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# Stressors of School-age Children With Allergic Diseases: A Qualitative Study

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ABSTRACT

*Purpose:* Most studies of stress in children with chronic diseases have been geared toward parents and caregivers have not considered allergic diseases together. This study aimed to identify the stressors associated with allergic diseases in Japanese school-age children.
*Design and Methods:* Stressors associated with allergic diseases of 11 school-age children (seven boys and four girls; age range: 9–12 years) were investigated using semi-structured interviews.
*Results:* In the qualitative thematic analysis of stressors about allergic diseases, two themes: allergic disease-specific stressors and common stressors in chronic diseases, and 12 categories were identified. A thematic map was applied to four domains of stressor: physiological factors, psychological factors, social factors, and environmental factors.
*Conclusions:* The results showed that school-age children with allergic diseases have a variety of stressors. Future studies should aim to develop an allergic disease-specific stress management program with school-age children.
*Practice Implications:* In children with allergic diseases, not only is stress management in daily life important, but also stress management for disease-specific matters to control the symptoms and maintain mental health. Stress management should be supported for school-age children with allergic diseases.


## Introduction

The prevalence of pediatric allergic diseases has increased over the last few decades (Asher et al., 2006). In Japan, the prevalence rate of asthma is slightly lower than the prevalence in the United Kingdom, Australia, New Zealand, Canada, and USA (e.g., Fukuoka City, 13%; Tochigi Prefecture, 19%; Ebisawa, Nishima, Ohnishi, & Kondo, 2013). Not only does the prevalence of asthma in Japan seem to be decreasing, the prevalence of atopic dermatitis is also decreasing among school-age children (Ebisawa et al., 2013). However, the estimated food allergy prevalence based on survey data is 5–10% among infants (0–6 years) and 1–2% among school-age children (6–15 years; Ebisawa et al., 2013). Children with allergic diseases often experience complications related to allergic diseases. The onset of allergic diseases relates to the "allergy march," which is defined as the progression of allergic diseases beginning in infancy from food allergies and atopic dermatitis to asthma and rhinitis (Baba & Yamaguchi, 1989). School-age children with allergic diseases often suffer from several allergic diseases concurrently; hence, allergic diseases need to be considered collectively, rather than individually.

As the number of school-age children with allergic diseases is increasing, various considerations are necessary to ensure safe school lives of such children (Ebisawa et al., 2013). School-age children with asthma experience adverse effects in daily life such as in physical education, in dusty environments, when in contact with animals and during out-of-school activities involving overnight stay. Concerns for school-age children with atopic dermatitis that worsen skin eczema include stimulants, such as perspiration, chlorine in swimming pools, and ultraviolet rays. Furthermore, school-age children with food allergy experience adverse effects in daily life, such as school lunches, relationships with friends, and so on. School-age children with asthma and/or food allergy need reliever drugs for anaphylaxis and asthmatic exacerbation in daily life.

School-age children with chronic diseases experience a time of challenging transitions. Children living with chronic diseases must contend not only with the particular management demands their chronic condition imposes but also the general developmental challenges associated with maturation (Clark et al., 2010). Thus, it is important for school-age children with allergic diseases to manage the symptoms and behaviors associated with their diseases, as well as managing the stresses of daily life and their diseases.

Stress is considered a causal and aggravating factor in many diseases, including allergic diseases. Allergic symptoms and psychosocial stress influence each other (Lee et al., 2012). Improving the stress tolerance of children with allergic diseases will contribute to better disease

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control and improved quality of life (QOL) (Marsac, Funk, & Nelson, 2006). For children with allergic diseases, coping with daily stressors and disease-related stress is important for long-term disease control and management.

### *Literature Review*

A review study indicated that disease-related stressors in children with chronic disease include being confronted with symptoms, taking medication every day, living with restrictions, having to visit doctors, and social consequences (Boekaerts & Röder, 1999). A previous study suggested that stressors of children with diabetes were general diabetes-related stressors (staying well, staying healthy, having diabetes in general, general problems, social problems, hospital problem, peer argument), and specific diabetes-related stressors, such as diet, insulin injections, insulin reactions, daily glucose testing, and finger-prick, hemoglobin A1 test (Band, 1990; Rathner & Zangerle, 1996; Reid, Dubow, & Carey, 1995). Previous research has identified stressors in children with type 1 diabetes included the following categories: people, self, and context (Hema et al., 2009). The category of people included stressors related to people involved in the child's life, and was subdivided into family, friends/peers, and classmates. Stressors associated with the children themselves were grouped in the self-theme, which consisted of personal disappointments, personal failures, physical stressors and being bored (Hema et al., 2009). The context theme included stressors related to external events or challenges in the child's life and was subdivided into school, environmental conditions and chores (Hema et al., 2009).

Similar categories of stressors have been found for children with other chronic diseases, and they may be chronic disease problems that are related to the disease, such as hospital stays, venipuncture, and pain, or common problems that are related to their school, parents, family, and friends (Olson, Johansen, Powers, Pope, & Klein, 1993; Spirito, Stark, Gil, & Tyc, 1995; Spirito, Stark, & Tyc, 1994). Specifically for children with cancer, they have general stressors, such as a stressful or hard situation, and cancer-related stressors including hospital stay, hair loss, getting sick due to medicine, having cancer in general, undergoing bone marrow aspiration or lumbar puncture procedures, and nausea (Bull & Drotar, 1991; Weisz, McCabe, & Dennig, 1994). Gil, Williams, Thompson, and Kinney (1991) reported that children with sickle cell diseases have identified pain awareness as a specific stressor.

A previous study suggested that four stressors for children with asthma were a wheezing episode, academic problems, social isolation, and shortness of breath (Boekaerts & Röder, 1999; Clark et al., 1988). Patients with atopic dermatitis have several disease-associated stressors, some of which include physical discomfort due to itching and altered appearance due to flare-ups (Barilla, Felix, & Jorizzo, 2017). Youth with food allergy may experience psychosocial stressors including limitations in activities, differences from peers, and anxiety (Lebovidge, Strauch, Kalish, & Schneider, 2009). There are few studies on the stressors of children with each type of allergic disease. However, most studies of stress were geared toward parents and caregivers, and the studies did not consider allergic diseases together. In addition, there are few previous studies on the stressors associated with allergic diseases in school-age children.

### *Study Aim*

The aim of this study was to identify child-reported stressors associated with allergic diseases in Japanese school-age children. The findings of this study are important to help healthcare providers provide patient education including stress management and help school-age children with allergic diseases cope with disease-related stressors.

## Methods

### *Study Design*

We conducted a qualitative study from April 2015 to March 2016. The data were collected using semi-structured interviews and analyzed by qualitative inductive methods.

### *Participants*

The participants were school-age children with doctor-diagnosed allergic diseases. In Japan, the majority of children have allergic diseases that are mild to moderate in severity, and they visit local pediatric clinics and general hospitals. Most of all children with allergic diseases with high severity visit specialized hospitals such as pediatric hospitals and university hospitals. Therefore, the participants were recruited by the researchers during the children's regularly scheduled visits to a pediatric department at a general hospital with most being characterized as having mild to moderate allergic diseases. The following criteria were required for inclusion in the study: (a) diagnosis of any of the following conditions: atopic dermatitis, asthma, or food allergies by a pediatrician (any severity level), (b) in the age range of 9–12 years, and (c) under treatment with daily drug therapy. Participants were excluded if they had communication disorder.

### *Data Collection*

We used purposive sampling, which consists of information-rich cases that manifest the phenomenon (Patton, 2014). The researcher contacted 21 children and parents who met the inclusion criteria at an outpatient department during the study period, and 11 agreed to participate. Each of the 11 participants was interviewed once for between 25 and 40 min. The interviews were carried out by one researcher who is a nurse specializing in pediatric allergies.

Data were gathered by a semi-structured interview. We prepared an interview guide to gather data that matched the study aim. The interview guide was constructed to prompt responses to commonly occurring situations identified in previous studies on stressors and coping in children with chronic diseases (Hema et al., 2009; Schmidt, Petersen, & Bullinger, 2003). Additional demographic information such as, age at onset of each allergic disease, and therapeutic regimen, was collected on the children. The contents of the interview comprised five situations: 1) stressors with disease treatment and management, such as treatment, hospitalization, examinations, relationships with parents or siblings, 2) stressors with daily life such as diet, play, human relations, study, culture lessons, pet care, outings, relationships with parents or siblings, 3) stressors with school-life such as physical education, study, school lunch, relationships with teachers or classmates, 4) stressors outside the home such as accommodation in school events and culture lessons, family trips, and 5) stressors with their own future. The interview was recorded on digital voice recorder after receiving informed consent.

### *Data Analysis*

All recorded data were transcribed verbatim in Japanese. The analysis was based on thematic analysis (Braun & Clarke, 2006), which identified codes and themes (low subcategories, subcategories, and categories) from the qualitative data. Thematic analysis makes it possible to construct a new theoretical framework and identify common meanings and themes of an existing model. The qualitative data were analyzed in five phases: (1) becoming familiar with the collected data; (2) generating the codes and collating the similar data for each code; (3) naming content-characteristic words and grouping together as categories; (4) exploring the themes and generating a thematic map by four research members who engaged in consensual decision making.

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Research members included two pediatric nurses, a clinical psychologist, and a pediatrician specialized in allergy.

*Informed Consent and Ethical Consideration*

The University Committee for Ethics in Research Involving Human Subjects and the hospital ethics committee both approved the study. The participants and caregivers who satisfied the inclusion criteria were informed verbally and in writing about the aim, significance, and methods of the study by the researcher. They also were told of their rights as voluntary participants, including their right to withdraw from the study, the anonymity of the data, protection of private information, handling, and disposal of the data, and the possibility of publishing the study's results. After receiving this information, their consent to participate was confirmed, and each participant's and caregiver's approval was obtained in writing.

## Results

*Participant Demographics*

Eleven children, seven boys and four girls, were interviewed in hospital in the pediatric ward. Table 1 presents each participant's characteristics. The children's mean age was 10.3 years. Their allergic diseases included eight cases of atopic dermatitis, six of asthma, and four food allergies, including child who has several allergic diseases. The therapeutic regimens for anaphylaxis and asthma exacerbation were six participants had short-acting beta agonists (participant 2, 5, 6, 7, 9, 10), and 1 had an epinephrine auto-injector (participant 10).

*Description Themes of Stressors Associated With Allergic Diseases in School-age Children*

The coding and classifying phases revealed 45 low-subcategories, 29 subcategories, 12 categories, and two themes from a total of sixty-eight codes in stressors with allergic diseases (see Table 2). Grouping the categories together, we explored the two themes; allergic disease-specific diseases, common stressors in chronic diseases. We have indicated the defined subcategories with *italics*, and categories with "*italics*".

*Theme 1: Allergic Disease-specific Stressors*

*Physical and Mental Influence on Skin Symptoms*

The category including stressors associated with atopic dermatitis that evolved from and united the subcategories was "*Physical and mental influence on skin symptoms*." These stressors included *physical and mental exacerbation associated with itchiness*, and *exacerbation in skin symptoms* in the children with atopic dermatitis.

*Influences of Hospitalization With Asthma Exacerbation*

The categories of stressors associated with asthma that evolved from and united the subcategories were "*Influences of hospitalization with asthma exacerbation*." Stressors of this category included those *effecting school-life* because of hospitalization.

*Not Having Animals With Hair*

Both children with atopic dermatitis and those with asthma expressed the stressors for "*Not having animals with hair*" which also included *not touching animals with hair*.

*Visibility of the Disease*

Children with atopic dermatitis were concerned about the "*Visibility of the disease*," which included friends pointing out skin symptoms. In addition, children with food allergy experienced feelings such as sadness when discussing the need to eat foods that were different from everyone else's.

*Circumstance of Dining Out*

Children with food allergy expressed "*circumstance of dining out*," including *diet at an event* such as out-of-school activities involving overnight stay and family trip.

*Having Sudden Life-threatening Diseases*

Children with asthma experienced "*Having sudden life-threatening disease*," including *anxiousness about asthma exacerbation*. In addition, children with food allergy expressed *anxiousness about self-coping with anaphylaxis*.

*Theme 2: Common Stressors in Chronic Diseases*

*Gloominess About Using Medicine*

The categories of stressors associated with children with asthma and atopic dermatitis were "*Gloominess about using medicine*," in daily and long-term treatment such as *troublesomeness of using medicines*, *sticky feeling on applying medicine*.

*Bearing in Daily Life*

Children with food allergy and those with asthma expressed "*Bearing in daily life*" concerned such as *bearing the taste of allergen-free food* and *cease and discontinuation of play or exercise* because of the appearance of asthma symptoms.

**Table 1**
Characteristics of the study participants.

| Participant | Age (years) | Sex | Allergic diseases (age of onset/specific FA) | | | Therapeutic regimen for long term management |
|---|---|---|---|---|---|---|
| 1 | 9 | Boy | AD (0 years) | | FA (0 year/Nut) | AD: topical corticosteroids<br>FA: removal |
| 2 | 9 | Boy | AD (0 years) | | FA (0 year/egg and milk) | AD: topical corticosteroids<br>FA: oral immunotherapy |
| 3 | 10 | Boy | | BA (2 years) | | BA: ICS |
| 4 | 12 | Girl | AD (0 years) | | | AD: topical corticosteroids |
| 5 | 10 | Girl | AD (2 years) | BA (7 years) | | AD: topical corticosteroids<br>BA: ICS and LTRA |
| 6 | 10 | Boy | AD (9 years) | BA (2 years) | | AD: topical corticosteroids |
| 7 | 10 | Boy | | BA (3 years) | | BA: ICS |
| 8 | 11 | Girl | AD (2 years) | | | AD: topical corticosteroids |
| 9 | 11 | Girl | AD (0 years) | BA (2 years) | FA (0 year/egg) | AD: topical corticosteroids<br>BA: ICS<br>FA: removal |
| 10 | 10 | Boy | | BA (8 years) | FA (0 year/egg, milk, squid, octopus, fish) | BA: ICS and LTRA<br>FA: removal |
| 11 | 11 | Boy | AD (0 years) | | | AD: topical corticosteroids, antihistamine |

AD, atopic dermatitis; BA, bronchial asthma; FA, food allergy; ICS, inhaled corticosteroids; LTRA, leukotriene receptor antagonist.

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**Table 2**
Description themes of stressors associated with allergic diseases in school-age children.

| Themes | Category | Subcategory |
|---|---|---|
| Allergic disease-specific stressors | Physical and mental influence on skin symptoms | Physical and mental exacerbation associated with itchiness |
| | | Exacerbation in skin symptoms |
| | | Difficulty in refraining from scratching an itch |
| | Influences of hospitalization with asthma exacerbation | Effects on school life of hospitalization |
| | | Not matching schedule for hospitalization |
| | Not having animals with hair | Not touching animals with hair |
| | | Concern about having animals with hair |
| | | Containing wish to own animals with hair as pets |
| | Visibility of the disease | Misunderstanding of skin symptoms |
| | | Having one's skin condition pointed out |
| | | Visible skin condition |
| | | Tiresomeness of explaining diet to others |
| | Circumstance of dining out | Circumstance about diet at an event |
| | Having sudden life-threatening diseases | Anxiousness about self-coping with anaphylaxis |
| | | Anxiousness about asthma exacerbation |
| Common stressors in chronic diseases | Gloominess about using medicine | Troublesomeness of using medicines |
| | | Bothersomeness of using medicines by parents |
| | | Sticky feeling on applying medicine |
| | Bearing in daily life | Bearing with dietary quality and quantity |
| | | Cease play or exercise in an episode of asthma symptoms |
| | Difficulty in management of school life | Lack of comfort in school life |
| | | Difficulty in dietary management at the time of homeroom teacher renewal |
| | Different from others by chronic diseases | Saying one's diseases are not different from those of others |
| | | Keeping chronic diseases private |
| | | Not participating in school events |
| | | Tiresomeness of not eating like everyone else |
| | Family's economic burden from diseases | Family's economic burden from diseases |
| | The future life with diseases | Continuation of diseases in the future |
| | | Anxiety about skin symptoms in relatives with the same diseases |

*Difficulty in Management of School Life*

Both children with atopic dermatitis and those with food allergy were concerned about "*Difficulty in management of school life*," such as not using medicine when itchy because of school rules, and *difficulty in dietary management at the time of homeroom teacher renewal.*

*Different From Others by Chronic Diseases*

Most children with allergic diseases reported that the stressors for "*Different from others because of chronic diseases*," included being unable to tell friends and acquaintances that he/she has allergic diseases.

*Family's Economic Burden From Diseases*

Children with allergic diseases recognized common stressors such as "*Family's economic burden from diseases*," such as increasing the family's economic burden on treatment costs.

*Future Life With Diseases*

There were common stressors including thinking about "*future life with diseases*," such as thinking about when the disease will heal and thinking about the *continuation of diseases in the future.*

*Thematic Map of Stressors With Allergic Diseases in School-age Children*

Using thematic analysis, we identified four domains with twelve categories that comprised two themes. Four domains of stressors in the thematic map were extracted: physiological factors, psychological factors, social factors, and environmental factors (see Fig. 1). Physiological factors involved allergic disease-specific stressors such as, "*Physical and mental influence on skin symptoms*," "*Visibility of the disease*," and "*Having sudden life-threatening diseases*." Psychological factors involved both allergic disease-specific stressors including, "*Influences of hospitalization with asthma exacerbation*," and common stressors in chronic diseases, which were "*Gloominess about using medicine*," "*Bearing in daily life*," "*Different from others by chronic diseases*," and "*Future life with the diseases*." "*Difficulty in management of school life*" included common stressors identified by patients with chronic diseases that involved social factors. Environmental factors involved both allergic disease-specific stressors, which were "*Circumstance of dining out*," and "*Not having animals with hair*," and common stressors in chronic diseases that included "*Family's economic burden from diseases*."

## Discussion

This study identified two themes and twelve categories as stressors. The allergic diseases-related stressors that might be experienced in children included stressors common to children with chronic diseases as well as allergic disease-specific stressors.

Physiological factors of stressors associated with childhood allergic diseases were applied as allergic disease-specific stressors. In this study, children with asthma and food allergy felt *anxiousness about self-coping at the onset of anaphylactic symptoms and asthma exacerbation*. Asthma exacerbation as dyspnea and anaphylaxis of food allergy could lead to sudden life-threatening diseases. Anxiety about self-management, which is specific to food allergy is associated with children's daily state and characteristic anxiety (Klinnert et al., 2015). In children with asthma, negative life events involve a risk of causing asthma attacks (Sandberg et al., 2000). It is necessary to recognize stressors that trigger exacerbation, although it is not easy to eliminate current anxiety itself. Children with atopic dermatitis recognized "*Physical and mental influence on skin symptoms*"; it is suggested that they are concerned about dermatological effects due to skin symptoms. This is thought to be the result of reflecting the characteristics of atopic dermatitis as a disease, which has a great negative influence on QOL because of the problem of itching (Beattie & Lewis-Jones, 2006). On the other hand, the physiological factors that are common stressors in chronic diseases were not included in this study's thematic map. Physiological factors that were stressors in chronic diseases are diabetes-specific factors, such as insulin injections, insulin reactions, daily glucose testing and finger-pricking (Band, 1990; Rathner & Zangerle, 1996; Reid et al., 1995), childhood cancer-specific side effects of anticancer drug such nausea and hair loss (Bull & Drotar, 1991; Weisz et al., 1994), and so on. Even in allergic diseases, side effects associated with treatment existed, but there was no mention of side effects from the participants. As a characteristic of allergic diseases, the *visible appearance of skin symptoms* and the fact that children told about their atopic symptoms leads to "*Visibility of the disease*." In addition, allergic diseases are familiar to many patients. When classmates see children with allergic diseases carrying different lunch box and allergen-free food, or having symptoms of dyspnea and coughing, the children's allergic disease is more easily noticed by others. This is thought to be a factor influencing the decrease in QOL of children with atopic dermatitis.

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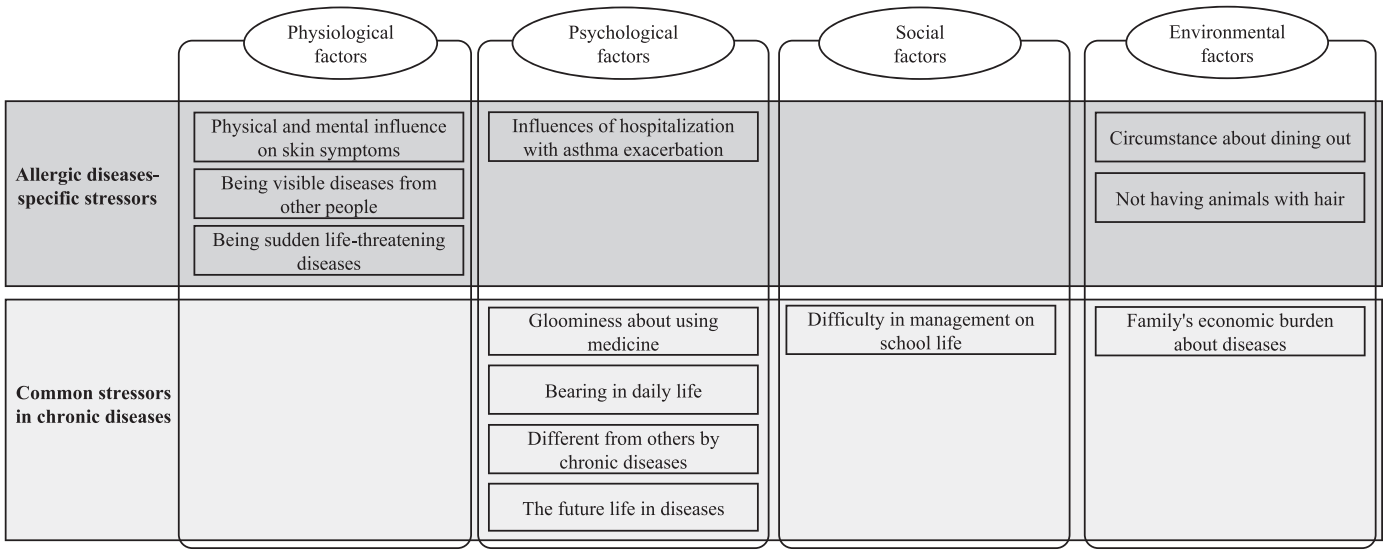


**Fig. 1.** Structured map of stressors associated with allergic diseases in school-age children.

Psychological factors of stressors associated with child's allergic diseases were applied as allergic disease-specific stressors and common stressors in chronic diseases. Since children with allergic diseases are '*Different from others due to diseases*', they are concerned about '*Being visible diseases from other people*'; therefore, the findings are related to the degree of comprehension by others. Some healthy children do not have knowledge about allergic diseases, so they could think that asthmatic coughing or the skin conditions of atopic dermatitis are contagious, and have less understanding attitude (Iio, 2012). Therefore, the findings are related to the degree of comprehension by others. In addition, the QOL in people with food allergy is reported to be lower than in those with other chronic diseases, such as type I diabetes mellitus (Avery, King, Knight, & Hourihane, 2003), which shows that the influence of "child's diet" is indispensable for physiology/nutrition, growth, and development. It appears to be important to arrange an environment in which all children can eat delightful and delicious meals. Children with asthma suffered from impairments in their play activities because of the appearance of asthma symptoms, including the interruption and termination of exercise. Hence, "*Bearing in daily life*" was a stressor. Many elementary schools in Japan have a meal service where lunch is offered at school. Thus, children with food allergies may experience classmates pointing out that they eat different lunches because they bring lunch boxes and allergen-free food. Their stressors were common to children with chronic diseases. As allergic disease-specific stressor, asthma requires hospitalization at the time of exacerbation among allergic diseases, which can influence both daily life and school life due to hospitalization. Children with chronic diseases have identified more intrusive events, while children with acute disease have identified more physical symptoms as being stressful. Children with high levels of trait anxiety were more likely to appraise hospitalization as stressful (Bossert, 1994). Evidence showed that psychological stress management interventions for children with asthma are associated with improvements in children's emotional health, increases in adaptive coping (Hampel, Rudolph, Stachow, & Petermann, 2003), and decreases in internalizing problems (Perrin, MacLean Jr, Gortmaker, & Asher, 1992). Thus, it appears that stress management interventions contribute to increased child stress tolerance, which highlights the importance of including stress management in daily self-disease management for children with allergic diseases.

Social factors of stressors associated with child's allergic diseases were applied as common stressors in chronic diseases. Children with allergic diseases felt "*Difficulty in management in school life*," such as *difficulty in dietary management at the time of homeroom teacher renewal* and *lack of comfort in school life*. These stressors influence important aspects of the school life of school-age children. Children with chronic diseases have identified disease-related social stressors, including social isolation (Boekaerts & Röder, 1999), school problems (Spirito et al., 1995), and diabetes-related social problems (Reid et al., 1995). Given these findings, both school officials and classmates should take measures to promote a better understanding of allergic diseases in schools. Additionally, since peer support is an important coping strategy to manage social stressors (Mosnaim et al., 2013; Stewart, Letourneau, Masuda, Anderson, & McGhan, 2013), it is necessary to adjust the allergies-specific peer support.

Environmental factors of stressors associated with allergic disease for children were applied as allergic disease-specific stressors and common stressors in chronic diseases. Since children with food allergy found difficulty in dining out, they were concerned about "*Circumstances of dining out*." Additionally, children with asthma and atopic dermatitis considered "*Not having animals with hair*" as a stressor. When environmental demands are found to be taxing or threatening, and coping resources are viewed to be inadequate, individuals perceive themselves as being under stress (Lazarus, 1999). Although addressing stressors within the environment is important, there are some situations where it is difficult to instantly resolve those stressors, making is necessary to first deal with environmental factors using children's individual stress coping strategies.

## *Future Directions*

Previous studies indicated the effectiveness of incorporating stress management into patient education about asthma (Hampel et al., 2003; Long et al., 2011). In other pediatric chronic diseases, stress management interventions have been developed for adolescents with type 1 diabetes (Hains, Davies, Parton, & Silverman, 2001; Hains, Davies, Parton, Totka, & Amoroso-Camarata, 2000; Soo & Lam, 2009), and atopic dermatitis (Ersser et al., 2014). Health education that includes stress management promotes understanding of the essence of stress and learning how to overcome it. Such education programs consists of: 1) increasing awareness of stressors; 2) increasing awareness of stress responses; and 3) learning how to suppress stress responses (Takenaka, 1997). It is important to teach children early about how to cope with stress to help in managing symptoms. Therefore, future studies should examine the teaching of stress management in patient education programs.

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To date, few studies have investigated children's understanding of stressors associated with allergic diseases and have only examined allergic disease-specific stress management. The data in this study from eleven children at one general hospital were used to identify stressors experienced by children with mild to moderate allergic diseases. Although the generalizability of the findings is limited, these results clarified the stressors associated with allergic diseases in school-age children, which has not been previously researched. Future studies will also need to test the validity of these findings by replicating the design in samples of children with severe allergic diseases visiting pediatric hospitals and university hospitals. In addition, we have not actually examined stress responses accompanying these stressors. In children with allergic diseases, not only is stress management in daily life important, but also stress management for disease-specific matters is important to help control symptoms and maintain mental health. The next step should be to develop a stress management program for school-age children with allergic diseases.

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The authors have no conflicts of interest to declare.

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