



Mitigating barriers against accessible cities and transportation, for child-rearing households

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ABSTRACT

This paper discusses the types of cities and transportation environments required for increasing quality of life of child-rearing households in Japan. The author proposes a classification of barriers that child-rearing parents face in their daily lives. An international comparative study shows that the behavior of and public attitudes toward stroller users in Japan are very different from those in other countries. In addition to providing accessible environments in cities and transportation systems, improving the quantity and quality of childcare services and information, and alleviating the scheduling constraints that come along with rearing children, it is also essential to raise public awareness of child rearing and travelers with children, a development that could help increase the birth rate in Japan.

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1. Introduction

Japan is facing an aging society with fewer children. The total fertility rate (the average number of children born to a woman over her lifetime) declined from 2.14 in 1973 to 1.43 in 2013, which is one of the lowest among developed countries (in 2011, the rate in the United States was 1.89, France 2.01, Sweden 1.90, UK 1.91, Italy 1.42, and Germany 1.36) [1]. In July 2014, the Japan Policy Council made a proposal aiming to boost the total fertility rate to 1.8 in 2025 [2]. Although the Japanese government has been aware of this problem since the 1990s, it has only recently started to tackle the issue in earnest. Many people want to have more children, but various economic, social, physical, and psychological barriers stand in the way. The main reasons behind the decreasing birth rate is that people are marrying and having their first children at older ages and that couples are having fewer children overall, conditions that stem from a variety of backgrounds: economic depression, unstable employment, increasing numbers of double-income families, day-care center shortages, and tax system difficulties all contribute to the issue. Compared with other European countries, the ratio of working women in their thirties is low in Japan, resulting in an “M-shaped” curve in the relationship between age and the ratio of working women.

At the same time, Japan has enacted several laws related to accessible cities and transportation for all, especially for elderly and disabled people.

Since the Law on Buildings Accessible and Usable by the Elderly and Physically Handicapped (the *Heartful Building Law*) went into effect in 1994, buildings and facilities that elderly and disabled people regularly visit have had to meet national accessibility standards. Under the Law for Promoting Easily Accessible Public Transport Infrastructure for the Aged and the Disabled (*Transportation Accessibility Improvement Law*), which lawmakers established in 2000, public transport business operators such as railway and bus companies are required to improve their vehicles and stations to meet accessibility standards. In addition, the law mandates that local governments draw up master plans of accessibility improvement, typically for train stations and surrounding areas, in cooperation with relevant stakeholders. In 2006, the *Heartful Building Law* and *Transportation Accessibility Improvement Law* were integrated into the Law for Promoting Mobility and Accessibility for the Aged and the Disabled and the others (the *New Accessibility Improvement Law*). Under these legal provisions, roads and streets, railway stations, trains and buses, public facilities, and shopping centers have undergone rapid transformations to offer universal accessibility. For example, elevators at train stations, wide and flat sidewalks, step-less buses, and multi-purpose bathrooms at railway stations, public facilities, and shopping centers have made it much easier for people with limited mobility to venture outside and participate in out-of-home activities than before.

The built environment of cities and transportation has become accessible not only for wheelchair users and the elderly but also for people with young children, including stroller users—a segment that has been using trains in greater and greater numbers recently, especially in metropolitan areas like Tokyo and Osaka. However, conflicts sometimes arise between stroller users and other passengers at railway stations, on trains and buses, and in elevators, among other settings. In 2013, the Japanese government's Ministry of Land, Infrastructure,

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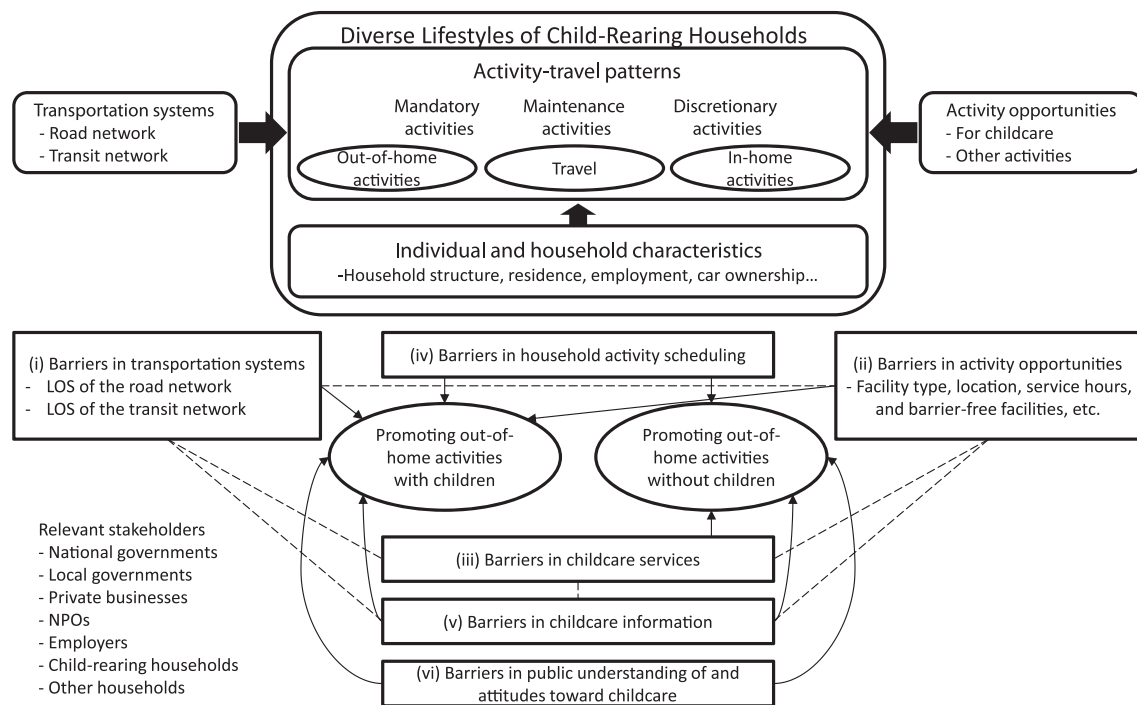


Fig. 1. Barriers restricting daily activities for child-rearing parents [7].

Transport and Tourism (MLIT) organized a committee and discussed desirable solutions that would allow people to use strollers on public transportation safely and comfortably [3]. The committee concluded that, in the short term, measures should focus on educating stroller users about safe usage and raising public awareness of stroller users. The long-term measures, meanwhile, could be to develop safer strollers and to provide priority space for stroller users on trains and buses [3].

This paper discusses accessible cities and transportation for households rearing young children in Japan. Section 2 reviews the existing literature on accessible cities and transportation for child-rearing households. Section 3 proposes a classification of barriers that parents with young children face in their daily lives. Section 4 introduces a comparative analysis of public attitude toward stroller users between Japan and other countries. Section 5 introduces recent activities that have aimed to raise public awareness of travelers with children in Japan. Section 6 concludes the paper and discusses future research approaches to realizing cities and transportation that are friendlier for child-rearing households.

2. Literature review on accessible cities and transportation for child-rearing households in Japan

Research into accessible cities and transportation for child-rearing households covers a wide variety of fields, including city planning, transportation planning, architecture, social welfare, and education. Recently, Japanese academic societies related to cities and transportation have paid considerable attention to this research topic. From 2012 to

2014, the Japanese Association for an Inclusive Society [4], City Planning Institute of Japan [5], and Japan Society of Traffic Engineers [6] organized special issues on child rearing in their journals. More and more researchers have begun to appreciate the importance of this research field. This section reviews existing literature, mainly in the field of transportation research in Japan.

A traveler with young children is defined as a (temporarily) “mobility-handicapped” person. Such travelers carry their children along with many childcare goods and supplies (milk bottle, diapers, pre-moist wipes, etc.) in their strollers, which make it difficult to climb stairs. Escalators are not recommended due to safety concerns, so stroller users rely on elevators. Some researchers have investigated the travel behavior of child-rearing women. Empirical studies in the Tokyo metropolitan area include Ohmori et al. [7] who conducted a web-based questionnaire of 1000 child-rearing women living in central Tokyo, suburban Tokyo, and the northern Kanto area. They found differences in travel behavior (frequency and travel mode) and attitudes toward barriers among the three areas. The authors also showed that mothers with children under three years of age, mothers with fewer years of child-rearing experience, and nuclear families not receiving help from others encountered more barriers. Ishigami et al. [8] analyzed the travel behavior of young women using data from a large-scale household travel survey (Tokyo Person Trip Survey 2008). Despite lacking direct information on the relationships of household members and on people accompanying children, the paper reports differences in travel behavior between women with and without children. Shinpuku et al. [9] revealed that while there are large numbers of childcare facilities such as nursing

Table 1
Parties responsible for mitigating barriers.

	National govt.	Local govt.	Private businesses	NPOs	Employers	Child-rearing households	Other households
1. Transportation systems	X	X	X				
2. Activity opportunities	x	X	X				
3. Childcare services	x	X	X	X	x		
4. Household activity schedule	x	x	x	x	x	X	x
5. Childcare information	x	X	x	x		x	
6. Public attitudes toward childcare	X	x	x	x	x	x	x

X: primary; x: secondary.

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