



# Group Psychoeducational Programs Improve Mood Profiles in Mothers of Non-Attendance School Children

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## Abstract

### Objective

The parents of non-attendance school children often feel distress. The aims of this study were (i) to assess their quality of life compared with the general population and (ii) to evaluate the effects of group psychoeducation for these parents.

### Methods

We approached the parents of children aged 10-15 who were not attending school, and used the MOS 36-item Short-Form Health Survey (SF-36) to assess their quality of life. Profile of Mood States, Parenting Stress-Short-Form Japanese Version and the Intimate Bond Measure were used to assess the effect of parental group psychoeducation. We compared the subdomain scores for the SF-36 from the parents against national normative scores, and all scores before and after the intervention.

### Results

Participants were 19 mothers of 20 children. Following the intervention, the mood profiles of the mothers improved for tension-anxiety, depression-dejection, anger-hostility, vigor, fatigue, and confusion. The mothers' mean scores before the intervention were significantly lower than in the general female population for physical role, vitality, social functioning, emotional role and mental health.

### Conclusion

Group psychoeducation may therefore improve mood profiles of mothers of non-attendance school children.

### Keywords

School non-attendance, Family educational program, Mood profile, Quality of life, Mothers

## Background

Non-attendance at school is considered a serious problem for children and parents, affecting their social, emotional, and educational development

[1,2]. The Japanese Ministry of Education, Culture, Sports, Science and Technology has investigated students who were absent from school for more than 30 days per year since

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1991, in research on issues about guidance for teachers on student misbehavior. These studies define non-attendance as “[when] students do not attend or are unable to attend school because of psychological, emotional and physical reasons, or sociological factors and background, but not disease or economic reasons”. They reported that more than 126,000 students were not attending elementary and junior high school in 2015, and their number has increased steadily over the last few decades [3].

Non-attendance at school is now seen as a diverse issue, with multiple causes, but views have changed over time. It was first described as “school refusal” [4], and has also been called “School phobia” [5]. Hersov used the term “non-attendance at school” to make clear that it was a condition, not a disease. Hersov classified non-attenders into two groups: those whose behavior was one facet of a psychoneurosis and those whose attitude and behavior were more indicative of truancy. “Non-attendance at school” was at that stage considered the same as school refusal or truancy [6].

In Japan, non-attendance at school was described as “school phobia” at first, although it became known as “school refusal” in the 1960s because it was considered to be related to familial conflict, social factors and immaturity. “Non-attendance at school” was first used in 1968, and is now the accepted term because it includes any child who does not attend school regardless of the reason [7].

Non-attendance at school is not a diagnosis in itself. It is, however, a serious issue, associated with environmental factors such as bullying at school or a dysfunctional home, as well as psychiatric disorders such as depression or anxiety [8-11]. Many parents of non-attendance school children consult child psychiatrists in Japan [12]. In serious cases, the children may stay indoors and refuse to go outside, so therapy often starts with the parents alone [13]. Family intervention is considered essential because problems with family functioning may contribute to non-attendance [11,14,15].

Parents of non-attendance school children often show psychiatric symptoms. For example, parents whose children do not attend because of anxiety have increased prevalence of both anxiety and depressive disorders [8,16]. Some kinds of family intervention or therapy are effective for these symptoms. For example, family therapy focused on improving depression and somatic

symptoms may improve family functioning [17]. Heyne, *et al.* reported that parent/teacher training appeared to be effective in increasing attendance with or without direct child involvement. Cognitive behavioral therapy for the child plus parent/teacher training was found to be effective in improving school attendance compared to a control group waiting for treatment [2]. This training helped reduce parental anxiety and enabled parents to understand their role in supporting their children [14]. In Japan, interventions for parents of non-attendance school children are common at educational institutions and welfare and medical facilities [18], but there are few reports of their effects.

Family psychoeducation is an intervention for parents and has been established as a part of optimal and evidence-based treatment. It was originally developed for patients with psychotic disorders, where it was found to reduce relapse [19]. It has recently been widely applied for other mental disorders such as anorexia nervosa [20], and depression [21]. A previous study [22] reported the effect of brief psychoeducational intervention programs with four biweekly sessions for the relatives of patients with a depressive disorder. They found that it helped to relieve caregivers’ expressions of emotion, psychosocial burden, anxiety, and depressive moods. It has also been used with mothers of children with high-functioning pervasive developmental disorders, but it did not alleviate maternal distress, the children’s aberrant behaviors, or caregiver burden [23]. To our knowledge, there have been no studies of its effects in the parents of non-attendance school children.

We hypothesized that the parents of non-attendance school children would show low mood profile and quality of life (QOL), and that psychoeducation programs would improve both mood profile and QOL. The purpose of this study was to examine the effectiveness of psychoeducation in alleviating psychological distress in parents of non-attendance school children.

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## Methods

### ■ Participants

The details of the purposes and procedures of the study were explained to the families of non-attendance school children who visited the Outpatient Psychiatry Clinic of the Nagoya City

University Hospital, Japan, during the 13-month period from November 2013 to March 2015.

Parents satisfying the following criteria were considered eligible for the study: 1) children were 9-15 years old; 2) children had been absent from school or classes for ten days or more in the previous three months at the time they agreed to participate in this study; 3) children were on the normal class register; 4) the parents' mother tongue was Japanese; and 5) parents were the main care providers at home. We excluded: 1) anyone unable to understand the study contents or whose participation might place an excessive burden on them for any reason; or 2) anyone assessed by the child's doctors as being an unsuitable candidate for participation in this study for any reason. These doctors were independent of the study intervention.

Data on the characteristics of individual children, including age, sex, diagnosis, the duration of non-attendance at school and the time of the first visit to the clinic, were collected at the outpatient clinic. Some parents had two or more non-attendance school children. Because QOL may be affected by any child, we tried to obtain data on all siblings if they were eligible and visiting the clinic.

### ■ Interventions

The treatment regimen for the psychoeducation program used in this study was based on the McFarlane Model [24], the Evidence-Based Practices Toolkit for Family Psycho-Education [25] and the standard model of the Japanese Network of Psychoeducation and Family Support (JNPFS) program.

The program consisted of four sessions, each lasting 120 minutes. The sessions were held every second week. In the intervention group, the number of participants in each program ranged from two to three, and each session was conducted by a multidisciplinary group consisting of at least three members: one to two psychiatrists, up to two nurses and up to one assistant. Two staff were qualified to deliver the JNPFS program, and three others received intensive training of JNPFS. At least one member of staff had participated in the intervention group. No children of participants joined the program. During the first 30 minutes of each session, the staff presented information to the participants on 1) the definition, mechanism, assessment and comorbid physical symptoms associated with school non-attendance; 2) the

comorbid psychiatric disorders associated with the situation; 3) medication for these comorbid psychiatric disorders and information about social support resources; and 4) the physical and mental health of the parents. During the next 90 minutes, supportive group therapy was provided, focusing on problem-solving skills. In the group therapy sessions, the participants will be encouraged to give a narrative of their subjective experience in taking care of the non-attendance school children. Staff direct the sessions and help the participants to support and to suggest the idea of problem-solving skills. We conducted these group sessions using the structures in the standard model of the JNPFS.

### ■ Measures

**(1) Profile of Mood States (POMS):** The long form of the POMS is a standard validated psychological test consisting of 65 adjectives on a five-point scale test. It derives six factors: tension-anxiety (TA), depression-dejection (D), anger-hostility (AH), vigor (V), fatigue (F), and confusion (C). The test assesses feelings in the previous week, including the day of the test. A low POMS score indicates a better mood state, except for the vigor subscale, which is inverse. The test was originally formulated [26], and the validity and reliability of the Japanese version have been confirmed [27].

**(2) The MOS 36-item Short-Form Health Survey (SF-36):** SF-36 is a self-report questionnaire used to assess general quality of life. It contains 36 items that cover eight measures: Physical Functioning (PF), Physical Role (RP), Bodily Pain (BP), Social Functioning (SF), General Health Perceptions (GH), Vitality (VT), Emotional Role (RE), and Mental Health (MH). The total result is shown across each of the eight measures by a standard score ranging from 0 to 100. A higher score indicates higher QOL. The Japanese version has shown good reliability and validity in the general population of Japan [28,29].

**(3) Intimate Bond Measure (IBM):** This measure is designed to evaluate the nature of the subject's relationship with their marital partner. It is a self-report measure for evaluation of two aspects of marital relationships (Care and Control), and consists of 24 questions. The Care dimension reflects care expressed emotionally and physically, with constructs of warmth, consideration, affection and companionship. The Control dimension suggests domination, instructiveness, criticism, authoritarian attitudes

and behaviors. The respondent selects one of four answers (3 = yes, 2 = somewhat yes, 1 = somewhat no, 0 = absolutely no). Each aspect is covered by 12 questions, and the total score ranges from 0 to 36. A high score indicates a tendency to Care or Control. The questions ask about 'recent' situations, without specifying the period covered. The reliability and validity of this measure have been confirmed [30], and the Japanese version has been used in a previous study [31].

**(4) Parenting Stress – Short Form (PS-SF) Japanese version:** The PS-SF consists of 19 items requiring 5th-grade reading level, and is derived from the 101 items in the Parent Stress Index (PSI). The PSI is a screening and triage measure formulated by Abidin (1995). It evaluates the parenting system and identifies issues that may lead to problems in the behavior of child or parent. The validity and reliability of the original version have been confirmed [32], as have those of the Japanese version [33].

**(5) Brief demographic self-report questionnaire and family profiles:** The questionnaire requested information about the age, occupation, education, and history of psychiatric treatment of the parents and the presence/absence in the family of additional children with pervasive developmental disorders not attending school.

#### ■ Analyses

We first calculated the mean values of the eight subscales of SF-36 before the group psychoeducation program. We compared them with those of age- and sex-matched subjects (259 women aged from 40 to 49 years old) sampled from the general population in Japan using an unpaired *t*-test. The comparison group was sampled from 300 areas in Japan, stratified by size of population. From each area, 15 people aged from 20 to 80 years old were randomly sampled. The final comparison group consisted of 1,572 women and 1,394 men [34].

We then calculated the mean values of the scores of POMS, SF-36, PS-SF and IBM before and after intervention, and compared them using an unpaired *t*-test. We used the standardized scores by age in POMS and SF-36.

We used SPSS v.22 for Windows [35] for all data analyses. A value of  $p < 0.05$  was regarded as statistically significant in all analyses.

#### ■ Ethical considerations

This study was approved by the Ethics Review

Committee of Nagoya City University Graduate School of Medicine, Japan, on August 19, 2010, and was carried out in accordance with the principles laid down in the Helsinki Declaration. All participants provided written informed consent once the purpose and procedures of the study had been explained to them.

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## Results

### ■ Subjects

In total, 19 mothers of 20 children participated in this study (Table 1 for their demographic data). We recruited the both mothers and fathers, but no fathers participated. Because we had the program on the week day, it would be difficult for many fathers to participate constantly. 15 of 19 mothers attended all four group sessions, three attended three sessions, and one attended one session. The mean attendance number (SD) of the programs was 3.68 (0.92). The reasons for non-attendance were unclear.

### ■ QOL of the participants before the intervention

The mean scores of the mothers of non-attendance school children before the intervention were significantly lower than those of the general female population for RP and VT ( $p < 0.05$ ), and for SF, RH and MH ( $p < 0.01$ ) (Table 2). Maternal QOL was noticeably lower for psychological than physical areas.

### ■ Effect of the intervention

Table 3 shows the scores for POMS before and after the intervention. The mood profile of the mothers improved in all areas with the intervention. The scores for T-A, D, AH, F and C after the intervention were significantly lower than before, and the score for V (inverse scoring) was slightly but significantly higher.

The scores for SF-36, however, showed no changes (Table 2). There were also no significant changes in PS-SF or Care and Control.

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## Discussion

To our knowledge, this is the first study that has focused on the effects of group psychoeducation on the mood profiles of mothers with children who were not attending school. All subscales of mood profiles significantly improved after the intervention.

Interventions have generally focused on behavior

or cognitive training for parents. Cognitive-behavioral treatment for school non-attenders was efficacious and acceptable, but the effects of combination of child therapy and parent/teacher training were unknown [36]. Behavioral interventions are effective in improving children’s school attendance and adjustment, but no difference was seen between child therapy alone, and combination therapy including parent/teacher training [2]. Cognitive training can help parents become less anxious [14]. There are few studies assessing the effect of interventions on QOL of parents. In Japan, group therapy for mothers of non-attendance school children is widely used, but published studies include only a few case reports, with few making a systematic assessment of the effects of therapy. Our study suggests that family psychoeducation programs can also be used to improve the mood profiles of mothers of school non-attenders.

This study also showed that the mothers of non-attendance school children had low QOL scores in several psychological domains. A previous study reported that the mothers of children with persistent developmental disorders seem to have low QOL, perhaps because of their children’s symptoms and behavior problems, leading to trouble in school, but few reports have focused on non-attendance school children [37]. Some studies have reported psychiatric symptoms among parents. For example, parents of children with anxiety who were not attending school had high prevalence of both anxiety and depressive disorders [16]. Fathers reported more symptoms of somatization, depression and phobic anxiety than mothers [38]. It is not clear what interventions could improve parents’ symptoms because the targets of most relevant studies are the state of the children, rather than the symptoms of the parents.

Unfortunately, the psychoeducation intervention did not significantly improve QOL of mothers, measured by any of the subscales used in this study. This might be because the QOL scales are about the previous month, but the mood profile reflects the previous week. We provided four sessions of the family education program across six weeks, so the short period may have meant that only effects on mood profile were detected.

This study had some limitations. First, other factors might influence the mother’s QOL. Most children who are not attending school suffer from co-morbid psychiatric disorders [10,14,39,40]. Some of the children in this study had autistic

**Table 1: Demographic data of parents and children.**

	Parents
Number	19
Sex	
Female (mother)	19
Age (years)	46.6(SD=3.1)
Marriage	
Married	17
Divorced	2
Work	
Housework or out of work	14
Under 40 hours per week	4
Over 40 hours per week	1
Education	
High school	4
Junior college or beyond	15
Number of children with non-attendant school	
One	18
Two or more	1
History of psychiatric therapy	
None	16
Yes	3
Age of children with non-attendant school (years, n=20)	13.3 (SD=1.6)
Duration of non-attendance of children (months, n=20)	12.35 (SD=7.62)
Psychiatric diagnosis of children with non-attendant school	
None	9
Autistic spectrum disorder	7
Schizophrenia	2
Mood disorder	1
Anxiety disorder	1

Abbreviations: ASD: autism spectrum disorder; SD, standard deviation

spectrum disorders, which might be linked to the mothers’ low and non-improving QOL.

Second, we did not assess whether there were any changes in the behavior of the children after the intervention period, such as their attendance at school. We therefore do not know whether this might have affected the study. For example, improved school attendance for an unrelated reason might have improved the mothers’ mood profile. Use of control groups would be helpful, because some non-attending children return to school naturally. The family education program was relatively short; however, so few children with over 3 months’ non-attendance would be likely to change over the period.

Third we assessed the mood profile and QOL only once after intervention. It was therefore not clear how long the effect would last.

Fourth in this study 10 of 19 mothers had children with psychiatric problems. It is higher prevalence than general population. There might be sampling bias because we recruited participants at hospital where their children

**Table 2: Changes in SF36 ver2 scores of mothers following the psychoeducation and family support program, and comparison with the general female population (n = 19).**

	Average scores before the intervention (SD)	Average scores after the intervention (SD)	Changes after the intervention (95% CI)	t	p	Difference in average of general female population and mothers (95%CI)	p
Physical Functioning	49.94 (8.50)	50.27 (9.73)	.332 (-1.699 ~ 2.361)	0.343	.735	-1.36 (-5.29 ~ 2.58)	.497
Role Physical	45.63 (14.36)	42.23 (15.722)	-3.400 (-7.813 ~ 1.013)	-1.619	.123	-5.07* (-9.36 ~ -.77)	.021
Bodily Pain	45.87 (12.88)	44.95 (13.19)	-.926 (-4.177 ~ 2.325)	-5.99	.557	-4.13 (-9.08 ~ .82)	.102
General Health Perceptions	46.16 (12.74)	46.71 (14.20)	.542 (-1.288 ~ 2.372)	.622	.542	-4.14 (-9.40 ~ 1.13)	.123
Vitality	43.29 (14.27)	43.93 (12.39)	-.637 (-2.515 ~ 3.789)	.424	.676	-5.61* (-11.07 ~ -.15)	.044
Social Functioning	40.47 (11.67)	41.86 (16.27)	1.390 (-3.636 ~ 6.415)	.581	.568	-8.93** (-13.57 ~ -4.28)	<.001
Role Emotional	43.80 (12.96)	39.57(14.93)	-4.226 (-11.472 ~ 3.019)	-1.225	.236	-6.30** (-10.87 ~ -1.73)	.007
Mental Health	41.15 (13.28)	44.50 (11.02)	3.347 (-1.123 ~ 6.818)	2.026	.058	-8.15** (-13.08 ~ -3.23)	.001

Abbreviations: CI, confidence interval; SD, standard deviation

\*p<.05; \*\* p<.01

**Table 3: Changes in Profile of Mood States scores of mothers after the psychoeducation and family support program.**

	n	degree of freedom	Average scores before the intervention (SD)	Average scores after the intervention (SD)	Changes after the intervention (95% CI)	t	p
tension-anxiety (T-A),	19	18	56.63 (14.100)	54.47 (12.558)	-2.158* (-4.254 ~ -.062)	-2.163	.044
depression-dejection (D)			59.68 (14.341)	56.47 (11.172)	-3.211* (-5.779 ~ -.642)	-2.626	.017
anger-hostility (A-H)			53.63 (10.248)	52.00 (9.428)	-1.632* (-2.968 ~ -.295)	-2.565	.019
vigour (V)			42.79 (10.147)	45.32(10.323)	2.526* (.609 ~ 4.443)	2.769	.013
fatigue (F)			56.16(13.545)	52.79(11.559)	-3.368** (-5.166 ~ -1.571)	-3.936	<.01
confusion (C)			59.74 (14.337)	55.95(12.925)	-3.789** (-5.748 ~ -1.831)	-4.065	<.01

Abbreviations: CI, confidence interval; SD, standard deviation

\*p<.05; \*\* p<.01

would often suffer from psychiatric disorders. On the other hands, academic achievement, family relationship, and maternal parenting stress relate to mental health problems in school-aged children [41]. Non-attendance children might tend to have psychiatric problems.

Although the study has some limitations, the results suggest that it is a feasible intervention program that can be run by a small number of staff in any location and over a relatively short period. Our intervention may be effective in decreasing the burden of mothers of children who are not attending school. The usefulness of the intervention needs to be confirmed in a future well-designed randomized controlled trial. We should also explore whether the content and timing of the family education program may have an effect on QOL, and whether this program is effective for fathers and other family members.

### Conclusions

Group psychoeducation may improve mood profiles of mothers whose children are not attending school. All mood profile subscales were significantly improved after the intervention. This study also showed that these mothers had lower

QOL scores in several psychological domains than women in the general population, although group psychoeducation had no effect on QOL. Clinicians may be able to deliver a better service by paying appropriate attention to the mood profiles and QOL of parents of non-attendance school children.

### Competing interests

The authors declare that they have no conflicts of interest.

### Acknowledgments

**Statistical expert:** None

**Financial support:** None

### Authors' contributions

All authors have contributed essential parts of the manuscript and are entirely responsible for its scientific content. AY planned the study. AY, MS, MK and FK carried out the investigation. AY analyzed all the data. MS, FK, NS, NW, and TA critically commented on the draft manuscript. All authors read and approved the final version of the manuscript.

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