



**STUDY ON THE INFLUENCE FACTORS OF SAFETY
MANAGEMENT OF DONG SHAN EXPERIMENT
KINDERGARTEN**

SONG BOXIAO

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**AN INDEPENDENT STUDY SUBMITTED IN PARTIAL FULFILLMENT OF
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This Independent Study has been Approved as a Partial Fulfillment of the Requirement
of International Master of Business Administration in International
Business Management

Advisor: 
(Dr. Jidapa Chollathanrattanapong)


Date: 25 / August / 2023


.....
(Associate Professor Dr. Jomphong Mongkhonvanit)
Acting Dean, Graduate School of Business Administration
Date: 21 / 9 / 2023

Siam University, Bangkok, Thailand

Title: Study on the Influence Factors of Safety Management of Dongshan Experiment Kindergarten
By: Song Boxiao
Degree: Master of Business Administration
Major: Education Management

Advisor:


.....
(Dr. Jidapa Chollathanrattanapong)

.....25 / August..... /2023.....

ABSTRACT

This paper aimed to study the influence factors of safety management of Dongshan Experimental Kindergarten; the objectives of this study were: 1) To analyze the current situation of safety management at Dongshan Experimental Kindergarten; 2) To explore the factors influence safety management in Dongshan Experimental Kindergarten; 3) To provide recommendations for preventing accidental injuries at Dongshan Experimental Kindergarten.

This paper adopted qualitative research methodology, through literature review, identified 11 questions under four key terms and conducted interviews with 12 kindergarten teachers and 3 managers to draw corresponding conclusions. This paper finds that: 1) Dongshan Experimental Kindergarten has its own safety management system, for the human safety management, it had a systematic safety education called the "1530" safety education system and for the material and environment are mainly handled by gatekeepers; 2) The main factors influenced safety management in kindergartens were the human factor and material and environmental factors. Human factors were mainly included the unstable physical and mental conditions of some children themselves, the inadequate work of the staff, and the negligence of the management in safety inspection. The material environmental factors are mainly caused by the untimely inspection and maintenance of the environment inside and outside the kindergarten classroom and the untimely cleaning and replacement of toys; 3) Preventing accidental injuries mainly involve two aspects: through strengthening safety education and improved the safety awareness of children and teachers.

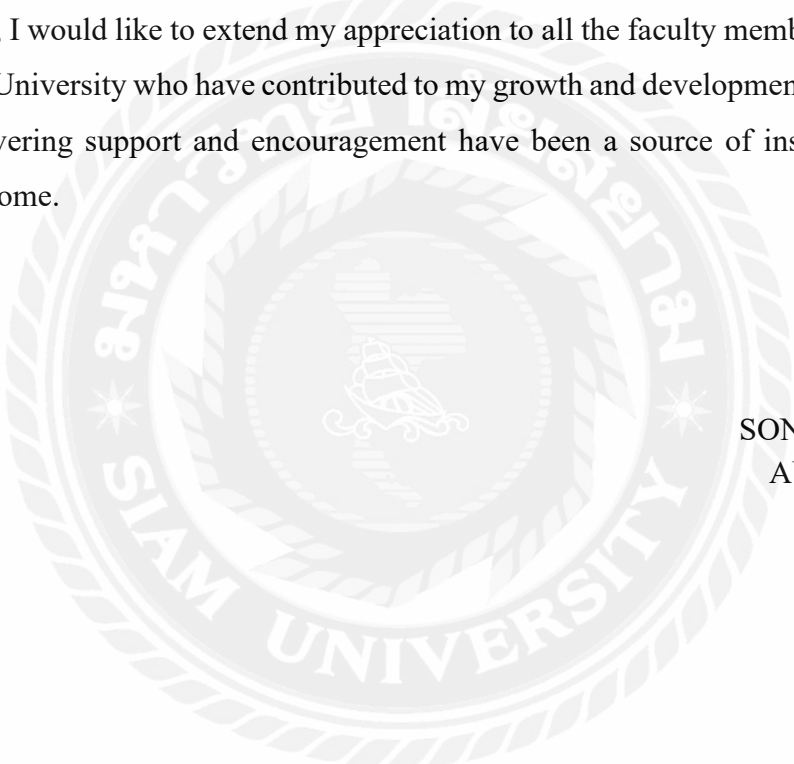
Keywords: safety management, safety risks, accidental injury, prevention

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The seal of Siam University is a large, circular emblem in the background. It features a central shield with a crown on top, surrounded by a wreath. The shield is set within a circular border containing the university's name in Thai script at the top and 'SIAM UNIVERSITY' in English at the bottom. The seal is rendered in a light, semi-transparent grey color.

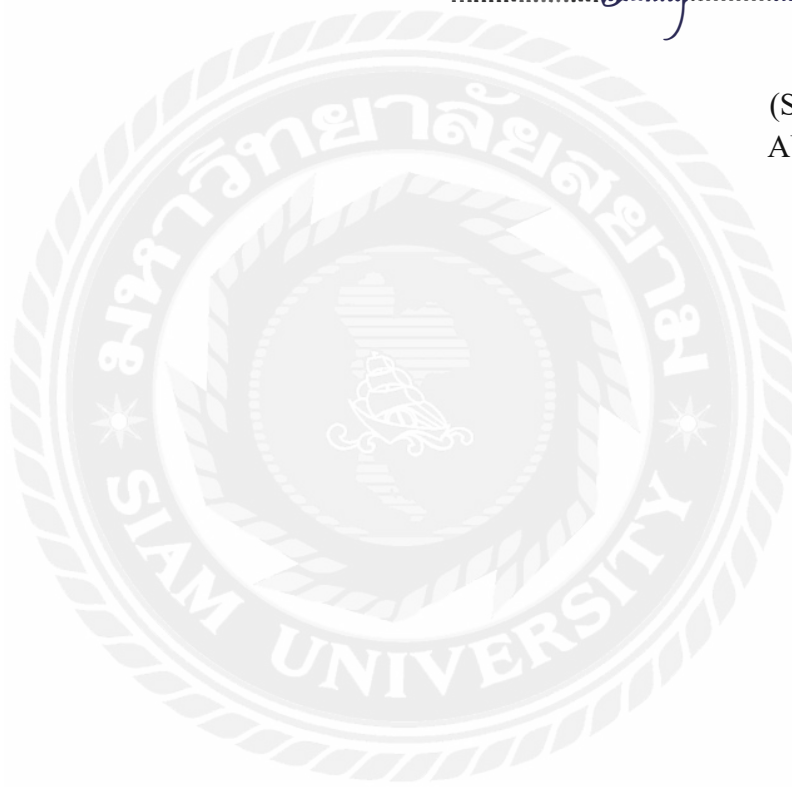
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AUG 16, 2023

DECLARATION

*I, Song Boxiao, hereby certify that the work embodied in this independent study entitled “**Study on the influence factors of safety management of Dong Shan experiment kindergarten**” is result of original research and has not been submitted for a higher degree to any other university or institution.*

..... Song Boxiao

(Song Boxiao)
AUG 16, 2023



CONTENTS

ABSTRACT.....	1
ACKNOWLEDGEMENT.....	II
DECLARATION	III
CONTENTS.....	IV
TABLE CONTENT	VI
Chapter 1 Introduction	1
1.1 Research Background.....	1
1.2 Research Problems	2
1.3 Objective of the study	3
1.4 Scope of the study	3
1.5 Research Significance	4
Chapter 2 Literatures Review.....	6
2.1 Safety Management.....	6
2.3 Safety hazards	7
2.4 Accidental injury.....	8
2.4.1 Internal factors of accidental injury	8
2.4.2 External factors of accidental injury to young children	9
2.4.3 Types of accidental injuries to children	10
2.5 Prevention	10
2.6 Conclusion.....	11
Chapter 3 Research Methodology.....	13
3.1 Introduction	13
3.2 Research Design.....	13
3.3 Data collection	14
3.4 Data Analysis	14

Chapter 4 Finding and Conclusion.....	15
4.1 Current Situation of Dongshan Experimental Kindergarten.....	15
4.2 Influencing factors of safety management of kindergarten.....	17
4.2.1 Human factors	18
4.2.2 Material and environmental factors	18
4.3 Prevention Suggestions	19
Chapter 5 Recommendation.....	20
Reference.....	22
Appendix.....	25



TABLE CONTENT

Table 3. 1 Interview Questions	13
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Chapter 1 Introduction

1.1 Research Background

Currently, there is a wide range of research and achievements in China regarding safety management. These efforts are mainly concentrated in areas such as infrastructure construction, financial control in energy projects, and information security engineering. Research on campus safety management primarily focuses on higher education institutions and primary and secondary education stages. There is relatively limited research on safety management in kindergartens, and guidelines for kindergarten safety management are largely issued by national and local governments.

Over the past 20 years, research literature and doctoral theses related to kindergarten safety management mainly include 1) discussions about safety risks in kindergartens and mechanisms for managing and coping with them; 2) explorations into accidents involving young children, discussing the current state, causes, trends, and reforms in preschool education; 3) studies on assessing the risk of fires in kindergartens; 4) research on fire safety management in kindergartens; 5) development of safety evaluation index systems and comprehensive assessment systems for safety prevention in kindergartens; 6) examination of legal issues in handling safety accidents in kindergartens; 7) investigations into the causes of safety accidents in kindergartens; 8) examination of safety education issues in kindergartens and corresponding countermeasures; 9) studies on safety in private kindergartens; 10) application of modern media technologies in kindergarten safety management, such as the integration of wireless radio frequency identification systems, intelligent wireless security networks, RFID technology, and the Internet of Things (Cheng & Zhao, 2018).

According to the perspective of American safety engineer Heinrich, comprehensive safety management is about preventing accidents. This can be understood as the core of safety management being the prevention of safety risks. Preventing safety risks can address problems early, catch the best time to eliminate hidden dangers, and tackle issues before they escalate. Handling damage after an accident might be irreversible or irreparable, particularly in cases of severe casualties or system failures. In conjunction with the aftermath of safety accidents, secondary risks are hard to effectively avoid and might lead to additional damage. Thus, preventing "safety risks" is more crucial than managing them once they've become reality (Cheng & Zhao, 2018).

Dongshan Experimental Kindergarten (www.zqsyjt.com), was established in September 2014, currently operates with 12 classes and 75 staff members, including 57 full-time teachers. Impressively, over the past ten years since its inception, Dongshan Experimental Kindergarten has not experienced any major personal safety accidents. It has maintained an excellent safety management record and has been recognized as one of the top ten kindergartens in Shandong Province.

In terms of safety management, the kindergarten takes proactive steps. At the beginning of each semester, the kindergarten organizes logistics personnel to conduct safety investigations, including comprehensive disinfection, cleaning, and maintenance of outdoor and indoor toys, books, and equipment. The first week of the semester is designated as a preparatory week, focusing on safety education. This enables a connection between past safety education and the safety education for the new semester. During the semester, monthly flag-raising ceremonies center around safety-related themes, such as fire safety, traffic safety, and food safety. These events often involve inviting police officers, firefighters, and medical staff to participate, imparting safety knowledge to the children and promoting self-rescue and first aid awareness. Regular fire drills, flood control drills, and earthquake drills are conducted to cultivate children's courage and acquaint them with essential survival methods.

Furthermore, the head of the kindergarten implements a weekly "1530" safety education initiative, which involves brief one-minute daily safety lessons and a more in-depth weekly session, totaling half an hour. Prior to each holiday, parents are provided with a "safety commitment" that requires their full reading and signing. Different content is covered based on the seasons, emphasizing summer safety measures such as drowning prevention and food poisoning avoidance, as well as winter safety precautions against fireworks injuries and carbon monoxide poisoning.

1.2 Research Problems

The main factors influencing kindergarten safety management include on-site equipment factors, safety management factors, activity organization factors, and safety education factors (Li, 2023). Factors affecting kindergarten safety management are as follows, based on the viewpoints of kindergarten teachers and principals:

Firstly, unsafe aspects of the environment and facilities, such as risk-associated pools, jungles, and sandboxes, and a lack of safety facilities in parks, coupled with outdated and hazardous equipment and toys. Secondly, inadequacies in safety management, including an incomplete safety management system, inadequate safety management practices, and insufficient emphasis on safety issues by leadership. Thirdly, safety education concerns, such as insufficient time allocated for safety education, a monotonous approach to safety education, and a disconnect between safety education content and children's actual lives. Fourthly, children's own qualities, with significant differences in safety incidents observed between urban, county, and rural kindergartens, suggesting that rural children tend to have weaker self-protective abilities and poor coordination skills. Fifthly, the role of parents, for instance, if parents lack safety awareness, they may overlook their child's safety.

Among these factors, the majority of teachers and principals believe that the main causes of child safety accidents are unsafe environments and a lack of safety facilities in parks. Children's behaviors that easily lead to safety accidents include actions resulting from immature psychological development, passivity, curiosity, poor understanding and judgment, lack of life experience, weak risk awareness, and inadequate self-protective skills, which together make them susceptible to accidents (X. Liu & Li, 2005). Accidental injuries tend to result from inattentiveness and overly active behavior; children may engage in rash and self-harming actions that lead to accidents. Additionally, boys are more prone to accidents than girls due to their higher activity levels. A shortage of caregivers or lack of safety awareness leading to lax safety observations during periods when children transition from periods of excitement to fatigue, coupled with decreased physical and self-control capabilities, all contribute to the likelihood of accidents (Liu, 2006).

In summary, the factors affecting kindergarten safety management center around the children themselves. Children inherently pose safety risks in safety management, but they are also the objectives of safety management. Often, even in the presence of potential safety hazards, accidents and injuries might not occur if children possess safety awareness and self-protective abilities. Therefore, focusing on effective safety education and safety screening around the current state is the most effective safeguard for preventing accidents and injuries in kindergartens.

1.3 Objective of the study

This paper aims to investigate the influencing factors of kindergarten safety management and conduct an in-depth analysis of the causes of child accidental injuries, to provide practical recommendations for kindergarten safety management. Additionally, it offers a new research perspective within the field of kindergarten safety management.

The specific goals of this paper are as follows:

1. To analyze the current situation of safety management at Dongshan Experimental Kindergarten.
2. To explore the factors, influence safety management in Dongshan Experimental Kindergarten.
3. To provide recommendations for preventing accidental injuries at Dongshan Experimental Kindergarten.

1.4 Scope of the study

This study collected and organized accident records, safety education, and safety training records from the inception of Dongshan Experimental Kindergarten in 2014. It summarized the experiences and the current state of safety management. The research also compiled nearly 20 years of literature on kindergarten safety management,

including more than 50 journals, 5 master's theses, and various legal and policy documents from different countries. Relevant theories of safety management were examined, including Heinrich's safety management theory and the "3E" theory. Through the study of these theories, four main themes were identified: safety management, safety hazards, safety risks, accident injuries, and prevention. Conclusions were drawn from interviews with 12 teachers and 3 administrators, providing recommendations to enhance the safety management of Dongshan Experimental Kindergarten.

1.5 Research Significance

In recent years, the safety of kindergartens has become a hot topic of public discussion and a focal point for both the government and the academic community. On April 28, 2017, the Chinese government issued the "Opinions on Strengthening the Safety Control System of Primary and Secondary Schools and Kindergartens," which established regulations for campus safety control and response. As the pursuit of educational development advances, the safety of primary and secondary schools and kindergartens holds paramount importance, signifying a critical concern for the well-being of children's lives and their physical and mental health (Cheng & Zhao, 2018).

The safety and healthy development of children are closely tied to the happiness of countless families and social harmony, implicating the long-term development and future of the nation. In recent years, various safety incidents frequently occur in kindergartens, seriously impacting the healthy growth of children. According to incomplete statistics, in 2011, the total number of school bus accidents exceeded the reported number of black coal mine workers in China (Zhang, 2011). Among the 116 school bus accidents, 72 occurred in kindergartens. Based on incomplete data, during the five-year period from 2009 to 2014, over 50 cases of child abuse, molestation, and sexual assault were reported, causing varying degrees of harm to young children. Additionally, incidents such as child abduction, food poisoning, accidents in kindergartens, violations of law and rights in kindergartens, stampede events, and infectious diseases have severely affected children's growth (Y. L. Liu, Liu, & Wang, 2016).

The continuous emergence of kindergarten safety incidents underscores the urgent need to explore factors influencing kindergarten safety management and propose corresponding strategies for resolution. Scholars both domestically and internationally have conducted research from various angles. However, the factors impacting kindergarten safety management are numerous, and the relationships between these factors are complex. Addressing this issue, this study aims to delve into the interrelationships among factors influencing kindergarten safety management, with the

goal of preventing and controlling accidents, reducing their frequency, and mitigating their severity.



Chapter 2 Literatures Review

2.1 Safety Management

Safety management refers to the fundamental function of the national or corporate security department. By employing administrative, legal, economic, educational, and technological methods, it coordinates the relationship between social and economic development and safety production, addresses the interactions among various sectors of the national economy, social groups, and individuals regarding safety issues, and ensures that the social and economic development meets the needs of the people. While fulfilling material and cultural life requirements, it also fulfills the demands for societal and individual safety, ensuring the smooth and effective progress of social and economic activities, production, and scientific research. The goal of safety management is the national management and control of all individuals, objects, and environments involved in production; safety management is a dynamic process. Insufficient safety management is a common factor of safety hazards in outdoor activities in kindergartens. On the one hand, the awareness of safety management is not strong. Kindergartens do not pay enough attention to the safety of outdoor activities. In safety management, they only pay attention to some visible safety risks, and pay little attention to invisible risks such as rest chairs, trash cans, and sinks, which increase the risk of children being injured. On the other hand, the security management system is weak. The kindergarten did not start from the potential safety hazards of outdoor activities, neither formulated a detailed and complete safety management system, nor strengthened safety management in strict accordance with the requirements of the safety management system. (Li,2020)

Kindergarten safety management refers to the fundamental function of the safety management system constructed collaboratively by kindergarten administrators and teachers. The main contents of kindergarten safety management include personnel safety management and material environmental safety management. The safety management system primarily prevents accidental injuries through elements such as personnel safety education, material environment safety inspections, and responsibilities for accidental injury safety. The safety requirements of kindergartens and young children ensure the normal development of children's lives and learning. Kindergarten safety management is also a dynamic management approach. Different safety education methods will be employed for varying ages, genders, and psychological characteristics. The types of safety hazards from foreign objects will also change over different periods and seasons, necessitating timely adjustments to safety education. Foreign scholars have done a lot of research on the theory of kindergarten injury accident prevention, and there are three main theoretical foundations. First, safety science theory. In the middle of the 20th century, with the advancement of science and technology and safety technology, people gradually explored safety technology issues, and gradually developed accident-cause theories such as fault tree analysis, event tree analysis, and man-machine system model. Second, safety management theory. In the 1930s, Heinrich, a famous safety engineer in the United States, put forward the causal

chain theory and the law of safety management. Third, the principles of infant psychology. Children's physical and mental development is not perfect, and their desire for activities is very strong, and they also lack self-protection awareness, so it is easy to cause injury accidents during activities. (Ma, Deng, Tang, Liu, 2015)

This research considers safety management theory (Cheng & Zhao, 2018), suggesting that safety risk pre-control should fulfill the following conditions: First, whether the safety system content is sound; second, whether the safety system is effectively implemented; third, whether safety protection facilities and existing equipment are secure; fourth, whether individuals possess strong safety awareness, comprehensive practical safety knowledge, and receive timely safety training. Only when these conditions are met can safety risk pre-control be effectively implemented.

2.3 Safety hazards

Safety hazards refer to various unsafe factors that arise in daily, production, life, or social activities due to human factors, material changes, and environmental influences. These factors encompass issues, defects, malfunctions, signs, and latent threats resulting from unsafe conditions. Kindergarten safety hazards refer to unsafe factors within the daily life of a kindergarten that pose potential threats to the life safety and physical and mental health of children (Wang, 2022). From perspectives such as understanding lag, unfair operations, funding shortages, and chaotic management, it is argued that private kindergartens are susceptible to hazard occurrences (Qu, 2006).

Through case studies, kindergarten environment analysis, lack of teacher experience, and children's safety awareness are investigated (Guo, 2014). contends that factors contributing to potential safety risks in kindergartens include weak safety awareness among children, self-centered disregard for the surrounding environment, inadequate preparation and arrangement by kindergartens and educators, neglect of psychological and emotional safety activities, and unsuitable kindergarten environments. Potential safety issues related to kindergarten location, irregular building design, simplicity, outdated equipment, and facilities are also identified (Ding & Ou, 2009).

Summarizing safety hazards arising from human and contextual factors, human factors mainly include children's unsafe behavior and negative emotional expression, inadequate performance by staff, and negligence in safety management by system administrators. Contextual factors involve kindergarten location, substandard construction quality, inadequate maintenance of large outdoor and indoor toys, among others.

2.4 Accidental injury

Accidental injuries refer to sudden events that result in harm to the human body due to factors such as physical, chemical, biological, and other elements. Accidental injuries are unexpected occurrences and constitute a significant danger to human life, health, and quality of life (Wu, 2004). Accidental injury refers to external, sudden, non-essential, non-disease objective events that cause physical harm. The International Classification of Diseases standard includes falls, sharp injuries, bruises, burns, bruises, crushes, bruises, bites, explosions, poisoning, electric shock, drowning, foreign body injuries, and injuries caused by environmental factors 14 kinds of accidental injuries. Unintentional injury death has become the first cause of death of children and the main cause of children's disability. Unintentional injuries can also cause children's physical and mental developmental disabilities, and bring heavy economic burdens to families and society. (M. L. Zhang, 2004). The occurrence of childhood accidental injuries is influenced by both internal and external factors, with internal factors primarily consisting of age, gender, and psychological and behavioral components.

2.4.1 Internal factors of accidental injury

Age: Children are at a high risk of experiencing accidental injuries. In the United States, the peak age for childhood accidents is 1-4 years old (Liu, 2003). In China, the incidence of accidental injuries among school-age children follows the pattern: primary school students > middle school students > high school students (Li, 2002). According to statistics from the World Health Organization in 1986, in most countries, the injury death rate for children aged 1-4 is higher than for those aged 5-9. In the United States in 1990, the highest accidental death rate was among individuals aged 15-19, with the lowest rates observed in the age groups 1-4, 10-14, and 5-9. Accidental injuries constitute the leading cause of child mortality in most countries and regions worldwide, and in China, they are the primary cause of death among children aged 0-14, accounting for 26.1% of child deaths. Accidental injuries have become a significant global public health issue that jeopardizes the healthy growth of children. Previous studies have shown that preschool children should be considered a crucial intervention group (Liao et al., 2014).

Gender: Boys have a higher incidence of accidental injuries compared to girls, and these ratios increase with age. Reports from both domestic and international sources (Haddon W, 1998) show that the rate of non-fatal injuries is higher among boys than girls, with a male-to-female ratio of 1.53:1 reported in the United States. The gender ratio of injuries among Chinese primary and secondary school students is 2.05:3.34:1

Psychological and Behavioral Factors: Physiological and psychological developmental levels are crucial factors influencing childhood accidental injuries. Their behavioral temperament and motivations are related to psychological conflicts, emotional depression, behavioral deviations, aggressive behavior, and other

psychological and behavioral factors that play a certain role in the occurrence of accidental injuries. Behavioral issues can be considered an indicator of childhood accidental injuries. Research has found that children with hyperactivity are more prone to causing injury to themselves and others when walking near moving vehicles compared to normal children. Children's psychological development is also related to the maturity of neurophysiology. Due to weaker neural inhibition processes, preschool children have limited emotional stability. Their personality, emotions, behaviors, and the occurrence of accidental injuries are all noticeably interrelated (Fang & Huang, 2002).

2.4.2 External factors of accidental injury to young children

External factors of childhood accidental injuries mainly include family factors, societal factors, and temporal factors. Family factors indicate that children's accidental injuries are closely related to parents' education level, age, and family relationships. The level of education and safety awareness directly influence parents' education on the safety and health of their children. Children under 19 years of age are more likely to experience abuse from mothers, with mothers over 30 years of age being less involved in injuries compared to those under 30 (Deng & Zheng, 2003). Greek research (1996) shows that children from single-parent families or those not living with their parents have a higher toxic risk than the control group (Li, 2001).

Societal factors and economic development are linked to the occurrence of childhood accidental injuries in a country or region. A study conducted in Sydney, Australia, revealed a negative correlation between socioeconomic status and childhood accidental injury death rates (Fang & Huang, 2002). The implementation and popularization of health education are negatively correlated with childhood accidental injuries. Data shows that strengthening education and raising safety awareness can reduce the incidence of childhood accidental injuries. An investigation of 57 primary schools in Philadelphia showed that 9% of climbing equipment and slides were unsafe (X. N. Zhang, 2002). Statistics from 1993 indicate that almost all sports-related injuries were due to climbing equipment accidents, with about 200,000 cases treated in emergency rooms (Zhao & Su, 2003). Student cafeteria construction and facility hygiene are related to food poisoning incidents among students (Yao & Qin, 2001).

Temporal factors have also been identified. The causes of death in Wuxi accounted for 57.69% and 35.9% of the total deaths, respectively. Population distribution for childhood accidental injuries varies based on different regions, causes, locations, ages, and genders. Different age groups have distinct issues: infants face choking incidents, children aged 1-4 experience more drowning cases, and children aged 5-14 are more prone to car accidents (P. B. Zhang et al., 1998).

2.4.3 Types of accidental injuries to children

The International Classification of Diseases, 9th Revision, External Causes of Injury (ICD-9E codes), classifies accidental injuries into 14 categories including falls, collisions, traffic injuries, cutting or piercing injuries, burns, drowning, electric shock, explosions, poisoning, and suicide. Looking at the types of childhood accidental injuries, falls are the primary type, followed by choking on foreign objects, burns, scalds, and drug poisoning. Investigations suggest that kindergartens focus on preventing accidental injuries and falls, with falls being the foremost injury factor (Yang Ying, 2014). Information released by the U.S. Consumer Product Safety Commission in 1986 identified the three major causes of childhood accidental injuries as traffic accidents, drowning, and fires. From 1983 to 1992, the main causes of childhood accidental injuries were motor vehicle accidents, drowning, and suffocation. The majority of accidental injuries occur in places where children engage in their daily activities the most, namely homes and sports fields. In a study by Zhan Shaozhi regarding school-age children, 29.6% of accidental injuries occurred at school, 47.3% occurred on the way to school, and the remainder occurred at home. Comparing different parts of the body and types of injuries, 45 cases (58.44%) were indoor injuries, and 32 cases (41.56%) were outdoor injuries. Among these cases, 47 (61.04%) were lacerations, 18 (23.38%) were fractures, 8 (10.39%) were contusions, and 3 (3.90%) were caused by toys. Among the cases, 66 (85.71%) were soft tissue lacerations, 9 (11.69%) were fractures, and 2 (2.60%) were other injuries. There were 69 cases of soft tissue tearing (89.61%), 5 cases of other injuries (6.49%), and 3 cases of fractures (3.90%) (Wei, 1999).

2.5 Prevention

Prevention refers to the response measures that may deviate from the subjective expected track or the objective universal law in the process of the development of things in advance. John Gordon's research indicates that there are three main factors contributing to accidental injuries: host factors primarily related to gender, age, and physical condition; agent factors refer to the objects causing accidents; environmental factors involve conditions like climate, location, and time (J. J. Liu, 2002).

In this process, strategies might deviate from subjective expectations or objective general rules. Kindergartens should implement strict safety protocols, effectively manage, and regulate teachers' professional conduct, instill them with strong professional ethics and sufficient safety awareness, and take firm measures to prevent accidents. To address child accidental injuries, scholars both domestic and international Rodriguez, have proposed the "Three E" intervention measures: "Education intervention, Engineering intervention, and Enforcement intervention". Educational intervention involves incorporating safety and health education into school curricula to enhance children's prevention awareness and self-care. Engineering intervention focuses on designing and innovating environments and products. Enforcement

intervention refers to the establishment of relevant laws and regulations in accordance with the law.

Hence, accidental injuries are not inevitable, and prevention is one of the most significant means to significantly reduce the occurrence and mortality rate of child accidental injuries. Establishing a comprehensive safety education system, high-standard safety training and regular assessment mechanisms, injury monitoring systems, improving legal protections for children, creating safe living environments, and fostering multi-departmental cooperation are all vital.

Through the study of the preventions, it is proposed that accidental injuries are not inherently unavoidable. Scholars both domestically and abroad have found that prevention is the most significant means to markedly reduce the occurrence and fatality rates of child accidental injuries (M. L. Zhang, 2004).

2.6 Conclusion

Kindergarten safety management refers to the fundamental functions of a safety management system built collaboratively by kindergarten administrators and teachers. This safety management system primarily employs measures like safety education, inspections, and accountability mechanisms to prevent accidental injuries. Its aim is to create an environment in kindergartens that not only meets children's daily life and learning needs but also ensures their safety, promoting their healthy growth. Kindergarten safety management is also a dynamic approach. Different age groups, genders, and psychological characteristics warrant different safety education methods. External threats and hazards from various materials can change over time and seasons, necessitating timely adjustments to safety education.

Regarding factors contributing to accidental injuries: Child accidental injuries can be categorized into internal and external factors. From the perspective of internal factors, age, gender, and psychological aspects play significant roles. Among these, age stands out as a key factor, with the peak age for child accidents being 1-4 years old in the United States (Y. Liu, Chen, & Zhang, 2003). In China, the occurrence rate of accidental injuries among school-age children is highest for primary school students, followed by middle and high school students (Gong & Qu, 2002). Accidental injuries have become a severe global public health issue jeopardizing children's healthy growth. Previous studies suggest that preschool children should be a key focus for intervention (Liao et al., 2014).

Gender also holds certain significance; boys experience higher rates of accidental injuries compared to girls, and this gender disparity increases with age. Reports from both domestic and international sources (Haddon, 1981) show that the incidence of non-fatal injuries is higher among male children than female children, with a gender ratio of 1.53:1 in the United States (Wei, 1999). Among collective child accidental injuries, the

highest occurrence rate is seen among 3-4-year-olds. Gender comparison reveals 58 cases among males (1.58%) and 19 cases among females (0.29%), with a significant difference ($\chi^2=5.15$, $P < 0.05$).

Psychological and behavioral factors: The physical capabilities, especially active exploration, greatly expand for children aged 3-4 years. They strive to understand their external environment and deal with encountered issues, but they lack self-defense abilities, exhibit strong curiosity, poor danger awareness, and decreased attention. Therefore, protecting this age group is of paramount importance.

According to the International Classification of Diseases (ICD-9E codes), accidental injuries are divided into three categories: falls, collisions, traffic injuries, scratches, cuts, burns, drowning, electrocution, explosions, poisoning, and suicides. Analyzing child accidental injuries by type, falls stand out as the primary cause. Investigations indicate that kindergartens prioritize preventing accidental injuries, with falls being the primary factor. Causes and types of injuries vary more in outdoor settings rather than indoors. Children are most prone to injuries from falling, particularly to the head and face, followed by limbs. Injuries mostly involve soft tissue damage, with occasional fractures. Overall, the most common accidental injuries among children are soft tissue abrasions from falling, followed by injuries caused by others.

Prevention is a crucial means to significantly reduce child accidental injuries and mortality rates. In summary, establishing a comprehensive safety education system, setting high standards for safety training and regular evaluations, implementing injury monitoring systems, enhancing child protection laws and regulations, creating safe living environments, and fostering effective multi-departmental cooperation are all of great significance.

In conclusion, the factors influencing kindergarten safety management are the presence of safety risks. The core of kindergarten safety management is managing safety risks, and the core of safety risk management is preventing accidental injuries. Based on the Heinrich accident chain theory, safety hazards refer to potential danger factors that could lead to accidents. Zhang Jinglin (1995) suggests that potential safety risks are latent unsafe factors causing accidents, but effective measures can control or eliminate them. Many safety hazards lie behind accidental injuries, but safety hazards do not equate to accidents; accidents are the outcome of safety hazards interacting with people, materials, and the environment. Once safety hazards intersect the trajectories of people, materials, and environmental factors, they lead to accidents with varying degrees of adverse consequences, i.e., accidental injuries. This idea primarily stems from the trajectory intersection theory proposed by Johnson and Hibbard.

Chapter 3 Research Methodology

3.1 Introduction

This paper adopted qualitative research methodology, through literature review, identified 11 questions under four key terms and conducted interviews with 12 kindergarten teachers and 3 managers to draw corresponding conclusions.

3.2 Research Design

Table 3. 1 Interview Questions

Keyword	Description
Safety Management	1.Has there been a major safety accident since the establishment of this kindergarten?
	2. What do you believe is the essence of safety management in the kindergarten?
	3.What are the main safety management work of the kindergarten?
Safety risk	4.What do you think are the safety risks in kindergartens?
	5.What specific work did the kindergarten arrange for the prevention and control of potential safety risks?
Accidental injury	6.What do you think is the most vulnerable to accidental injuries for kindergarten children?
	7.What do you think is the cause of accidental injury to children?
	8. In your opinion, which age group of preschool children is more susceptible to injuries? Why is that?
	9. What do you believe can be done to reduce the likelihood of accidents occurring among preschool children?
Prevention	10. How do you think you should prevent accidental injuries?
	11. Do you think the preventive measures such as safety education for children are helpful for the safety management in kindergartens?

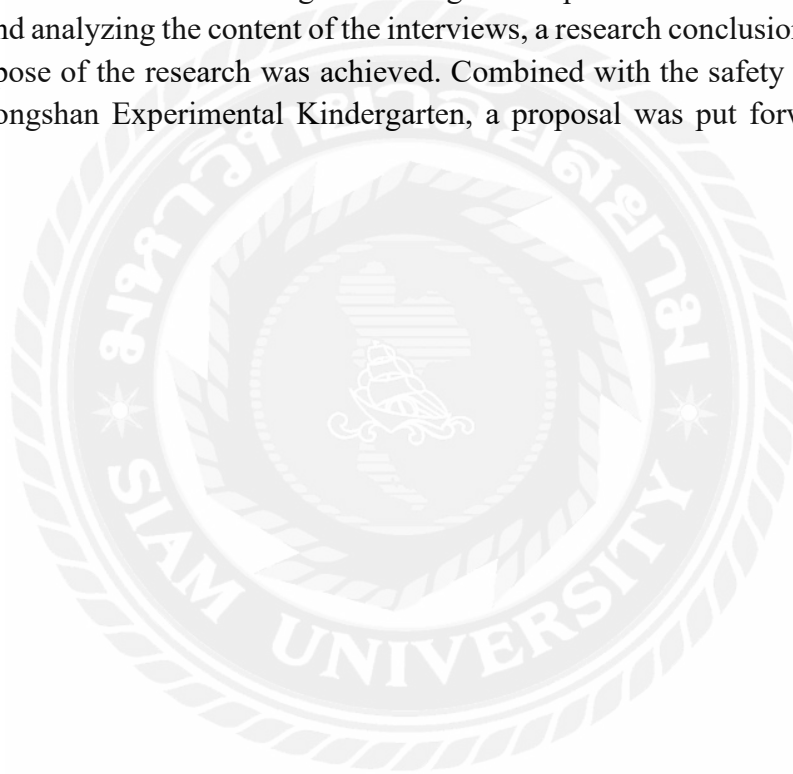
The literature review identified safety management and the prevention as the theoretical basis for this thesis. By studying these two theories, this research introduces four key terms: safety management, safety hazards, accidental injuries, and prevention. The following are 11 questions derived from these terms. These questions will be utilized to conduct individual interviews with 12 teachers and 3 managers from Dongshan Experimental Kindergarten, leading to corresponding research conclusions. Additionally, recommendations for improving kindergarten safety management will be proposed to both the Dongshan Experimental Kindergarten and relevant government departments.

3.3 Data collection

In this study, CNKI was used to search and collect relevant literature, conducted in-depth interviews with the security director of Dong Shan Experimental Kindergarten, and used the mobile phone recorder function for recording, and transcripts for subsequent use.

3.4 Data Analysis

This research adopts qualitative research method. First, the existing literature was collected and sorted out, and four key words related to this study were found, safety management, safety hazard, accidental injury and prevention, and 11 interview questions were proposed using the four key words and used This interview outline interviewed 12 teachers and 3 managers of Dongshan Experimental Kindergarten. After collecting and analyzing the content of the interviews, a research conclusion was drawn, and the purpose of the research was achieved. Combined with the safety management status of Dongshan Experimental Kindergarten, a proposal was put forward. related advice.



Chapter 4 Finding and Conclusion

4.1 Current Situation of Dongshan Experimental Kindergarten

The safety management worked at Dongshan Experimental Kindergarten has been commendable since its establishment in 2014. Looking at the completeness of the safety management system, Dongshan Experimental Kindergarten has a well-established safety management system. Based on the areas of management, it is divided into human safety management and material and environmental safety management. Concerning the safety management of materials and the environment: Dongshan Experimental Kindergarten's materials and environment are categorized based on their geographical location into outdoor materials and environment, as well as indoor materials and environment.

Through interviewed with management and teachers, the researchers found that Dongshan Experimental Kindergarten has maintained a good safety management record since its establishment, with no significant accidents involving death or disability. However, each year, a few children experience fractures and minor injuries, which are considered normal and acceptable within a certain range.

Regarding the connotation of kindergarten safety management, there are slight differences between management and teachers' responses. Management personnel focus more on gardening and scheduling, organizing safety knowledge training for teachers' emergency capabilities at specific times and places, implementing safety management costs, such as the regular replacement and maintenance of outdoor large toys, and reporting updates on classroom toys to the financial bureau in advance.

From the teachers' perspective, safety management is more concerned with internal classroom safety, such as establishing safety rules within the classroom and prohibiting activities like running, jumping, and pushing, or engaging in behavior like throwing sand during outdoor play.

Management and teachers have differing views on safety hazards within safety management. Management personnel are more attentive to safety issues. Therefore, when some teachers request children to engage in games with difficulties and potential dangers, management personnel often worry about psychological activity and suggest turning these games into more reliable alternatives.

Currently, Dongshan Experimental Kindergarten has a comprehensive safety management system. It includes safety management before the start of the school year, monthly safety education theme ceremonies, at least two fire safety drills per semester, summer flood safety drills, winter safety drills, winter earthquake safety drills, weekly "1530" safety education and documentation, with "1530" indicating one minute of random safety education each day, and 30 minutes of specialized safety education per week (5 days). In terms of home-school cooperation, parents are required to complete safety education on the safety education platform weekly. Kindergarten management

believes that such intensive safety management arrangements, aside from regular safety checks, are challenging to quantify in terms of quality. Teachers and parents might resort to cheating due to their busy lives and work schedules, and parents and teachers from different educational backgrounds and cultures possess varying levels of safety awareness. As a result, the quality of safety education that children receive is inevitably uneven, presenting a safety risk for accidental injuries in their future lives.

As witnesses to most accidental injuries in the kindergarten, teachers generally hold a common view about the types of accidental injuries children are most susceptible to. Outdoor areas have the highest occurrence frequency, with bruises from falls being the most common accidental injury type. Most of the time, children become engrossed in games, concentrating on the activity, and failing to notice whether their surroundings are adequately safe. Alternatively, they might not realize their physical exertion in the midst of the game, and accidents like falls can result from physical fatigue. A few children might engage in conflicts over toys, but teachers typically intervene promptly and discourage such behavior. In general, children in the younger age group are less familiar with the kindergarten environment, possess less-developed skills, and consequently experience fewer severe accidental injuries. However, due to their young age, limited development, slower reaction speed, weaker muscle strength, and poorer self-protection ability, the middle age group witnesses an increase in body reaction speed and strength, as well as a significant increase in knowledge. This group starts identifying certain safety risks and consciously observing and avoiding them. For the senior age group, there is an old Chinese saying that describes children of this age as being "7 or 8 years old." This phrase aptly depicts the vitality and high energy of children in this category. At this stage, children engage in active competitive games and are drawn to challenges with higher difficulty levels. However, their impulsive behavior might lead to unexpected accidents.

To minimize the possibility of accidents, an emphasis should still be placed on children's safety education. In many kindergartens' accident cases, subjective behavior on the part of children contributes to accidental injuries. Moreover, safety hazards do not necessarily result in accident-related injuries. This concept aligns with Heinrich's safety management theory. Hence, the connotation of safety education and treatment is of utmost importance. Management personnel believe that the effectiveness of safety education might not be very pronounced. However, with corresponding safety education records as evidence, kindergarten's response during the accident injury handling phase is not overly passive. These records help secure the utmost protection for teachers. If daily safety education work becomes muddled, crucial moments may lack evidence. This is indicative of how management implements safety education.

The head of the kindergarten is the first person responsible for kindergarten safety management. However, teachers are often the first responders on-site. When teachers take the initiative to report safety accidents and manage emergency measures, they can negotiate more room for management discussions. If teachers try to evade responsibility

by hiding incidents, it often leads to worse outcomes. Therefore, kindergarten safety education not only assists children in learning self-protection but also instructs teachers on how to dutifully practice their responsibilities while remaining true to their professional ethics and self-discipline.

Human safety management of the kindergarten has a systematic safety education called the "1530" safety education system. Its content involves "1 minute of safety education every day and 30-minute specialized safety education course every 5 days". Teacher management is mainly reflected in the level of classroom safety management and its connection to teachers' personal interests. Teachers involved in safety incidents within their classrooms may face rejection from kindergarten management when applying for professional titles and promotions. The management utilizes this approach to prevent teachers from being careless in their everyday safety management and to maintain constant vigilance.

Management and supervision of outdoor materials and environment are mainly handled by gatekeepers. Before each semester begins, regular cleaning, disinfection, inspection, and replacement are conducted monthly. Facilities receive regular maintenance and checks. Any damage or environmental safety hazards noticed by teachers and children during outdoor activities should be immediately reported to the management and the school staff for repairs and replacements. Indoor material and environmental safety management is primarily conducted by teachers. Toys, books, and furniture within classrooms should be inspected promptly, and damaged components should be cleaned and repaired as needed. If repairs cannot be done by themselves, new items should be requested. Classrooms undergo daily UV disinfection, plastic toys are soaked and disinfected with a disinfectant solution every week, and books are exposed and disinfected monthly.

4.2 Influencing factors of safety management of kindergarten

Factors Influencing Kindergarten Safety Management. The main factors affecting kindergarten safety management include personnel safety management and material and environmental safety management. The emergence of safety hazards is influenced by both human and material factors. Human factors primarily consist of unsafe behaviors and negative emotions of individual children, insufficient work from staff members, and negligence in safety checks by management personnel. Material and environmental factors encompass issues like improper kindergarten site selection and construction quality, inadequate maintenance and timely cleaning of large outdoor and indoor toys, and insufficient upkeep of indoor toys.

4.2.1 Human factors

Safety hazards refer to various unsafe factors that arise in the daily production processes or social activities due to human factors, materials, and environmental influences. These factors encompass a range of issues, defects, malfunctions, precursors, and hidden dangers.

In the context of kindergarten settings, safety hazards arise from both human-related and material-related factors. Human-related factors primarily include unsafe behaviors and negative emotional outbursts of children, staff not meeting designated job requirements, and oversights in the safety management system by administrative personnel. Material-related factors involve issues such as inadequate selection of kindergarten locations, subpar construction quality, untimely maintenance of large and indoor toys in kindergartens, and improper cleaning and replacement practices.

4.2.2 Material and environmental factors

The occurrence of accidental injuries in children is influenced by both internal and external factors. The internal factors primarily consist of age, gender, and psychological and behavioral elements.

Internal factors of accidental injuries: Regarding age, according to statistical data from various countries worldwide, children are a high-risk group for accidental injuries. Accidental injuries have become a serious global public health issue jeopardizing children's healthy growth. Among children aged 1 to 4 years, the accidental injury death rate is highest. In terms of gender, previous research indicates that boys have a higher accident rate than girls. Psychological and behavioral factors are also significant. Physical and psychological developmental levels play a crucial role in affecting children's accidental injuries. Their behavioral traits, motives, psychological conflicts, emotional depression, behavioral deviations, aggressive behaviors, and other psychological and behavioral factors play a role in the occurrence of accidental injuries.

External factors of accidental injuries in preschool children: The external factors of children's accidental injuries primarily encompass family, societal, and temporal elements. Family factors show that children's accidental injuries are closely related to parents' education level, age, and family relationships. Education level and safety awareness directly impact parents' ability to provide safety and health education to their children. Children of mothers under 19 years of age are more likely to be subjected to abuse, while mothers over 30 years of age are less prone to causing injuries compared to those under 30 years of age (Deng & Zheng, 2003). Research from Greece in 1996 revealed that children from single-parent families or those not living with their parents have a higher risk of toxicity compared to the control group (Li, 2001). Societal factors, including economic development levels, are connected to children's accidental injuries. A study conducted in Sydney, Australia, showed a negative correlation between

socioeconomic status and childhood accidental injury death rates (Fang & Huang, 2002). The implementation and dissemination of health education are negatively correlated with children's accidental injuries. Strengthened education and improved safety awareness can reduce the occurrence of children's accidental injuries. Utility safety conditions revealed from a survey of Philadelphia's 57 primary schools indicated that 9% of climbing equipment and slides were unsafe (Zhang, Huang, 2002). Statistics from 1993 indicated that annually, around 200,000 cases of sports-related injuries treated in emergency rooms were associated with climbing equipment, accounting for nearly all sports-related injuries (Zhao & Su, 2003). Students' cafeterias and facility sanitation also led to incidents of food poisoning (Yao & Qin, 2001). Temporal factors indicate that in Wuxi, the leading causes of death accounted for 57.69% and 35.9% of the total deaths. The demographic distribution of children's accidental injuries varies based on factors such as different regions, causes, locations, ages, and genders. Different age groups face different issues; for instance, infants are more prone to choking accidents, children aged 1 to 4 are more susceptible to drowning, and those aged 5 to 14 are more prone to car accidents (P. B. Zhang et al., 1998).

Types of children's accidental injuries: The external factors of children's accidental injuries mainly include material environmental factors, family factors, societal factors, and temporal factors. Family factors indicate that children's accidental injuries are closely related to parents' education level, age, and family relationships. The education level and safety awareness of guardians directly influence children's safety education level. In terms of societal factors, the economic development level of the area where the kindergarten is located directly affects its material environment. Higher economic levels result in more funding for kindergartens, enabling timely updates to the material environment and maintaining safety. As society places more emphasis on kindergarten safety, kindergartens can receive increased sponsorship, support, as well as more legal and humanitarian protection. The frequency of children's injuries varies across different seasons and periods, underscoring the necessity for flexible and appropriate safety education in kindergartens.

4.3 Prevention Suggestions

The success of accident prevention is the key to the success of kindergarten safety management. The most common components of accidental injury prevention are safety inspections and safety education. Safety inspections can be divided into outdoor safety inspections and indoor safety inspections. Outdoor safety inspections are carried out by administrative personnel and school staff, while indoor inspections are conducted by teachers within their classrooms. The primary tasks of safety inspection work involve identifying damages, aging parts, and the need for maintenance or updates. Teachers engage in daily safety education sessions, including the main "15:30 Safety Education." Additionally, the kindergarten organizes safety drills for children each semester, aimed at cultivating their ability to evacuate in cases of fire, floods, earthquakes, and enhancing their general safety awareness in daily life.

Chapter 5 Recommendation

Suggestions for Safety Management at Dongshan Experimental Kindergarten: The kindergarten should facilitate safety education for teachers. For instance, various classes and grades could take turns delivering safety education sessions. Collecting safety education materials and then conducting these sessions would help alleviate teachers' work burden and enhance their enthusiasm for providing safety education. Safety education should not become an additional heavy load amidst their daily tasks. Furthermore, in the last 20 years, research has shown that the core of safety management is reducing the likelihood of children experiencing accidental injuries. The task of safety education is for teachers to achieve this goal through various means. Instead of external influences, children should actively and spontaneously contemplate safety issues. Therefore, the researcher suggests creating safety ambassadors within the kindergarten in future endeavors. Teachers can use a points-based system where children earn points for demonstrating safety awareness, and these points can be exchanged for tokens that can ultimately be used to "purchase" small gifts in a "Safety Store." This approach, aligned with the popular trend among children, conforms more to their gamified way of thinking, where learning and playing are intertwined, maximally assisting children in gaining knowledge about safety education.

Recommendations for Kindergarten Safety Management Submitted to the Government: Enact legislation for preschool education. Based on our research findings, from the perspective of China's basic national situation, the government's attitude towards education is crucial. China lacks specific legislation for preschool education, whereas neighboring Japan implemented the Preschool Education Act in 1926. The United States has enacted a series of educational laws since the 1960s. The government's passing of the "National Defense Education Law" significantly propelled the development of preschool education. However, it wasn't until 2010 that China enacted the "Kindergarten Management Regulations," and not until 2012 did it release two specific documents, the "Guidelines for Learning and Development of Children Aged 3-6" and the "Preschool Education Special Law." These late regulations and laws have brought unnecessary complications to kindergarten management. Therefore, the government is advised to expedite the enactment of specialized laws for preschool education.

Increase capital investment. The "Head Start Program," implemented in the United States in 1965, provided early education compensation for up to 500,000 impoverished children under the age of 6. By 2007, the new "Head Start Act" required the federal government to allocate \$7.35 billion in financial support for the Head Start Program in 2008. In 2022, China's investment in preschool education reached \$71.426 billion, seemingly surpassing the United States. However, significant disparities in population remain. In 2022, China's per-student spending on preschool education was \$2,074.22, significantly lower than the \$4,744 average spending on preschool children in France

in 2007, a figure exceeding the OECD and European averages, and placing France at the forefront worldwide. To conclude, the development of education is inseparable from government investment. Quality school infrastructure, facilities, and qualified teachers all require funding. The Chinese government is advised to address the gap between China and developed countries, considering its vast population base. Once again, increasing investment in preschool education is recommended to effectively raise per-child educational funding, promoting genuine progress in Chinese preschool education.



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Appendix

1. Has there been a major safety accident since the establishment of this kindergarten?
2. What do you believe is the essence of safety management in the kindergarten?
3. What are the main safety management work of the kindergarten?
4. What do you think are the safety risks in kindergartens?
5. What specific work did the kindergarten arrange for the prevention and control of potential safety risks?
6. What do you think is the most vulnerable to accidental injuries for kindergarten children?
7. What do you think is the cause of accidental injury to children?
8. In your opinion, which age group of preschool children is more susceptible to injuries? Why is that?
9. What do you believe can be done to reduce the likelihood of accidents occurring among preschool children?
10. How do you think you should prevent accidental injuries?
11. Do you think the preventive measures such as safety education for children are helpful for the safety management in kindergartens?