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A.

가

2001 12 Y 2001 10

20 , 10

Anderson behavioral state scale

12

10 , Anderson behavioral state scale

5-10

(, , ,) ,

10 3 3

가 . 3

9~11 , 2~4 , 7~9 2

10 10 3

가 30

²-test Mann-Whitney test . 10

Mann-Whitney test .

paired t-test

1. ‘

가 ,

가 (U=136.50, p=.01).

2. ‘

가 ,

가 (U=60, p=.47, U=40, p=.09,
U=71.5, p=.97, U=65.50, p=.69).

, 가 ,

가 (t=12.27, p=.00).

가

B.

1)

2)

3)

(1999). 가

(1987).

(1998).

(1998).
 , 22(1), p.189~194.

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(1997). 21 ; 6 :
 1053- 1059.

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 , 21 2 . 390~397.

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 , 15(3), 316~329.

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 , 15(3), p.62~73. p.12

, , , , (1996).
. _____, 22 , 6
19~1224.
, , , , , (1999).
, _____
__, 1999, 23 , 3 , p.504~514.
, , , , , (1997). _____
_____가_____. . 21(4) : 679-688.
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_____. . 2(1)
(2001). 2000
(1989). _____가_____.
, (1990). _____가_____ (by Karel Bobath).
. (1998). _____가_____. _____.
. (1998). _____
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대상자 행위 상태 측정표

이름 :

성별/나이 :

진단명:

점 수	행 위 상 태
12	<ul style="list-style-type: none"> - 심하게 운다 - 매우 심하게 상기된 얼굴 - 주먹을 꼭 쥐고 있음 - 매우 긴 호기 - 소리가 들리거나 소리없는 울음 - 몸 전체가 매우 긴장되어 있음
11	<ul style="list-style-type: none"> - 운다 - 붉게 상기된 얼굴 - 긴 호기 - 소리가 드리거나 소리없는 울음 - 몸 전체가 긴장되어 있음
10	<ul style="list-style-type: none"> - 보챈다 - 얼굴색은 정상 - 약간 길어진 호기 - 찡찡거림 - 울기 전의 약간 찌푸림 - 씩씩거림
9	<ul style="list-style-type: none"> - 매우 불안정한 상태로 깨어있다 - 몸 전체가 움직임 - 몸을 꼬거나 가슴을 뒤흔다
8	<ul style="list-style-type: none"> - 불안정한 상태로 깨어있다 - 사지 전체를 움직임
7	<ul style="list-style-type: none"> - 조용한 상태로 깨어있다 - 눈이 고정되지 않고 움직임 - 얼굴, 손, 발 하지를 움직이지 않거나 약간 느리게 움직임
6	<ul style="list-style-type: none"> - 깨어 있으면서 활동이 없는 상태 - 눈이 고정되고 움직임 - 얼굴, 손, 발 하지를 움직이지 않거나 약간 느리게 움직임 - 눈이 마주침 - 웃는다
5	<ul style="list-style-type: none"> - 약간 조는 상태 - 조용하거나 약간 움직임 - 눈이 희미함

실험군 자료수집표

이름 _____ 성별/나이 _____ 진단명 _____ 입원일수 _____ 재활치료 시작시기 _____

	1회 마사지		2회 마사지		3회 마사지		4회 마사지		5회 마사지		6회 마사지	
	전30	후30										
행동상태 (초)												
평균												
심박동수												
호흡수												
혈압												

	7회 마사지		8회 마사지		9회 마사지		10회 마사지		11회 마사지		12회 마사지	
	전30	후30	전30	후30	전30	후30	전30	후30	전30	후30	전30	후30
행동상태 (초)												
평균												
심박동수												
호흡수												
혈압												

	13회 마사지		14회 마사지		15회 마사지		16회 마사지		17회 마사지		18회 마사지	
	전30	후30										
행동상태 (초)												
평균												
심박동수												
호흡수												
혈 압												

	19회 마사지		20회 마사지		21회 마사지		22회 마사지		23회 마사지		24회 마사지	
	전30	후30										
행동상태 (초)												
평균												
심박동수												
호흡수												
혈 압												

	25회 마사지			26회 마사지			27회 마사지			28회 마사지			29회 마사지			30회 마사지					
	전30	후30	60																		
행동상태 (초)																					
평균																					
심박동수																					
호흡수																					
혈압																					

Abstract

Effects of pediatric massage on behavioral state and vital sign in infants with spastic cerebral palsy

Yu, So Young

Department of Nursing Education
Graduate School of Education
Yonsei University

This study was done to examine the effects of massage on the behavioral state of infants with spastic type cerebral palsy (CP). During the period from October 2001 to December 2001, an unequal control group pre-post test was used to determine the effects of massage. The study was done at the Rehabilitation Hospital of Y University Hospital in Seoul, Korea. Twenty infants were selected for the sample from infants with spastic type CP who met the inclusion criteria and all infants were randomly assigned to either a control group or an experimental one. Each group was composed of 10 infants. According to the protocol as prescribed by Kathy F. Drehobl (1995), the experimental group infants received 10 minutes of intervention three times a day for 10 days during hospitalization. The blood pressure, heart rate, respiratory rate and behavioral state of the infants were recorded for data analysis.

The characteristics of the two groups were expressed by real numbers and percentages. Chi square test and Mann-Whitney test were used to

compare the characteristics of the two groups. After the 10 days intervention, Mann-Whitney test was used to compare the behavioral state and the vital signs of the two groups. Paired t-test was used to compare the behavioral state and vital signs of the experimental group before and after the each intervention.

The results are summarized as follows.

1. The two groups showed differences in characteristics of the infants (sex, age, diagnosis and length of admission), behavioral state and vital signs.

2. Hypothesis 1 that 'The two groups will show difference in behavioral state after 10 days of intervention.' was accepted.

There were statistically significant differences in the behavioral state between the two groups after the 10 day intervention.

Hypothesis 2 that 'The two groups will show difference in vital signs after 10 days of intervention.' was not accepted.

There were no statistically significant differences in the vital signs (blood pressure, heart rate and respiratory rate) between the two groups after the 10 day intervention.

There were significant differences in the behavioral state of the experimental group before and after each intervention. The behavioral scale decreased from 8.35 to 7.25 before and after the each intervention and this decrease was statistically significant. This indicates that massage can be effective for infants with spastic type CP.

If the infants are given massage for a long term period, the behavioral state of the infant who had the massage would be more stable than the infant who

did not. If the massage is done daily by the family who have received massage education, a multiple effect in the infants with spastic type CP can be expected.

Through the results as described above, massage can be considered as an effective nursing intervention leading to greater stability infants with spastic type CP.