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## Research on promotion of management of children with psychosomatic and psychosocial disorders in Japan

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### Abstract

**Background:** The number of children with psychosomatic and psychosocial disorders has been increasing in Japan. There are, however, few trained pediatricians who have adequate knowledge of the treatment needed. The Research Group on the Promotion of Management of Children with Psychosomatic and Psychosocial Disorders carried out the present study to (i) disseminate knowledge about psychosomatic and psychosocial disorders of children; and (ii) establish a community-based network model to ensure effective communication among relevant institutions.

**Methods:** To disseminate knowledge of the psychosocial and psychosomatic disorders, the Research Group compiled the *Handbook for Psychosomatic Disorders of Children* and distributed it to pediatricians throughout Japan. A follow-up questionnaire survey was then carried out. Also, in order to examine the current status of the communication network between pediatricians and the related institutions, the Research Group conducted a questionnaire survey on general pediatricians.

**Results:** Sixty-five percent of the respondents indicated that they were actually using the *Handbook*. The topics in the *Handbook* that were most frequently referred to by the respondents were attention deficit hyperactivity disorders, school refusal, eating disorders, and orthostatic dysregulation. Thirty-seven percent of the participants indicated changes in their behavior towards psychosomatic and psychosocial problems. The results of the survey on communication networks found that the pediatricians generally collaborated with different institutions depending on the nature of the problems, such as school refusal and bullying, developmental disorders, child abuse and maltreatment, and others.

**Conclusion:** Promotion of the *Handbook* would greatly contribute to improving the management of children with psychosomatic and psychosocial disorders, together with the construction of the basic network model for management of these children.

**Key words** community-based network model, promotion, psychosocial development, psychosomatic disorders,

The number of children with psychosomatic and psychosocial disorders has steadily been increasing in Japan. According to the results of the first nationwide epidemiological survey conducted on neurosis or psychosomatic disorders among children, 5.8% of all children who visited the outpatient pediatric clinics on a given day in October 1999 were considered to have psychosomatic or psychosocial disorders.<sup>1,2</sup> The percentage of children with these disorders also increased with age. Among children 6–15 years of age, this percentage was as large as 8.2%. The most common problems or

diagnoses among these children with psychosomatic or psychosocial problems were ‘orthostatic dysregulation’, followed by ‘irritable bowel syndrome’, ‘eating disorders’, ‘tic syndrome’, ‘attention deficit hyperactivity disorders’, and ‘learning disabilities’. Approximately 10% of these patients also have a problem of school refusal.

Although these disorders have become more common in children in Japan, there are still few pediatricians who have adequate knowledge and expertise to take care of such patients. Thus, the Research Group on the Promotion of Management of Children with Psychosomatic and Psychosocial Disorders (the Research Group) carried out the present study (i) to disseminate knowledge about the psychosocial development of children/adolescents, relevant psychosocial issues and psychosomatic disorders (study I); and (ii) to establish a

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## 「子どもの心の健康問題 ハンドブック」



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**Fig. 1** *Handbook for Psychosomatic Disorders of Children.*

community-based network model to ensure effective communication among relevant parties, such as medical, educational, and government institutions (study II).

### Study I. Implementation and benefits of measures to manage children with psychosomatic and psychosocial disorders in Japan

#### Methods

In 2001, the Research Group compiled *The Draft Handbook for Psychosomatic Disorders of Children*, which was intended to provide basic knowledge necessary for diagnosing and treating the psychosomatic symptoms. The Research Group chose the contents by taking into account the results of the nationwide epidemiological study in 1999<sup>2</sup> and the training guideline of the Japanese Society of Psychosomatic Pediatrics.<sup>3</sup> *The Draft Handbook* was distributed nationwide for the benefit of general pediatricians, school doctors, and trained physicians in psychosomatic and psychosocial disorders in children. Incorporating feedback criticism/comments from all three parties, however, would have made *The Draft Handbook* too bulky because the specialists from different fields had different needs with regard to the *Handbook*.<sup>4</sup> In order to solve this problem, the Research Group considered that

**Table 1** Contents of *The Handbook for Psychosomatic Disorders of Children*

#### General issues

1. Mechanism of psychosomatic diseases of children
2. Psychosocial development of children
3. Epidemiology of the psychosomatic diseases of children
4. Interview and psychological testing
5. Primary care for children with psychosomatic disorders in general pediatric practice
6. Communication network between pediatricians and related institutions
7. Special care for children with psychosomatic disorders by a specialist of psychosomatic disorders

#### Itemized discussion

1. Orthostatic dysregulation
2. Respiratory system
3. Digestive system
4. Elimination disorders
5. Atopic dermatitis
6. Tic syndrome
7. Attention deficit hyperactivity disorders and the related disorders
8. Eating disorders
9. Psychiatric diseases
10. Childhood chronic fatigue syndrome
11. School refusal
12. Other psychosocial problems in children
13. Child abuse
14. Differential diagnose of psychosomatic diseases in children

general pediatricians would occupy the major portion of the readers, made necessary revisions and completed *The Handbook for Psychosomatic Disorders of Children* (Fig. 1; Table 1). It was distributed to pediatricians throughout Japan via relevant academic meetings and seminars in 2002.

In 2003, that is, a year after the distribution of the *Handbook*, a follow-up survey was carried out among 1285 pediatricians. A questionnaire was sent out by mail to each of them. The questionnaire consisted of whether he/she was specially trained for psychosomatic and psychosocial disorders of children, frequency of use of the *Handbook* and impression of its usefulness, questions about the changes that occurred after reading the *Handbook*, that is, changes in the respondents' thoughts of psychosomatic disorders among children as well as changes in their behavior in the clinical setting.

#### Results

The number of analyzable replies was 418 and the response rate was 32.5%. The training status of psychosomatic and psychosocial disorders of children was as follows: 14.2% of the respondents had qualified training of psychosomatic and psychosocial disorders among children (trained group), 15.5% of those had limited training (limited training group) and 68.9% of those had no training (no training group).

**Table 2** Frequency of reading and impression of usefulness of *The Handbook for Psychosomatic Disorders of Children* among study participants ( $n = 418$ )

| Questions  | (%)  |
|--|------|
| How often do you use the <i>Handbook</i> ?   |      |
| Three or four times a week   | 0.7  |
| Once or twice a week   | 4.6  |
| Three or four times a month  | 9.1  |
| Once or twice a month  | 20.6 |
| Once or twice per 2 or 3 months  | 29.4 |
| Seldom   | 33.3 |
| Was the <i>Handbook</i> useful for your clinical practice?   |      |
| Useful   | 19.4 |
| Relatively useful  | 43.8 |
| Not so useful  | 5.5  |
| Difficult to judge the usefulness  | 17.7 |
| How often did you use the tables or figures in the <i>Handbook</i> when providing advice to your patients? |      |
| To almost all patients   | 1.0  |
| To 70% of the patients   | 1.7  |
| To half of the patients  | 6.0  |
| To less than half of the patients  | 37.3 |
| Never  | 41.6 |

Table 2 indicates frequency of reading and impression of usefulness of the *Handbook*. Two-thirds of the respondents indicated that they were using the *Handbook*. Thirty percent of the respondents used it once or twice in 2–3 months. Approximately >50% of the respondents used it either once or twice in 2–3 months or once or twice a month, and the remaining 14% replied that they used it more frequently. Ten percent of the respondents made use of the *Handbook* when providing advice to their patients, 60% of whom indicated that it proved useful.

The content in the *Handbook* that was frequently referred to by the respondents (duplicate answers) was the one concerning ‘attention deficit hyperactivity disorders and the related disorders (45.2%)’, followed by those sections dealing with ‘school refusal (40.4%)’, ‘eating disorders (29.9%)’, and ‘orthostatic dysregulation (25.1%)’.

As a result of using the *Handbook*, several changes occurred to the respondents in their clinical setting. Twenty-five percent of the respondents indicated that there was an increase in the number of children visiting them with psychosomatic complaints, and 28% indicated that there was an increase in the consultation time. Thirty-seven percent of the total number of respondents, or 44% of the respondents of the limited training or no training groups, indicated changes in their behavior towards psychosomatic and psychosocial disorders. Most of these respondents answered that they became more interested in such disorders and/or started reading articles related to the topic.

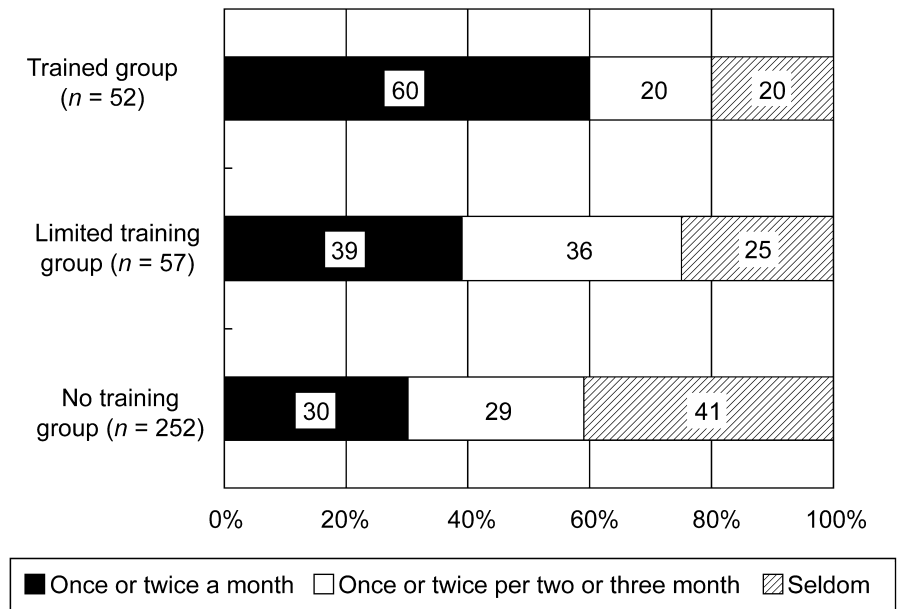
The cross-tabulation among the three groups showed that the number of respondents who read through the *Handbook* and the frequency of using it were both higher in the trained group ( $\chi^2$ ,  $P < 0.01$ ; Figs 2,3). In contrast, the percentage of

the respondents who replied that their thoughts and behavior towards psychosomatic disorders among children had changed after reading the *Handbook* was the highest in the no training group ( $\chi^2$ ,  $P < 0.01$ ; Fig. 4). This percentage corresponded to 34% in the limited training group and to 8% in the trained group.

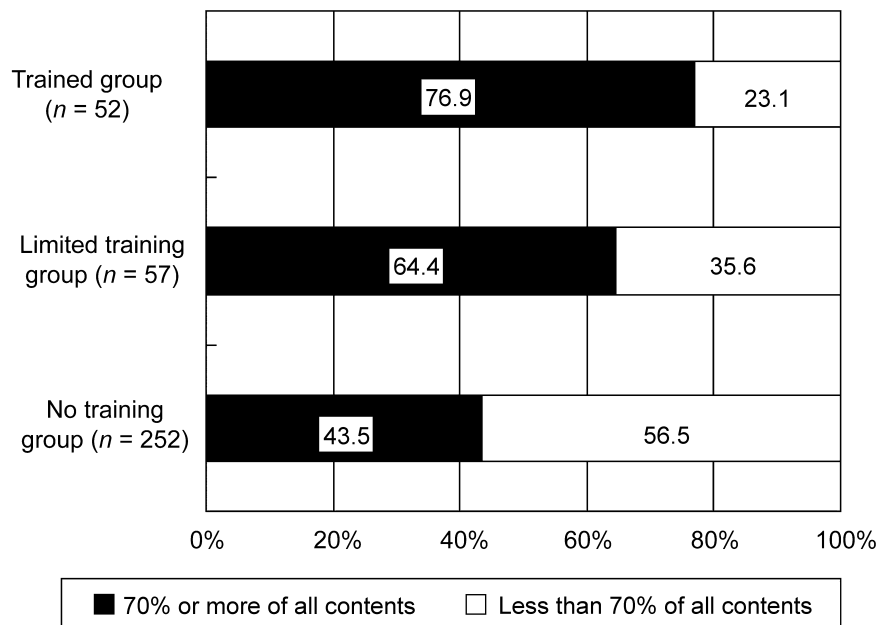
### Discussion

To disseminate knowledge about psychosomatic and psychosocial disorders of children among the general pediatricians, the Research Group compiled the *Handbook* and distributed it to general pediatricians in Japan. A year after the distribution, the Research Group evaluated the benefits of the *Handbook* by a questionnaire survey. As a result, more than 60% of the respondents used the *Handbook* during the year following the distribution. Respondents of the trained group and those who read through the *Handbook* were likely to use it more frequently than others. There seemed to be a relationship between the frequency of use of the *Handbook* and the number of patients visiting physicians with psychosomatic complaints. Nearly 40% of all respondents, or 44% of the limited training group or no training group answered that reading of the *Handbook* changed their thoughts and behavior towards psychosomatic and psychosocial disorders among children. Because the readers of the *Handbook* answered that it was useful and that it changed their thoughts and behavior for such disorders, the Research Group concluded that the *Handbook* was effective in helping pediatricians understand psychosomatic and psychosocial disorders as well as in assisting them in their clinical setting.

**Fig. 2** Comparison of frequencies of reading of *The Handbook for Psychosomatic Disorders of Children* among physicians with qualified training of psychosocial and psychosomatic disorders (trained group), those with limited training (limited training group) and those with no training (no training group;  $\chi^2$ ,  $P < 0.01$ ).

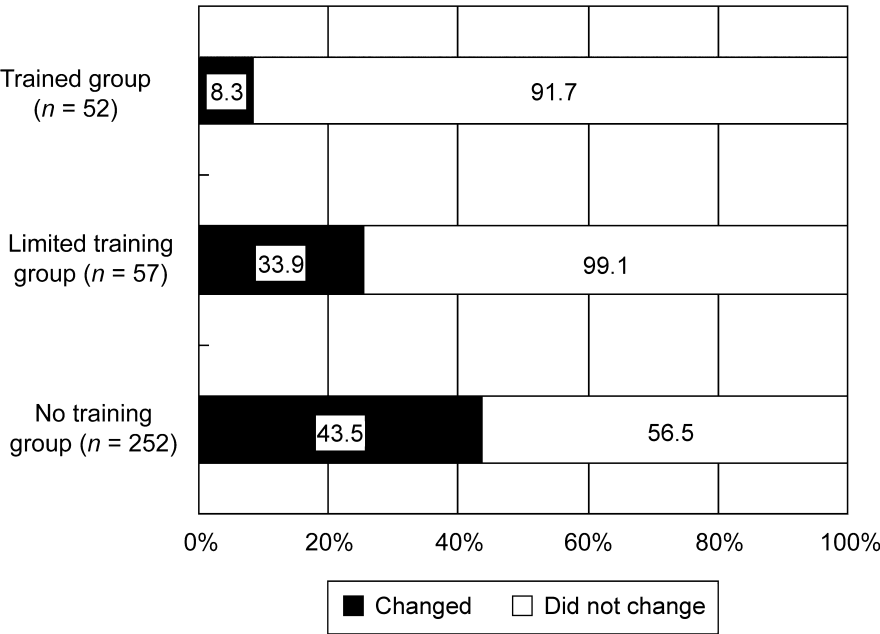


**Fig. 3** Comparison of percentage of reading *The Handbook for Psychosomatic Disorders of Children* among the trained group, limited training group and no training group ( $\chi^2$ ,  $P < 0.01$ ).



Additionally, 'attention deficit hyperactivity disorders and the related disorders', 'school refusal', 'eating disorders', and 'orthostatic dysregulation' were areas that were most frequently referred to the readers. These problems corresponded to the common psychosomatic disorders among children who visited

pediatric outpatient clinics in the first nationwide epidemiological study.<sup>2</sup> From the results of both the current study and the first nationwide epidemiological study,<sup>2</sup> these disorders were cardinal problems in the psychosomatic and psychosocial disorders in children for pediatricians in Japan (Table 3).



**Fig. 4** Comparison of percentage of respondents who replied that their thoughts and attitudes towards psychosomatic disorders among children had changed after reading *The Handbook for Psychosomatic Disorders of Children* among the trained group, limited training group and no training group ( $\chi^2$ ,  $P < 0.01$ ).

**Table 3** Cardinal problems in psychosomatic and psychosocial disorders in children for pediatricians in Japan (in order of frequency)

| Psychosomatic or psychosocial problems of children reported in the first nationwide epidemiological study <sup>2</sup> | Content in the <i>Handbook</i> referred to by respondents in the current study |
|--|--|
| Orthostatic dysregulation  | Attention-deficit/hyperactivity disorders and related disorders                |
| Irritable bowel syndrome   | Eating disorders   |
| Eating disorders   | Orthostatic dysregulation  |
| Tic syndrome   | School refusal   |
| Attention-deficit/hyperactivity disorders  |  |
| Learning disabilities  |  |
| School refusal   |  |

**Study II. Research on the current status of the communication network between pediatricians and the related institutions**

**Methods**

A multidisciplinary approach by various professionals is essential for understanding and taking care of children with psychosomatic and psychosocial disorders. However, the communication network among such professionals has not yet been established in Japan. In order to examine the current status of the communication network between pediatricians and the related institutions, the Research Group conducted a questionnaire survey on general pediatricians. Subjects were 642 pediatricians who made up the total membership of the Osaka Pediatric Association. A questionnaire was distributed to each member by mail. The questionnaire asked about what kind of communication networks between the pediatricians and the related institutions were used in their

daily practice. The completed questionnaire was returned anonymously by mail.

**Results**

The number of replies was 224 (response rate: 34.9%). The results of that survey were that the pediatricians generally collaborated with different institutions and contacted different key persons depending on the nature of the problems that could be related to a psychosomatic disorder among children, such as: (i) school refusal and bullying; (ii) developmental disorders; (iii) child abuse and maltreatment; and (iv) others (Table 4).

**Discussion**

We investigated the current status of the communication networks between the pediatricians in Osaka and the related institutions among the general pediatricians and found that

**Table 4** Groups of communication networks between pediatricians and the related institutions

| Problems                    | Institutions or professionals for collaboration  | Key person  |
|-----------------------------|--|---|
| School refusal and bullying | School<br>Board of education<br>Specialist of psychosocial and psychosomatic diseases<br>Psychiatric clinic<br>Psychological counseling center<br>Public hospitals | Class teacher<br>School nurse   |
| Developmental disorders     | Board of education<br>Health center<br>School<br>Institute of special education  | School nurse<br>Specialist of psychosocial and psychosomatic diseases<br>Psychologist<br>Speech therapist |
| Child abuse                 | Guidance center for children<br>Nursery<br>Kindergarten<br>School  | Administrative officer of the guidance center for children  |
| Others                      | Eating disorders<br>Delinquency  |   |

the subjects had several patterns of collaboration with related institutions depending on the nature of the problems. When developing a network model for the prevention and treatment of children with psychosomatic and psychosocial disorders, one should bear in mind that there should be several models corresponding to different types of problems that may be associated with the disorder. To ensure practicability of the model, its users should be able to incorporate into the model other relevant institutions and services available in the community in which they live. Assisting community pediatricians in providing adequate primary care to children with psychosomatic and psychosocial disorders is essential to ensuring physical and psychosocial development of children.

## Conclusion

*The Handbook for Psychosomatic Disorders of Children* proved to be useful in disseminating knowledge about the psychosocial development of children/adolescents, and relevant psychosomatic and psychosocial disorders. We conclude that promoting use of the *Handbook* would greatly contribute to improving the management of children with psychosomatic and psychosocial disorders, together with the construction of the basic network model proposed for the management of these children.

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