



Research Article

# Are There Picky Preschool Eaters in Japan?

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## Abstract

**Background:** Picky eating, defined as refusing certain foods (or food groups) and/or having strong likes and/or dislikes around food and beverages is common among North American preschool children. Japanese children under 5 years of age may have minimal amounts of picky eating due to the Japanese preschool programs that emphasize shared eating. **Objective:** The objective of this study was to assess eating and feeding practices in Japanese preschools using qualitative methods. **Subjects:** Subjects in our study included preschool teachers, administrators and preschool students. **Methods:** In this study, we visited 8 hoikuen and yochiens (kindergartens) in Tokyo and Chiba prefectures of Japan. Interviews were conducted with managers, teachers and dietitians and qualitative observations were made of meal and snack times. Themes were extracted from notes that were taken during interviews. **Results:** Japanese preschool/nursery meal times are structured and follow a specific format of thanks, multiple plates/bowls of food (none of which are finger foods) and group seating. Specific themes that emerged from interviews and observations were presence of structure/rules around eating, absence of parental involvement in meals, importance of seasonality in determining meal composition, nutrition education and absence of picky eating. **Conclusion:** The frequency of picky eating in the United States may be a culture-bound syndrome, or a behavior/syndrome specific to American and Western cultural norms. Additional studies with a larger, more diverse group of Japanese preschools are needed to confirm our findings.

**Keywords:** Picky-eaters; Japan; Toddlers; Preschool; Obesity

## Introduction

Picky-eater is a term that indicates consuming a limited number of different types of food, having strong food likes and dislikes and restricting the intake of new foods or certain food groups [1]. Studies with children in North American have found that up to 50% of children are picky eaters under 24 months of age [2] Indeed, a recent article in the American Family Physician journal indicates that food neophobia is a normal stage of development for children [3].

Picky eating is not limited to North America. Countries in East Asia including Taiwan and China have reported a high prevalence of picky eating in preschool children, up to approximately 50% [4]. Meanwhile, studies on growth in picky eater preschool children find that picky eaters tend to have lower weight and height for age percentiles. Although picky eating is

common, it may not necessarily always be benign, as there can be associated health concerns [4]. In part, growth can be impacted, because picky eaters often eat foods with that have more added sugars and those with a high carbohydrate content. It is argued that picky eating is heavily influenced by environmental factors (e.g. parent behaviors such as limited food choice or restriction of certain foods or promise of a reward), which can result in picky eating behaviors [5].

Japan has a lower prevalence of obesity than the rest of East Asia and Asia in general [6]. We sought to investigate the cultural context of the food environment in Japanese preschools. We hypothesized the nursery/preschool lunches may limit or reduce the development of picky eating in Japan.

## Japanese Preschools and Nursery Schools

A high percentage of Japanese children attend nursery school (hoikuen) and preschool/kindergarten (yo-chien). More than 70%

of three-year olds, 80% of four year olds and 90% of 5 year olds attend hoikuen or yo-chien in Japan [7]. Hoikuen is managed by the Department of Health and Social Welfare and in order to get licensing most schools have kitchens and dietitians associated with the schools who plan out all meals (all children get the same meals every day, with the exception of children who have allergies who are provided with allergen free alternatives) [8]. At the yo-chien, by contrast, many children will bring a bento box (a boxed lunch), at least a few days per week [8].

Previous research suggests that at both types of nursery schools, however, children follow strict rules for eating and finishing meals [9]. Group ethos may create a situation where the whole class has to wait until the last child finishes, preventing children from being picky eaters or else they may get teased by peers.

There may be a reduction in picky eating in Japan due to the structured eating environment at Japanese hoikuens. We further hypothesized that these strict rules prevent the development of picky eating behaviors in Japanese children.

## **Ethnographic Research at Japanese Nursery Schools**

### **Subjects and Methods**

During 2019-2020, we visited eight different nursery schools (hoikuen and yo-chien) in Tokyo and Chiba areas including one university school that was unlicensed, one unlicensed unaffiliated nursery school and one yo-chien (kindergarten). Different management groups including Shogakukan-Shueisha, Hitowa Kids Life, Poppins and Global Kids Corp. Nursery schools were chosen based on convenience sampling managed the preschools. We conducted open-ended qualitative interviews with teachers, managers/directors of the nursery school, management groups and dietitians to assess structure of daily eating, rules around eating and how problem eaters were addressed in the classroom environment. Visits lasted between 2-3 hours. Questions centered on eating practices, rules and restrictions and were conducted in English and Japanese and including the following questions: What types of rules are present around eating or mealtime? What happens if a child does not follow the rules? Are parents allowed to bring in specific meals for the child? Which foods/beverages are not allowed at the school? Observations on site included observation of meal times, snack times and viewing of the kitchen (from outdoor viewing areas). We specifically asked about how picky eaters were dealt with and whether there were any picky eaters in the schools (defined as children who refused to eat what was being served or only ate a limited number of types of foods). Notes were taken during the interviews and subsequently common themes were extracted from the interviews. Themes are described in results below.

We also collected menus, which were specific to each age group. Menus were translated from Japanese to English. The study received exempt approval from the Institutional Review Board (Committee on Human Research (CHR) of the University of California, San Francisco (IRB #19-29644). Informed Consent for participation was verbal from participants. The Institutional Review Board waived signed informed consent as there was no Protected Health Information (PHI) collected from subjects.

### **Results**

All hoikuens that we visited with the exception of the two unlicensed ones and the one yo-chien had kitchens on-site that prepared all children's meals.

### **Rules**

Specifically, we asked questions about rules around eating and one of the major themes that emerged in all the schools was that there was a specific structure to mealtime that children were expected to abide by these guidelines. Universally, the preschools had the same approach to eating and finishing food for children. All children were seated together by classroom, ate together and said a small statement of thanks prior to beginning the meal (itadakimasu or "I humbly receive this meal"). Foods served consisted on foods that needed to be eaten with chopsticks, spoons or forks (e.g. a meat dish, vegetables and a soup were always served at lunchtime or spoons for younger children). Cut up fruit is commonly served as desert. There were no finger foods that were served as the main meal. Attached are photos (Figures1- Figure 2) of one of the school kitchens (Figure 1) as well as examples of typical meals that are provided to children in the hoikuens (Figure 2).



**Figure 1:** On-site kitchens at hokuikuen.



**Figure 2:** Typical three-four plate meals at hokuiens including seating pattern.

Another theme that emerged was the absence of parental involvement from the meal process. Not all hoikuens that we visited allowed outside food or beverages brought in by parents. There is only one option (school meal) and children or parents with concerns are not allowed to bring food from home. The only drinking options for children are milk; water and mugicha (a barley non-caffeinated tea) were also universally followed by all the schools. The schools did not allow any types of sugar-sweetened beverages such as sodas or fruit drinks to be served or brought in by parents. The unlicensed hoikuen and the yo-chien, by contrast, allowed bento boxes (packed lunches from home) but desserts and certain types of beverages (sugar sweetened beverages or flavored milks/yogurts) were not allowed by the school. Holiday and birthdays were celebrated by the schools (not by the parents) with special meals chosen by the school (often not of a sweet variety). The schools and dietitians determined how holidays would be celebrated and which types of food would be regularly served without parental input.

### **Types of Meals and Seasonality**

Another theme that emerged was using mealtime as part of the educational process related to teaching about seasons and geography. Specific foods/beverages were chosen to be part of the menu based on seasonality as well as to educate about regions of Japan or other parts of the world. The construction of meals was a process that was orchestrated by the dietitians, administrators and based on governmental dietary standards and parents were not allowed to be involved in this process.

Similar to the emphasis on seasonality in Japanese cuisine, the preschools chose seasonal vegetables and fruits to serve at meals as well as meals that indicated the beginning of spring or

were more suitable for winter. Below we outline some of the meals that were commonly served for lunch and snack time to 3-year-old children although variants of these meals were also served to two- and 4-year-old children at the same schools.

Main dishes included dishes from other countries as well as the different regions of Japan. Common Japanese dishes included the following: yakitori don (grilled ginger chicken), salmon teriyaki, gomayaki (sesame steak) or sawara (Spanish Mackerel fish), spinach don (spinach rich bowl), swordfish steak and stir fry tuna and hijiki (Japanese seaweed). Dishes from other countries included meat and potatoes, Milan cutlet (chicken or beef) and Turin fried chicken (Italy). Regional dishes included the following with specific education on the regions these foods were most celebrated in: Okinawa oden (fish dumplings from Okinawa prefecture), kubirichi (fried seaweed and pork from Okinawa prefecture), bukkake udon (udon noodles with bonito fish and creamy soy sauce from Okayama/Kagawa prefectures), chicken nanban (chicken with cream sauce from Miyazaki prefecture), eggplant dish (from Ehime prefecture), imotaki (hotpot with taro from Ehime prefecture) and nyumen (soup with Japanese vermicelli from Nara prefecture). Other vegetables that were commonly served on the side included traditional Japanese ones such as simmered dried daikon strips (radish) or komatsuna (Japanese mustard spinach).

All the nursery schools included afternoon snacks with some snacks having a regional teaching emphasis or specific to celebrate a certain time of year. Snacks included rice balls, seaweed rice, spring cabbage cooked rice (more commonly served in spring), soy milk kuzumochi (mochi cakes made of Lactobacillales fermented wheat starch (typically served in summer), rorukeki of strawberries (roll cake), cocoa donuts, eho maki (long sushi roll eaten to celebrate beginning of spring) and karaimo dumpling (sweet potato dumpling from Kyushu island) among others.

Soups served included traditional Japanese soups in addition to soups from other cultures (e.g. China and Italy) bamboo shoot, bean sprout, minestrone, chuka soup (“Chinese soup”), bonito soup (bonito fish), seaweed, miso and thick fried tofu soup. Soup was always included at lunch meal as was salad. Daily salads include cucumber salad, hijiki seaweed salad (brown algae), Japanese potato (with cucumber or carrots) or Japanese vermicelli salads.

### **Picky Eating**

Another theme that emerged was the absence of picky eating. All teachers and staff that we interviewed denied any problems with picky eating among children at the nursery schools. It appeared that this problem was either nonexistent or just not recognized even if problematic. The structure of the nursery schools that we visiting did not accommodate any special preferences or diets with the exception of allergies.



Although we did not witness and food or beverage refusals, we observed how second or leftover portions were allocated as well as how staff addressed behavioral problems. We witnessed a couple instances where there were leftovers for snack and children had to engage in raffle type participation (led by the teacher) in order to receive seconds. All 3-4 year old children (class of 20-30 children) enthusiastically participated these in even though there were only 2-3 servings remaining. We similarly witnessed experiences where a couple of preschool children (2-3 years) wanted more food than was provided (in particular seconds of rice). Although the children had tantrums, these demands were discussed by teachers, noted and not provided.

### **Nutrition Education**

Another theme that emerged was discussions and teaching of healthy versus unhealthy foods. All of the hoikuens we visited had dietitians provide nutritional education to young children. In addition to the seasonality and geography of menu items, dietitians educate about healthy food and physical anatomy. Indeed, in 2004, the Ministry of Education implemented the Basic Law of Shoku-iku or healthy eating in schools from primary up, so that healthy eating and nutrition is taught in every school including preschools [10,11]. As early as the preschool-education period, healthy nutrition is emphasized in the school environment. We saw nutrition education of children from 2-4 years of age that centered on introduction of new fruits or vegetables, seasonality (as described above) cooking foods, nutrition as health (categorization of foods and unhealthy/healthy foods) and which parts of the body were involved in which physical processes.

### **Discussion**

In contrast with American preschools and nursery schools where there are fewer restrictions on parents bringing in food including lunch and snacks for children, the eating environment is heavily regulated by the Japanese government for the licensed nursery schools (hoikuens). Other researchers have commented on the structured and rule-based nature of Japanese preschools and the importance of commensal behavior with respect to eating [12]. Picky eating, by definition, is an approach to eating that departs from the group eating behavior.

It is possible that we did not witness any problems with picky eaters because picky eating is not tolerated. There were not special or unique meals for children who had food preferences. The only eating differences that we witnessed were related to food allergies, which were carefully attended to with children eating in separate locations with different meals and care providers.

It is theorized here that other areas of the world including the United States, Europe and other parts of Asia may have problems with picky eaters in preschool because parents, teachers and the

community tolerate and anticipate these behaviors. The example of preschools and daycares in Japan illuminate the plasticity of childhood and the possibility that children could conform to more rigid feeding structures. In psychiatry, the term “culture bound syndromes” has been used to describe the manifestation of particular symptoms in a certain cultural context such that the “disease” is only recognizable in a certain society or culture [13] Picky eating may be a cultural phenomenon, most common in cultures and communities impacted by Western norms that allow children independence and choice with early feeding decisions. The example of preschools in Japan suggests that American children could have improved eating habits and behaviors and potentially a resultant potential decrease in the prevalence of obesity; picky eating behaviors may be a Western-specific culture bound syndrome. The possible absence of picky eating in Japan may be due to the importance of meal times as a group experience and eating alone or outside of the group experience/practice is culturally frowned upon.

Mealtime is a structured experience in Japanese preschools and individual choices for food are not permitted. The focus on teaching children about seasonal foods, healthy versus unhealthy meals and meals as a communal experience are echoed in other ethnographic studies of preschool eating in Japan [7] we argue that picky eating may be a culture bound syndrome specific to North American and European settings as there are limited reports of picky eating in Japanese preschools. American children could have improved eating habits by restricting approaches to eating in the school setting.

### **Limitations**

This study evaluated a small number of preschools in urban Japan. Future studies with a greater number of preschools, in diverse parts of Japan including both rural and urban areas, are needed to confirm our findings.

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