博 士 学 位 論 文

就学前の子どもをもつ母親のコミュニケーション
スキルトレーニングの効果

近 畿 大 学 大 学 院
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論文題目

Effect of communication skills training
on mothers with preschool children

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Effect of communication skills training on mothers with preschool children

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Effect of communication skills training
on mothers with preschool children

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Abstract

This study aims to evaluate the effect of a communication skills training program developed for mothers of preschool children. The study was carried out between September 2010 and July 2012 among 73 consenting mothers of preschool children. The training program, consisting of six 90-minute sessions, was delivered to 36 of the mothers in the experimental group. Remaining 37 mothers who did not participate in training program were set as the control group. The allocation to experimental and control groups was made on a voluntary basis. Before and after the training program, the experimental group and the control group both completed a questionnaire comprising questions about their social skills, self-esteem, empathic ability, sense of trust, sense of self-efficacy, and group awareness. Each training program involved a 50-minute PowerPoint presentation, 30 minutes of practical exercises, and 10 minutes for participants to complete a written evaluation of their experience. The presentation covered skills such as listening and problem-solving. The practical exercises included pair work to develop listening techniques. For each of the indicators, we carried out two-way repeated-measures ANOVA. We performed between-subject factor analysis for both groups （experimental and control） and within-subject factor analysis for time （before and after the experiment）. Where the interaction effect was found to be significant, we tested for simple main effects. The results showed a significant increase in scores for the experimental group after the training program for communication skills, sense of fulfillment, sense of trust, cognitive empathic ability, and group awareness behavior. This suggests that the communication skills training program was effective at improving participants' communication skills.

Introduction

Communication is a process through which we seek to maintain balance in our relations with others and allows us to share our psychological state by providing information and expressing emotions. Communication presupposes both mutual differences and shared knowledge, and is the foundation of society[1]. It has been studied in a wide range of fields, such as psychology, neuroscience, and linguistics, and researchers have proposed various definitions. The following are some of the features of communication that have been identified: (1) It is the transfer of information between individuals with a specific purpose. (2) The transfer of information has interactive qualities. (3) The transfer of information generates interaction between individuals. (4) Communication can be both verbal and non-verbal.[2]

The term "communication skills" is used almost synonymously with "social skills" or "interpersonal skills." They are considered to be adaptive skills that can be developed and improved with practice, with the purpose of facilitating smooth interpersonal relations. Characteristics of communication include that it is (1) a process, (2) goal-oriented, (3) interrelated, (4) situation-adaptive, (5) learnable, and (6) cognitively controlled[3]. In Japan, Horike and Kikuchi have carried out pioneering research in this field[4], and we have also seen attempts to consolidate all factors associated with communication skills.[5]

In current society, the field of communication skills has been receiving widespread attention. We are seeing training courses being implemented in medical[6-14] and welfare[15] settings to improve support skills for those who work with people, and in educational[16-17] settings to improve interpersonal skills for interaction with children and pupils. Communication issues are also being addressed in universities[18-20], where efforts to improve students' interpersonal skills have also been studied[21, 22]. An earlier study by Aono[23] on the effect of a communication skills training program for university students suggested that participants saw an improvement in communication skills such as self-acceptance, awareness of others/group awareness, and problem-solving skills.

Recent years have seen child-rearing becoming an increasingly isolated activity, with the nuclearization of the family, the aging population, and weaker community bonds; cases involving concerns over child abuse are also showing a steady upward trend[24]. In an effort to prevent child abuse, we are seeing a range of support measures to address the need for spaces to reduce isolation among those bringing up children. There has also been an increase in parents repeatedly making self-centered and unreasonable demands of child-care, educational, medical, welfare, and other facilities related to child-rearing; a lack of communication skills has been identified as a problem concerning the current generation of parents.[25]

Although communication skills training courses have been implemented in a range of different fields, there have been few attempts to target the parents of young children. There have been studies into interventions targeting parents in the form of measures to prevent child abuse[26, 27], parental training for parents of children with developmental disorders[28-30], and child-rearing courses[31, 32]. However, there is an extremely small body of research into the practice and effect of communication skills training programs that seek to improve the

interpersonal skills of ordinary parents over and above the skills specifically required for child-rearing.

The aim of this study was to evaluate the effects of a communication skills training program developed for and delivered to mothers of preschool children.

Method

1．Participants

The study was carried out between September 2010 and July 2012. We held a briefing of study for approximately 180 parents of all kindergarteners at a private preschool, and 81 mothers consented to take a part in the study. Among them, 36mothers were assigned to the experimental group and 45 to the control group on a voluntary basis.

2．Method

ⅰ．Delivering the training

We delivered six 90-minute communication skills training sessions to the 36 mothers of the experimental group at the pace once in the about half moon. The contents of the training program according to a precedent study[23]. An overview of each session is shown in Table 1. Each session was made up of a 50-minute PowerPoint presentation, 30 minutes for practical exercises, and 10 minutes for participants to write down their thoughts on the training. The presentation covered skills such as listening and problem-solving. The practical exercises included pair work to develop listening techniques, and other group work.

Table 1. Communication skills training: Overview of each session

Session	Psychoeducational lecture (50-minute PowerPoint presentation)	Practical exercises (30 minutes) + Participants write down their thoughts on the training (10 minutes)
1	・A psychology test (TEG) is marked after enforcement ・Description of personal relationships and personality traits	Communication work ① in pairs・1 minute each × 2・change speaker and listener Listen without speaking・Listen while asking partner a question・Sharing・Write down thoughts on the training
2	・Basic theoretical commentary of the counseling ・Description of the verbal technique	Communication work ② in pairs・1 minute each × 2・change speaker and listener Listen being conscious of verbal technique・Sharing・Write down thoughts on the training
3	・Description of the question technique ・Description of the nonverbal technique	Communication work ③ in pairs・1 minute each × 2・change speaker and listener Listen using the question technique and nonverbal technique・Sharing・Write down thoughts on the training
4	・Coping methods in talks ・Points to keep in mind in the domain of restoring relations	Communication work ④ in pairs・3 minutes each × 2・change speaker and listener Listen about the restoration of human relations・Sharing・Write down thoughts on the training
5	・Points to keep in mind in the psychological domain ・Points to keep in mind regarding the self-understanding of the listener	Group work ① in groups of 4・2 minutes each × 4・Listen based on all training Group sharing・Sharing among all the members・Write down thoughts on the training
6	・Show an imaginary example problem about relations between the parents of preschool children ・Points to keep in mind during group work	Group work ② in groups of 5・Talk in a group for 30 minutes Main points described by each group・Commentary by the lecturer・Write down thoughts on the training

ii．Administering the questionnaire

All 81 study participants were asked to complete an anonymous questionnaire. The questionnaires were completed between October 2010 and July 2012. Before and after the six training sessions, a questionnaire was distributed at the private preschool to the experimental group and the control group. Completed questionnaires were then collected.

3．Structure of questionnaires

The questionnaire included basic attributes such as age, sex, number and age of children and employment situation, as well as the following seven scales covering multidimensional aspects of communication and communication skills. Level of involvement each participant in mutual aids and information exchanges on child care with other mothers was inquired on a 5-point scale from "no involvement at all" as point 1 to "very involved" as point 5, respectively.

The post-training questionnaire distributed to the experimental group included an open question where they were asked to write what skills they thought they had acquired through the training program. Participants were also asked to rate themselves on a 5-point scale "does not apply" (point 1) to "definitely applies" (point 5), respectively, for following seven scales. It shows that each characteristic is strong so that numerical value is big.

1．Social skills: measured by KiSS-18 (Kikuchi's Social Skills Scale – 18 items)[4], which is based on the categories proposed by Goldstein et al[33]. This scale measures the extent to which social skills have been acquired, where social skills are defined as the skills (techniques) useful for conducting successful interpersonal relationships. We chose 18 questions covering the three factors of communication, problem-solving, and trouble-shooting.

2．Self-esteem: measured by Hiraishi's[34] self-esteem scale. This scale measures self-esteem, which is a dimension of the development of self-awareness during adolescence. We chose 24 questions covering the five factors of self-acceptance, self-actualization, sense of fulfillment, outgoing temperament, and sense of worth.

3．Sense of trust: measured by Tani's[35] scale of basic sense of trust. This scale measures basic sense of trust, which plays an important role in the development of a sense of identity during adolescence[36]. We chose 12 questions covering this factor.

4．Empathy: measured by Maemura et al.'s Empathic Ability Scale (EAS)[37]. This scale measures the ability to empathize with others. We chose nine questions covering three factors, namely, emotional empathy, cognitive empathy, and empathic intentions.

5．Sense of self-efficacy: measured by Narita et al.'s[38] generalized self-efficacy scale, the Japanese version of Sherer et al.'s generalized self-efficacy scale (SE scale)[39]. We chose 10 questions covering the single

factor of self-efficacy, as used in Aono's earlier study[23].

6. Scales to measure group awareness and behavior. Group awareness: We chose five questions from Yoshida *et al.*'s social awareness scale[40], replacing "society" with "group" for the purposes of this study. Group awareness behavior: We chose five questions from Ishii *et al.*'s measure[21] of behavior in a group.

7. Psychological stress response: measured by Ozeki *et al.*'s[41] psychological stress response scale. This scale comprises emotional, behavioral , physical and fatigue aspects. We chose 29 questions for this factor.

4. Analysis

To compare the basic attributes of experimental group and the control group, we performed a chi-square test on the qualitative data, a Mann-Whitney U test on the level of involvement with other mothers and used a t-test to compare the means.

We carried out factor analysis for each scale. After excluding items with low communality (0.30 or lower), we extracted factors with eigenvalues of 1.0 or higher. Drawing on previous studies, we repeated the analysis to find a more interpretable factor structure. We calculated Cronbach's alpha to verify internal consistency, and each factor was confirmed to fall within the range of 0.73 to 0.95. We then used these factors to compare the baseline means for each group, using a t-test.

After the training had been delivered, we carried out two-way repeated-measures ANOVA for each scale. We performed between-subject factor analysis for each group (experimental and control), and within-subject factor analysis for time (before and after the experiment). Where the interaction effect was found to be significant, we used the Bonferroni correction of a significance level to 0.05 in comparisons to test for simple main effects.

5. Ethical considerations

We held a briefing session for all study participants, where the following was explained in writing: the purpose of the study, how participants' personal information would be protected, that participation was optional, and that their decision to participate or not would not disadvantage them in any way. Participants who signed the consent form were deemed to have acknowledged this. Data were also carefully managed, and were used in coded format to prevent the identification of personal information during statistical processing. This study was carried out with the approval of Kinki University Faculty of Medicine's Ethics Review Board (authorization number 22-84).

Results

1. Participants' basic attributes

Among 81 mothers who participants in the study, 73 (36 in the experimental group and 37 in the control group) completed the study and were analyzed. The age of participants was 37.9 ± 4.5years (mean±SD)

with the range of 26-48. Most participants（35 participants）had one child, 33 had two children, and five had three children. The average number of children was 1.6, and no participants had more than three children. The average age of the first child – indicating length of parenting experience – was 5.68 years. Regarding the employment situation, 54 participants were stay-at-home moms, one was in regular employment, thirteen were self-employed, two were temporary/part-time workers, and three described their employment situation as 'other'（skilled work, etc.）. Participants were also asked to rate the frequency of their involvement with other mothers on a five-point scale（from 1 to 5）from "no involvement at all" to "very involved."

The basic attributes for each of the groups are shown in Table 2. The results showed no significant difference between the groups on any of the items, confirming that the basic attributes of both groups were sufficiently homogenous.

Table 2. Participants' basic attributes

	Total (n = 73)	Experimental group (n = 36)	Control group (n = 37)	P value
Average age (SD)	37.9 (4.46)	37.9 (4.23)	37.9 (4.73)	0.977
Number of children				
One child (%)	35 (47.9%)	17 (47.2%)	18 (48.6%)	1.000
Two or Three children (%)	38 (52.1%)	19 (52.8%)	16 (51.4%)	
Average age of the first child (SD)	5.68 (3.33)	5.64 (2.949)	5.73 (3.709)	0.908
Employment situation				
Stay-at-home moms	54 (74.0%)	26 (72.2%)	28 (75.7%)	
Self-employed				0.794
Temporary/part-time workers	19 (26.0%)	10 (27.8%)	9 (24.3%)	
Regular employment				
'Other'				
Frequency of their involvement with other mothers				
no involvement at all	1 (1.4%)	1 (2.8%)	0 (0.0%)	
not involvement very mach	7 (9.6%)	2 (5.6%)	5 (13.5%)	
in the middle	4 (5.5%)	2 (5.6%)	2 (5.4%)	0.613
involved a little	36 (34.2%)	18 (50.0%)	18 (48.6%)	
very involved	25 (34.2%)	13 (36.1%)	12 (32.4%)	

２．Comparing baselines

We used the t-test and Chi-square test, based on the mean values prior to the training program, to investigate the difference in baseline scores between the two groups. No difference between groups was identified for any of the scales, thus confirming the homogeneity of the two groups（Table 3）.

Table 3. Comparing baseline scores between experimental and control group

		Experimental group (n = 36)		Control group (n = 37)		t value	P value
		M	SD	M	SD		
KiSS-18	Communication	2.91	0.95	3.09	0.66	-0.967	0.337
	Problem-solving	3.69	0.61	3.54	0.56	1.125	0.264
	Trouble-shooting	3.14	1.03	3.14	0.76	0.018	0.986
	KiSS-18 (total score)	3.25	0.77	3.42	0.58	-0.060	0.952
Self-esteem	Outgoing temperament	3.27	0.78	3.54	0.71	-1.540	0.128
	Self-acceptance	3.16	0.63	3.18	0.50	-0.171	0.865
	Sense of fulfillment	3.53	0.80	3.51	0.69	0.121	0.904
	Sense of worth	3.33	0.86	3.08	0.87	1.245	0.217
	Self-actualization	3.35	0.73	3.29	0.77	0.362	0.718
Sense of trust		3.72	0.68	3.87	0.62	-0.966	0.337
Sense of self-efficacy		3.33	0.62	3.32	0.49	0.088	0.930
Empathic ability	Emotional empathy	4.07	0.64	4.30	0.55	-1.597	0.115
	Cognitive empathy	3.45	0.65	3.70	0.50	-1.838	0.070
	Empathic intentions	4.16	0.50	4.23	0.58	-0.535	0.594
Group awareness and behavior	Group awareness	3.90	0.56	3.67	0.58	1.733	0.088
	Group awareness behavior	2.84	0.83	2.77	0.64	0.403	0.688
Psychological stress response	Emotional stress response	2.32	0.92	2.14	0.83	0.868	0.388
	Behavioral stress response	2.36	0.77	2.02	0.70	1.987	0.051
	Physical stress response	1.67	0.80	1.68	0.68	0.105	0.917
	Fatigue	3.28	1.25	3.14	1.25	0.468	0.641
	Stress response (total score)	2.28	0.74	2.09	0.69	1.117	0.268

3．Change in factors relating to communication skills

The change in each indicator after the training program is shown in Table 4. The two-way repeated-measures ANOVA showed that, for KiSS-18, there was no significant main effect of group. A significant main effect of time was identified for communication, and an interactive effectwas also identified. The Bonferroni correction to test for simple main effects indicated a significant increase in post-training scores for the experimental group compared with before the training program（F（1, 35）= 10.532, p = 0.003）（Figure 1）. With regard to the self-esteem scale, no significant main effect was identified for the group. Time was found to be a significant main effect for self-acceptance and a significant interactive effect was identified for sense of fulfillment. Test for simple main effects for sense of fulfillment indicated a significant increase in post-training scores for the experimental group compared with those before the training program（F（1, 35）=11.325, p = 0.002）（Figure 2）.

With regard to sense of trust, there was no significant main effect of either group or time identified. A significant interactive effect was identified. Test for simple main effects indicated a significant increase in post-training scores for the experimental group, compared with those before the training program（F（1, 35）= 6.484, p = 0.015）（Figure 3）.

With regard to the self-efficacy scale, there was no significant main effect of the group. Time was identified as a significant main effect.

With regard to empathic ability, a significant main effect of time was identified for cognitive empathic ability and a significant interactive effect was also identified. Test for simple main effects indicated a significant increase in post-training scores for the experimental group, compared with those before the training program （$F(1, 35) = 12.681$, $p = 0.001$）（Figure 4）.

Considering the group awareness scale, we can see that for group awareness behavior, the group was found to be a significant main effect, as was time, and a significant interactive effect was also identified. Test for simple main effects indicated a significant increase in post-training scores for the experimental group, compared with those before the training program （$F(1, 35) = 42.547$, $p = 0.000$）（Figure 5）.

With regard to the stress response scale, a significant main effect of time was identified for emotional response, behavioral response, and stress response.

Table 4. Change in factors relating to communication skills

| | | Experimental group (n = 36) | | | | Control group (n = 37) | | | | Main effect | | | | Interaction | |
| | | Pre | | Post | | Pre | | Post | | Group | | Time | | | |
		M	SD	M	SD	M	SD	M	SD	F value	P value	F value	P value	F value	P value
KiSS-18	Communication	2.91	0.95	3.18	0.86	3.09	0.66	3.15	0.67	0.193	0.661	10.534	0.002 **	4.375	0.040 *
	Problem-solving	3.69	0.61	3.69	0.63	3.54	0.56	3.53	0.42	1.678	0.199	0.003	0.957	0.003	0.957
	Trouble-shooting	3.14	1.03	3.36	0.82	3.14	0.76	3.22	0.72	0.177	0.675	2.981	0.089	0.646	0.424
	KiSS-18(total score)	3.25	0.77	3.42	0.51	3.42	0.58	3.30	0.51	0.143	0.706	5.150	0.026 *	1.775	0.187
Self-esteem	Outgoing temperament	3.27	0.78	3.33	0.74	3.54	0.71	3.53	0.67	2.078	0.154	0.179	0.674	0.441	0.509
	Self-acceptance	3.16	0.63	3.43	0.72	3.18	0.50	3.30	0.61	0.203	0.654	10.880	0.002 **	1.818	0.182
	Sense of fulfillment	3.53	0.80	3.82	0.73	3.51	0.69	3.47	0.73	1.335	0.252	3.293	0.074	5.843	0.018 *
	Sense of worth	3.33	0.86	3.15	0.83	3.08	0.87	3.05	0.84	0.950	0.333	1.436	0.235	0.798	0.375
	Self-actualization	3.35	0.73	3.51	0.85	3.29	0.77	3.26	0.61	0.896	0.347	0.975	0.327	1.994	0.162
Sense of trust		3.72	0.68	3.94	0.65	3.87	0.62	3.79	0.62	0.001	0.982	1.566	0.215	6.512	0.013 *
Sense of self-efficacy		3.33	0.62	3.43	0.68	3.32	0.49	3.43	0.51	0.004	0.953	5.137	0.026 *	0.007	0.932
Empathic ability	Emotional empathy	4.07	0.64	4.15	0.68	4.30	0.55	4.28	0.51	1.991	0.163	0.199	0.657	0.537	0.466
	Cognitive empathy	3.45	0.65	3.73	0.61	3.70	0.50	3.68	0.63	0.639	0.427	4.658	0.034 *	6.040	0.016 *
	Empathic intentions	4.16	0.50	4.31	0.47	4.23	0.58	4.21	0.42	0.021	0.885	1.751	0.190	2.855	0.096
Group awareness and behavior	Group awareness	3.90	0.56	3.83	0.61	3.67	0.58	3.74	0.53	1.786	0.186	0.001	0.975	1.480	0.228
	Group awareness behavior	2.84	0.83	3.81	0.58	2.77	0.64	2.95	0.64	11.304	0.001 *	48.725	0.000 ***	22.796	0.000 ***
Psychological stress response	Emotional stress response	2.32	0.92	2.02	0.81	2.14	0.83	1.99	0.80	0.379	0.540	5.383	0.023 **	0.559	0.457
	Behavioral stress response	2.36	0.77	2.05	0.68	2.02	0.70	1.97	0.74	2.146	0.147	4.276	0.042 *	2.203	0.142
	Physical stress response	1.67	0.80	1.55	0.68	1.68	0.68	1.59	0.73	0.008	0.931	1.433	0.235	0.171	0.681
	Fatigue	3.28	1.25	3.25	1.04	3.14	1.25	2.54	1.24	2.939	0.091	3.119	0.082	2.587	0.112
	Stress response (total score)	2.28	0.74	2.03	0.68	2.09	0.69	1.95	0.69	0.858	0.358	6.374	0.014 **	0.483	0.489

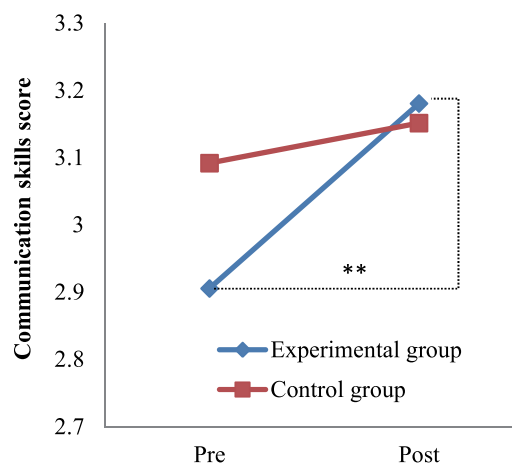*p <0.05,**p <0.01,***p <0.001

Fig. 1. Comparison between the experimental and control groups in communication skills scale score （**p<0.01）
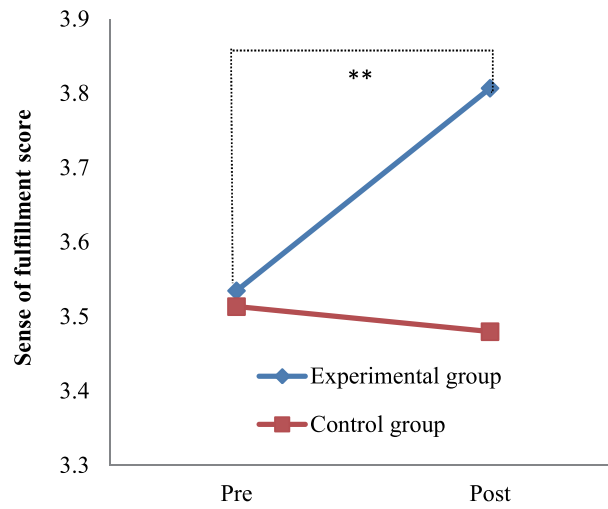
Fig. 2. Comparison between the experimental and control groups in sense of fulfillment scale score (**p<0.01)
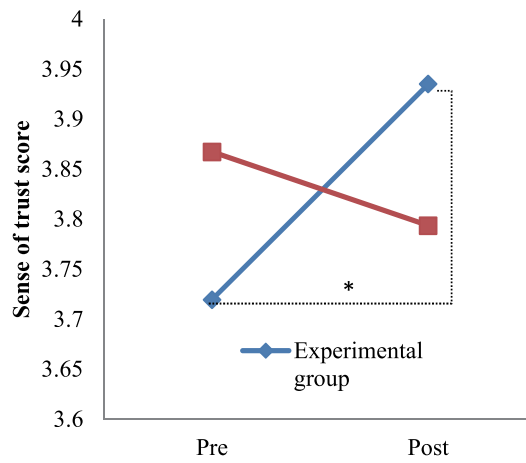

Fig. 3. Comparison between the experimental and control groups in sense of trust scale score (*p<0.05)
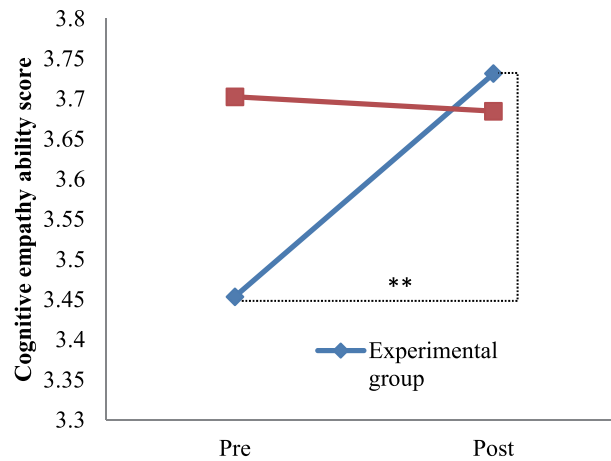

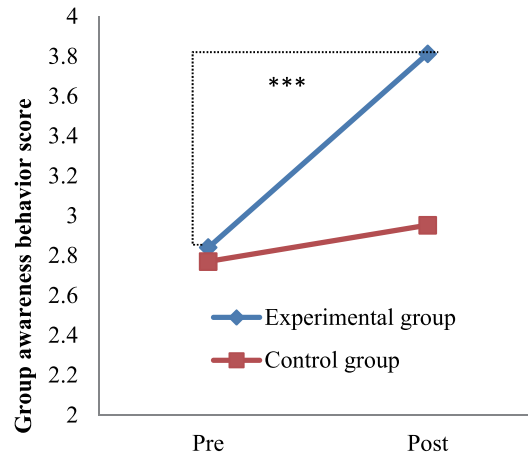Fig. 4. Comparison between the experimental and control groups in cognitive empathy ability scale score (**p<0.01)

Fig. 5. Comparison between the experimental and control groups in group awareness behavior scale score（***p<0.001）

Discussion

　The purpose of this study was to deliver communication skills training to mothers of pre-school children, and verify the effects. We compared the psychological attributes of the experimental group and the control group before and after the training program. The experimental group demonstrated a significant increase in scores for communication skills on the social skills scale（KiSS-18）. This suggests that the communication skills training program was effective at improving their communication skills. With regard to social skills as a whole, time was found to be a significant main effect. This improvement in skills could be attributed to the cumulative effect of interpersonal relations that participants would experience ordinarily through preschool. However, the results suggest that the communication skills training further developed these skills.

　With regard to scores for self-acceptance, sense of self-efficacy, and stress response, time was found to have a significant effect, but no interactive effect was found. Both groups showed an improvement of their self-acceptance and sense of self-efficacy, and a decrease in stress response. This improvement in self-acceptance and sense of self-efficacy comes with bringing up a child, and is part of a parent's developmental process[41]. Although an incident of childabuse, for example, would increase a mother's stress levels, the significant decrease in stress response in this study could be argued to suggest that the participants enjoy largely healthy parent-child relations.

　With regard to scores for cognitive empathic ability, the significant improvement shown by the experimental group could be attributed to the training program implemented in this study, which included practical exercises that built on psycho-educational presentation and counseling techniques（table1）. This could have improved the experimental group's ability to read other people's feelings from their words, facial expression, or attitude. This was also expressed in responses to the open question concerning the kind of skills acquired through the training program, where participants commented that they were now able to look at the other person's face during a conversation and able to understand what the other person was feeling.

The sense of fulfillment of the experimental group also increased significantly. The pass analysis performed by Aono et al[43] in an earlier study on the relationship among sense of fulfillment scores at baseline of training program indicated that sense of fulfillment increases with self-acceptance, and that it causes an improvement in trouble-shooting skills, socially active behavior, sense of trust, and sense of self-efficacy.

With regard to scores for problem-solving and trouble-shooting, no significant effect of the training program was found. Improvements in communication skills may be achieved by offering an additional program including a description of the domain to restoring relations and relevant group work.

The experimental group also showed a significant improvement in group awareness behavior. The same path analysis showed that group awareness behavior has an effect on all indicators, through self-acceptance and cognitive empathic ability. For example, the group work during the training program provided an opportunity for the mothers in the experimental group to behave in a way that required group awareness, and as such was an effective method of improving their communication skills. They were able to apply what they had learnt during the training program to real-life situations.

The participants in this study were healthy mothers aged between 29 and 46 with children attending a private preschool. A high proportion of mothers were homemakers, with a relatively high average age and standard of living. This study therefore demonstrated the psychological attributes of a uniform group. Further investigation would be required to generalize from the results of this study. We would need to expand the range of attributes and sample size, such as targeting mothers in different age brackets or mothers of children attending a public preschool or child-care facilities. Because this study was not a randomized trial, there might be group differences which did not appear in the comparisons of the baseline characteristics. Attention should be paid for the interpretation of the results. We would need to carry out a randomized controlled trial.

There is a problem with the way the indicators are measured, in that these data are collected in the form of self-report questionnaires. To improve on this, we are currently developing a program that would enable us to measure the same concept while using a different item each time. To do this, we are investigating existing psychological scales based on the item response theory. Another problem with this study is that we did not use physiological indicators. We hope to see the development of practical physiological indicators to measure communication skills in the future, and it would be desirable to consider using existing indicators（f-MRI et al.）. Incorporating such evaluation methods should enable us to improve the validity of the results of future studies.

This study involved developing and delivering a communication skills training program to mothers of preschool children, and the results indicate that it was effective. We hope that it will be possible to build on this in order to provide more effective support for parents raising children.

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