

Improvement Plan for Safety Management System related to Kids Cafe

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As the number of kids cafes, one of the children's playgrounds, is increasing rapidly, safety accidents in the kids cafe are also increasing rapidly. The facility is also increasing as the need increases, but it is spreading without ensuring safety. In particular, the Ministry of Public Administration and Security for children's play facilities in the kids cafe, and the Ministry of Culture, Sports and Tourism for organic organizations are divided into different departments, so it is not easy for local governments to manage and supervise the actual business, and there are safety blind spots. Kids cafes have changed rapidly according to needs of children and guardians who are users, and there are many problems associated with them. Therefore, we identified problems that may arise due to insufficient safety management systems for kids cafes, investigated the safety management related to kids cafes in advanced countries, and compared and analysed them with domestic systems. As a result of the research, we proposed a safety management reinforcement system, and we hope to contribute to the reduction and prevention of kids café safety accidents.

Keywords: Kids Cafe, Safety Accident, Children's Play Facility, Disposal Equipment, Safety Management System, Safety Inspection

1. Introduction

"Kids Cafe" means an indoor space in accordance with the 「Tourism Promotion Act」. Installation of organic facilities or organic equipment, or paid facilities provided for children to play by installing children's playground equipment. It refers to the business office of a person who does public business providing food and beverages to children or accompanying guardians [1].

These kids cafes are popular with parents with young children as they have not only amusement facilities where children can play, but also cafe spaces where accompanying parents can rest. Based on 2,300 nationwide operations [2].

However, as the need for kids cafes increases, the facilities also increase. However, it is spreading recklessly without securing safety. Child safety accidents are also increasing due to the use of kids cafes. Risk cases related to kids cafes received through the Consumer Risk Monitoring System (CISS) of the Korea Consumer Protection Agency was 333 for 3 years (2013-2015), and 230 cases, especially in 2015, a 411.1% increase from the previous year was received. As for the symptoms of harm, 102 cases (31.9%) and 78 cases (24.4%), 45 cases of 'bruises' (14.1%), 34 cases of 'sprains' (10.6%), etc. And 9n = 320), for hazardous facilities, 97 cases (35.5%) of 'trampoline' The most frequent, followed by 'facilities' (48 cases, 17.6%), 'slides' (32 cases, 11.7%), etc. (n=273 cases) [3].

In addition, in Korea, there is no unified safety management system for kids cafes, and play facilities such as seesaws and slides are managed by the Ministry of Public Administration and Security by applying the 'Children's Play Facility Safety Management Act', and mini-trains, trampolines, jungle gyms, etc. are organic devices. It is a system managed by the Ministry of Culture, Sports and Tourism in accordance with the 'Promotion Act'. Children's play facilities and organic facilities, food and beverage facilities, environmentally hazardous substances, fire safety, etc. are categorized into different factors for installing and maintaining a kids cafe, and the Ministry of Culture, Sports and Tourism, Ministry of Trade, Industry and Energy, Ministry of Public Administration and Security, Ministry of Environment, Ministry of Food and Drug Safety, Fire Department manages it [1]. Accordingly, the Civil Rights Committee recommended the Ministry of Public Administration and Security to prepare and distribute the "Kids Cafe Integrated Management Guidelines" to facilitate safety management by gathering and distributing regulations that apply to individual facilities, safety inspections and inspections, and safety education [4].

Therefore, in this study, we attempt to seek ways to improve the safety management system of children's cafes in Korea through comparison and analysis by examining and comparing systems related to the installation and maintenance of children's cafes in Korea and major developed foreign countries (mainly in Japan, the United States, and the United Kingdom).

2. Research Method

In this study we analyze the contents of safety related laws related to children's play facilities and organic facilities in Korea among the laws related to kids cafes, while also researching and analyzing safety related laws related to children's play facilities and organic facilities in Japan, the United Kingdom, and the United States by comparing the differences and characteristics of each country, and attempt to suggest improvement plans for the safety management system related to kids cafes in Korea.

3. Results

3.1 Safety Management System Related to Kids Cafes in Japan

Kids cafes are divided into a children's play facility and an amusement facility (organic facility). The technical level of children's playground equipment and organic equipment follows the standards of ASTM-F1487, ASTM F846 in the United States and EN1176 in Europe, centering on the Framework Act on Building [5-7]. As a standard for safety management of children's play equipment, the Japan Park Facilities Association has developed and operated JPEA-2002 as a safety standard for children's play facilities [8]. The public and private sectors share the role of the inspection agency, giving priority to ensuring fairness and safety [9-11].

1) Installation inspection

In the case of children's play facilities, quality control is carried out step by step by instructing, accepting, and consulting the contractor for the installation of play equipment

In the case of organic facilities, the inspection system related to the use permit until the installation of organic equipment is operated is divided into procedures such as confirmation inspection at the installation stage, intermediate inspection after the start of construction, and completion inspection after completion.

2) Safety inspection and maintenance

In the case of a children's play facility, an initial inspection is performed immediately after installation by the manufacturer and constructor to confirm the initial operation performance in the presence of the manager. The manager conducts daily inspections during daily work in order to investigate the presence or absence of any deformation or abnormality in the facility through sensory testing. A specialized technician entrusted by the manager conducts detailed regular inspections at least once a year at regular intervals rather

than routine inspections.

In the case of organic facilities, they are identified as elevators, and are designated and managed as structures under the Basic Building Act. Regular inspections are conducted by a qualified inspector with an inspection certificate by a specific administrative agency, and are prescribed at least once a year. Apart from regular inspections, self-inspection is usually performed 1-2 times a month along with daily inspections, and it is recommended to perform autonomously.

Meanwhile, for the safety management of private children's play facilities, the Playground Safety Network (PSN) provides play facility safety education services.

3.2 American Kids Cafe Related Safety Management System

Safety management and evaluation are carried out by the government, inspection agencies, and civic groups. Based on the guidelines issued by the Consumer Product Safety Committee (CPSC), 「Handbook for Public Playground Safety」 and the technical regulations of the American Association for Testing and Materials (ASTM), the F-24 Committee of ASTM has been established by the International Organic Facilities Association (IAAPA). Organic facilities are inspected based on the developed Standards on Amusement Rides and Device [5, 12, 13].

1) Installation inspection

When installing children's play facilities or manufacturing play equipment, safety regulations must be observed by applying the guidelines issued by CPSC and "Handbook for Public Playground Safety" and the standards of the ASTM. Children's playground safety inspection is basically conducted by CPSIC (certified playground safety inspector), and in the case of organic equipment, the IAAPA conducts.

2) Safety inspection and maintenance

The frequency of safety inspections for children's play facilities varies from state to state in the United States, so some states take place regularly, while others take place irregularly without a fixed period. The inspection method is presented in the guidebook "Public Playground Safety Handbook" presented by the CPSC.

In the U.S., measures to increase the safety rate for children's play facilities are being carried out through non-profit organizations rather than under the guidance of the government, and the CPSC created guidelines for children's play equipment and facilities, NPSI is required to join the private company NRPA as a member after completing the safety investigation team expert training course that manages and inspects children's play facilities.

Safety checks conducted by private companies that have been accredited are generally divided into three categories, including play facility inspection, play facility safety inspection, and play facility safety consulting.

- (1) Amusement facility inspection (regular inspection) refers to a regular inspection conducted by experts by the Safety Investigation Team (CPSI) qualified by NPSI.
- (2) Play facility safety inspection includes detailed parts of children's play facilities to perform facility safety inspection. If it was previously done through a documentary evaluation, the amusement facility audit process also performs on-site inspection. At this time, the audit standards for amusement facilities are judged whether or not Handbook for Public Playground Safety and ASTM F1487 are complied with.
- (3) Amusement facility consulting is to present overall consulting related to playground equipment and facilities, and it is extensively performed facility consulting such as safety design of amusement facilities, safety education seminars, programs in amusement facilities, self-inspection and monitoring of amusement facilities, responsibility-related issues and legal issues, etc.

3.3 British Kids Cafe Related Safety Management System

The UK government manages accident-related prevention and related regulations through an organization called RoSPA (Royal Society for the Prevention of Accidents). The technical level is based on

EN1176 and EN1177 [10, 14].

1) Installation inspection

All inspections must comply with the legal provisions of RoSPA and EN1176 regulations. In other words, all inspectors at Kids Cafe in the UK are supervised by RoSPA. According to the guidelines for safety management of indoor play facilities, three things (supplier's selection, design and layout, product) must be checked before installation.

Children's playground equipment is inspected in accordance with the safety requirements of playgrounds and safety requirements for each facility in accordance with EN 1176-1 ~ EN 1176-11.

2) Safety inspection and maintenance

In the long term, all play facilities in the UK are subject to safety checks on a regular basis at least once a year each year by independent experts for play facility safety issues, equipment and additional ancillary facilities. The inspection must comply with the legal provisions prescribed by RoSPA and EN1176 regulations just like the installation inspection, and the inspector can only perform the periodic inspection by the inspector who has completed the highest course in RPII. RoSPA is implementing a circuit inspection service so that children's playground safety inspections can be inspected inexpensively.

Safety inspections are conducted by RoSPA, ILAM, NPFA, etc., and must be performed twice a year by experts with experience and knowledge of all types of amusement facilities. After the operation, it must undergo a regular inspection at least once a year and a risk assessment at least once every two years.

Safety inspection is conducted from the three viewpoints of visual inspection, operation inspection, and annual inspection.

(1) Routine visual inspection

Hazards that can be clearly identified with the naked eye are examined, and hazards should be checked regularly. Inspections are conducted every week, and inspections are conducted focusing on the cleanliness, degree of wear and damage of facilities, corrosion or damage status, structural safety of facilities, surface safety, and presence or absence of damage and loss of accessories.

(2) Operational inspection

Operational inspections are more specific than visual inspections. According to the advice of the facility installer or the condition of the facility, the manager should conduct an inspection every month. The inspection includes the inspection of permanent facilities, and includes the contents of facilities that require special attention.

(3) Annual main inspection and maintenance

Annual inspections determine the average level of safety of facilities and floor conditions, and basic equipment. The inspector should leave a report on the safety that may occur due to abrasion, damage, repair, and corrosion of facilities, as well as replacement and addition of accessories. In addition, a special report is made for the contents of surface inspection for safety, damaged facilities and missing accessories, and structure inspection of facilities. That is, the annual regular inspection includes inspections of permanent facilities and facilities that require special attention, and as a result of these periodic inspections, the inspector may request the facility to be dismantled.

The safety management of children's play facilities is subject to The Occupiers Liability Act (1957) and the Health and Safety at Work Act (1974).

In addition, for the management of amusement facilities, education for kids cafe staff is conducted in accordance with the requirements of the Ministry of Health and Safety. Professional training and common training for full-time employees and temporary employees are separately provided, and detailed training such as user safety management and safety management for each facility are provided.

3.4 Safety Management System Related to Kids Cafe in Korea

The playground equipment installed in the kids cafe is classified into children's playground equipment

(swings, slides, public playground equipment, etc.) under the Children's Play Facility Safety Management Act and organic equipment (trampoline, mini train, mini air bounce, etc.) under the 「Tourism Promotion Act」 [15, 16].

1) Installation inspection

In the case of organic facilities, when the first permission for the amusement facility business and the installation of organic devices are newly installed, organic facilities and devices subject to safety inspection must undergo a safety test, and 「Organizations and procedures such as safety inspection of organic facilities or organic devices (Notification No. 2017-40 of the Ministry of Culture, Sports and Tourism) It must meet the standards of No.)」.

In the case of a children's play facility, the management entity or installer of the children's play facility must install the children's play equipment, which has obtained safety certification pursuant to Article 17 of the Special Act on Children's Product Safety, in conformity with the facility standards and technical standards notified by the Minister of Public Administration and Security when installing new or re-installing or moving facilities. Play equipment must be installed in conformity with facility standards and technical standards notified by the Minister of Public Administration and Security, and must be inspected for installation by a safety inspection agency. In the case of organic facilities, when the first permission for the amusement facility business and the installation of organic devices are newly installed, organic facilities and devices subject to safety inspection must undergo a safety test, and 「Organizations and procedures such as safety inspection of organic facilities or organic devices (Notification No. 2017-40 of the Ministry of Culture, Sports and Tourism) It must meet the standards of No.)」. Organic facilities and equipment that are not subject to safety inspection must undergo an inspection to confirm that they do not fall under the safety inspection object.

2) Safety inspection and maintenance

In the case of a children's play facility, the management entity of the children's play facility must undergo a regular facility inspection every two years after undergoing an installation inspection. The management entity of children's play facilities shall display the results of regular facility inspections by installing or attaching them to appropriate places within the children's play facilities, or by printing or engraving. In addition, safety inspections should be conducted at least once a month, and the results should be recorded in the safety inspection execution register and stored for 3 years.

In the case of organic facilities, organizations subject to safety inspection must undergo a regular inspection at least once a year, but organizations that are not subject to safety inspection do not conduct a separate regular safety inspection other than confirming that they are not subject to the initial safety inspection. On the other hand, safety inspections of abandoned facilities should be carried out at least once a month, and the results should be recorded and displayed in the safety inspection record, and safety inspection signs should be posted for each facility.

In the case of children's play facilities, there is no obligation to assign a safety manager, and they should receive safety management training provided by the safety management support organization for children's play facilities within 3 months, at least once every two years after delivery, and at least 4 hours once.

In the case of organic facilities, safety managers must always be assigned for safety management of organic facilities subject to safety inspection, and there is no obligation to assign safety managers to facilities not subject to safety inspection. Safety managers must receive safety training within 6 months from the date they are first assigned to the workplace, and safety training must be received at least once every two years and at least 8 hours at a time, and self-safety training must be provided for operators and workers of organic facilities.

4. Conclusion

As a result of comparing and reviewing safety standards and related laws and regulations related to kids cafes in Korea and advanced foreign countries, we have drawn the following conclusions.

- 1) In Korea, an organization entrusted with safety inspection authority conducts inspections, and installation inspections and periodic inspections are conducted by the same inspection organization. Therefore, it is necessary to reinforce the registration requirements of inspection agencies so as not only to ensure fair inspection by cross-checking with other agencies at the second time to prevent problems with transparency and fairness of inspections, but also to enhance the expertise of inspection subjects.
- 2) Children's playground equipment is required to undergo installation inspection when installed in accordance with the 「Children's Play Facility Safety Management Act」 and regular facility inspections every two years, but there is a lack of a safety management system for organic equipment because it is installed after 'confirmation inspection for non-safety inspection' without inspection for and after installation, it is possible to operate without separate safety inspection. In Japan, all organic facilities are subject to safety inspection when included in the Framework Act on Building, whereas in Korea, organic facilities are divided into safety inspection and non-inspection objects, and children's appliances account for the majority of non-inspection objects. In spite of the fact that the classification system is presented in detail when compared to foreign laws, the classification of the inspection object and the non-test object is ambiguous, so it is necessary to clarify the classification of organic equipment. It is necessary to expand the range of target organic devices.
- 3) With regard to amusement facilities, various laws related to child safety such as the 「Tourism Promotion Act」 and 「Children's Play Facility Safety Management Act」 have been enacted, and various safety regulations by departments have been enacted. We believe that there may be a blind spot where management does not proceed. Therefore, in order to prevent the confusion of safety regulations and eliminate the blind spots for safety management, it is necessary that all kinds of organic equipment listed in the 「Tourism Promotion Act」 should be included in children's playground equipment, and the scope should be expanded to apply the 「Child Play Facility Safety Management Act」. In addition, we believe there is a need to strengthen safety management of the kids cafe.

References

- [1] Ministry of Public Administration and Security, "Guidelines for Kids' Cafes for Easy to Know," 2018. 12.
- [2] Corporate kids cafe, "Active overseas expansion in Southeast Asia," *the Bell*, 2019.3.
- [3] Korea Consumer Resources, "Children's Safety Accident Kid's Cafe," 2016.5
- [4] National Rights Commission, "Improvement of blind spots for safety management in people's lives," 2018.5.
- [5] <http://www.astm.org>
- [6] <http://www.cen.eu>
- [7] <http://world.moleg.go.kr>
- [8] JPFA-S2014(Japan Park Facilities Association), "Safety standards for rides"
- [9] Korea Living Safety Union, "Outdoor playground and child safety," 2011.
- [10] Ministry of Public Administration and Security, "A Study on the Realization of Safety Standards for Children's Plat Facilities," 2011.
- [11] Korea Living Safety Union, "A Study on the Strengthening of the Safety Management of Kids Cafe," 2012.12.
- [12] U.S. Consumer Product Safety Commission, "Public Playground Safety Handbook," 2015.
- [13] <http://www.iaapa.org>
- [14] <http://www.rospa.com>
- [15] Ministry of Culture, Sports and Tourism, "Tourism Promotion Act & Enforcement rules," 2020.
- [16] Ministry of Public Administration and Security, "Children's Play Facility Safety Management Act & Enforcement decree," 2017.