

A STUDY OF THE EFFECTIVENESS OF A MUTUAL EXCHANGE SUPPORT PROGRAM FOR PARENTS OF CHILDREN WITH DEVELOPMENTAL DISORDERS

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Abstract

There is an urgent need to support families of children with developmental disorders, especially when it is necessary for such families to help each other. However, practice and research related to support systems for families have begun only recently in Japan. Considering these issues, the authors developed a program to support mutual exchanges among parents of children with developmental disorders. This study aimed to verify the program's effectiveness and to examine the relationship between participants' program experience and its effectiveness. Participants included 21 male and female parents of children with developmental disorders. The parents were in their 30s to 50s (4 in their 30s, 14 in their 40s, and 3 in their 50s) (1 male, 20 females). Effectiveness indicators included the Profile of Mood States 2nd Edition-Adult Short (POMS2-A Short) (before and after implementation), Session Impact Scale (SIS), and Mutual Exchange Support Experience Rating Scale. t-tests were conducted on the pre- and post-program results of the POMS2-A short. Results showed that scores on Anger-Hostility ($t=4.77$, $df=20$, $p<.01$, $d=1.04$), Confusion-Bewilderment ($t=4.31$, $df=20$, $p<.01$, $d=.94$), Depression-Dejection ($t=2.88$, $df=20$, $p<.01$, $d=.63$), Fatigue-Inertia ($t=3.63$, $df=20$, $p<.01$, $d=.79$), and Tension-Anxiety ($t=3.61$, $df=20$, $p<.01$, $d=.79$) in the POMS2-A Short decreased significantly after the implementation of the program. These results evidence the effectiveness of the program in improving several mood states, especially anger-hostility, tension-anxiety, depression-depression, and fatigue.

Keywords: *Developmental disorder, family support, interaction support, program development, profile of mood states 2nd edition.*

1. Introduction

Support for families of children with developmental disorders has been attracting attention. The Law for Supporting Persons with Developmental Disabilities, amended in 2008 and revised 2016, requires direct support for parents and the development of support necessary for the families of persons with developmental disorders to help each other. Accordingly, there is an urgent need to establish a system to facilitate mutual support among persons with developmental disorders and their families.

The importance of support and connection among parents has been demonstrated by numerous practices and initiatives in Japan and abroad, such as the Parent Mentor Program (Haraguchi, Kato, and Inoue, 2015; Inoue, 2008; Santelli, Turnbull, Marquis, et al., 1995). Such activities are not limited to developmental disorders. They have been implemented in several initiatives in Japan and abroad. By participating in such activities, parents can alleviate loneliness in child-rearing. Further, they can gain a sense of security (Ainbinder et al., 1998), and be empowered (Law et al., 2002). In addition to positive psychological changes, such as the improvement of skills (Law et al., 2002), parent can gain valuable skills and knowledge about parenting in real life. These previous studies suggest that parents who share common or similar experiences can benefit from mutual interactions on an equal footing in a diverse and multilayered way.

Against this background, the Ministry of Health, Labor and Welfare (2019) has proposed the creation and expansion of a new menu of family support services. However, even the Parent Mentor program, which is currently the most systematic program of its kind in Japan, has commenced only recently. The need for further discussion on effective activities and support systems is thus evident (Haraguchi, Kato, and Inoue, 2015).

2. Objectives

The authors developed a program to support mutual interaction among parents of children with developmental disorders based on the awareness of the above problem. In this study, we will examine the program's effectiveness using the Profile of Mood States 2nd Edition-Adult Short (POMS2-A Short), which has been used to explore the effectiveness of a wide range of clinical interventions. This study investigated the relationship between the program experience's evaluation and its effects and clarifies the program's mechanism.

3. Methods

3.1. The program

Detailed objectives of the program were to enable parents: 1) to learn about other parents' experiences of raising children with developmental disorders, 2) to learn about the meaning of mutual support among parents, 3) to identify their and their children's strengths, and 4) to learn to listen effectively when supporting each other. The program structure included the following elements: (1) mini-lectures on common experiences, (2) reflection on their children's and own strengths and efforts, (3) listening training, (4) group work using psycho-educational methods, and (5) question and answer sessions and free talk.

3.2. Target group

Participants included 21 male and female parents of children with developmental disorders. They were in their 30s to 50s (4 in their 30s, 14 in their 40s, and 3 in their 50s). The demographics of the children were as follows: 3 preschoolers, 3 in the first or second year of elementary school, 5 in the third or fourth year of elementary school, 1 in the upper grades of elementary school, 2 in junior high school, and 7 in high school or older (including siblings). The children's diagnoses were as follows: Autism spectrum disorder (ASD) : 13 (including one suspected case), ASD + Attention deficit hyperactivity disorder (ADHD) + Learning Disorders (LD) : 3, ASD + Intellectual disability (ID) : 1, DD+ADHD+ Developmental Coordination Disorder (DC): 1, None: 1, Not reported: 2.

3.3. Effect index

POMS2-A Short (before and after the intervention), Impact of Session Scale (IS; Elliot & Wexler, 1994; 9 items), and Interaction Experience Rating Scale (5 items) were used to assess the effectiveness of the program. The POMS2-A comprises six mood clusters, Anger-Hostility (AH), Confusion-Bewilderment (CB), Depression-Dejection (DD), Fatigue-Inertia (FI), Tension-Anxiety (TA), and Vigor-Activity (VA). It provides scale scores on Friendliness (F) and Total Mood Disturbance (TMD). It comprises 35 items in which the respondent's mood "state" is graded on a 5-point scale from "not at all (0)" to "very much (4)" (Heuchert & McNair, 2016)

4. Result and discussion

4.1. Changes in POMS2 before and after the implementation of the program

IBM SPSS Statics 27 was used to analyze the data, and a t-test was performed on to examine the POMS2-A scores before and after the program implementation (Table 1). Findings revealed that scores on AH, CB, DD, FI, and TA decreased significantly after the intervention. No significant differences were observed in VA, F, and TMD scores. These results suggest that the program had a positive impact on several mood states. The opportunity to interact with other parents with similar experiences in a safe and structured learning environment, and the experience of reflecting on their children together, may have helped alleviate feelings of loneliness and gain a sense of security (Ainbinder et al., 1998), even for parents meeting others for the first time. However, the program did not affect positive mood states such as friendship and vitality. This highlights the need to further examine the program's content, structure, and frequency to improve its effectiveness in supporting mutual interaction among parents.

4.2. Relationship between program evaluation and the amount of change in POMS2-A

To identify the relationship between participants' evaluation of the interaction support program and its effect on mood states, we compared their pre-post differences scores on the POMS2-A with their scores on the Interaction Experience Rating Scale items. A Spearman's rank correlation analysis showed that the item "It gave me an opportunity to reflect on my child," was positively correlated with reduction in scores on CB ($r(21)=.589, p<0.01$), DD ($r(21)=.436, p<0.05$), FI ($r(21)=.435, p<0.05$), TA ($r(21)=.530, p<0.05$) and TMD ($r(21)=.611, p<0.01$). The item "It gave me an opportunity to reflect on

myself” had a positive correlation with reduction in scores on CB ($r(21)=.598, p<0.01$). Further, the items “It gave me an opportunity to interact with other parents” and “I would like to have more opportunities to interact with other parents in the future” had a positive correlation with increase in scores on F ($r(21)=.471, p<0.05$ and $r(21)=.728, p<0.01$, respectively). These findings suggest that mutual interaction among parents, especially “opportunities to reflect on their children,” may be associated with positive changes in various mood states and it may be an important factor in the implementation of the program.

Table 1. *t*-test on the POMS2-A Short before and after the intervention.

Variable	Time 1		Time 2		<i>t</i> (21)	<i>p</i>	95% CI		Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			<i>LL</i>	<i>UL</i>	
AH	49.00	9.31	40.90	4.55	4.77	<.001	4.56	11.63	1.04
CB	53.90	9.68	46.38	7.21	4.31	<.001	3.88	11.16	0.94
DD	51.24	9.16	46.62	7.23	2.88	.009	1.28	7.96	0.63
FI	48.76	14.30	38.67	5.94	3.63	.002	4.29	15.90	0.79
TA	52.76	12.13	44.62	8.47	3.61	.002	3.43	12.85	0.79
VA	52.57	8.66	55.05	10.23	-1.75	.095	-5.42	0.47	-0.38
F	55.00	8.25	57.71	12.12	-1.72	.100	-6.00	0.57	-0.38
TMD	50.58	11.10	47.09	7.07	1.72	.101	-7.39	7.69	0.38

Note. CI = confidence interval; LL lower limit; UL upper limit; AH = Anger-Hostility; CB = Confusion-Bewilderment; DD = Depression-Dejection; FI = Fatigue-Inertia; TA = Tension-Anxiety; VA = Vigor-Activity; F = Friendliness; TMD = Total Mood Disturbance.

5. Conclusions

The program was effective in alleviating negative mood states; however, the positive effects were weak. Nevertheless, this study confirms the short-term effects of the program. In future, it is necessary to further evaluate the long-term effects of the program. Additionally, the relationship between the participants' evaluation of the program and the change in their POMS2-A scores following intervention should be examined with a larger sample.

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