Chapter 14

School safety and crisis management

Learning objectives

You will be able to gain proper understanding and explain:

- The concept of safety as well as the theory and method of crisis management.
- The present situation and characteristics of accidents involving children.
- The concept of, and measures for, school safety (i.e., daily life safety and traffic safety) that should be pursued in the future.

This chapter explains the basic concept of, and measures for, school safety. First, the outlines of the concept of safety, the psychological and physical traits of children, and the characteristic of their accidents are given. Then, explanations are provided about the present situation of traffic safety and the need for traffic safety education in Cambodia, and the basic concept of safety management and safety education in schools that should be pursued in the future.

1. Concepts of safety and danger

First, an explanation is given about the basic concepts of safety and danger.[1]

1) Concept of safety

Safety refers to "a condition in which the lives and property of people are protected without being exposed to natural or unnatural harm in daily lives," while "a factor or condition that can undermine the safety of people" is called a **danger** or **hazard**. A thing that can be evaluated with probability as a product of the seriousness of the hazard (the magnitude of the hazard and damage) and the probability of occurrence of the hazard is called a **risk** (see Column: Hazard risk model). A thing that cannot be evaluated with probability is an **uncertainty**, which is distinguished from a risk. A condition in which a risk has actually caused some kind of damage to the lives or property of people is called an **accident**, and damage to the human body caused by an accident is referred to as an **injury**.

For people who have undergone a certain level of development, it is easy to avoid **"visible danger (explicit danger)"** but difficult to avoid "**invisible danger (latent danger)**," which often causes accidents. The basic measure to prevent accidents comes down to the detection and removal of danger before an accident occurs.

Column: Hazard risk model

To achieve safety, multiple basic safety theories have been developed from the standpoint of accident prevention. A hazard risk model, one of these theories, is explained in this chapter.

A hazard risk model is a theory on safety that has recently become common understanding in the fields of safety engineering as well as occupational safety and health.[1] This theory basically divides the concept of danger that can lead to the occurrence of harm (damage actually incurred) into hazard and risk. The methods for estimating risks vary among fields and disciplines, and the definition below is adopted for the prevention of accidents in the concept of crisis management in nursery/educational settings.

Risk = Gravity of hazard × Probability of occurrence of damage caused by the hazard

Even when a hazard exists and its seriousness understood, if the probability of the hazard causing harm to people is zero or close to zero, then the risk will also be zero or close to zero.

Examples of hazards include bicycles, steps, doors, desks, and raised playground equipment. These are hazards that can cause collisions, stumbles, and falls. For the prevention of accidents, **the viewpoint of environmental improvement** is important, which includes eliminating hazards and taking effective measures to keep children away from hazards (e.g., attaching cushioning material to the corners of desks).

2) Disasters and accidents

A disaster refers to the occurrence of some kind of injury or damage to the lives, bodies, or property of people, which is caused by a danger resulting from a natural phenomenon or a human factor. Disasters can be divided into **natural disasters** (e.g., meteorological disasters and earthquakes) and **man-made disasters** (e.g., life disasters, traffic disasters, industrial accidents, criminal damage, and war damage that are caused in daily lives). Most man-made disasters are brought about by accidents. Accidents can be divided into **traffic accidents** in a broad sense (i.e., car, railway, airplane, and marine accidents) and **life accidents** caused in various situations in daily lives in general, including schools, homes, and communities (unexpected accidents that occur in daily lives, including suffocation, and stumbles/falls). Life accidents that occur in schools, including falling down stairs and injuries caused by aging playground equipment, can occur even during a break (see "6. School safety").

2. Characteristics of accidents involving children from the standpoint of developmental stages

What kinds of accidents and injuries can occur from early childhood to adolescence? This section explains the characteristics of accidents and injuries that can occur from early childhood to adolescence, as well as the factors behind them.[2] Because the growth and development of the mind and body are

immature in these periods, it is necessary to deepen children's understanding of safe behavior while improving the safety management of their surroundings.

1) Characteristics of the mind and body and behavior in early childhood

Early childhood is a period in which both mind and body significantly grow and develop. It is also a period in which the ability to communicate with others develops. Major physical characteristics in early childhood are as described below:

i) Early childhood is a period in which relatively stable physical growth is seen.
ii) It is a period in which visual and auditory functions develop toward completion.
iii) The nervous system significantly develops, and coordination between multiple functions develops.

From the standpoint of behaving safely by avoiding danger, there are characteristics of growth and development that need to be taken into consideration. For example, immaturely developed visual and auditory senses may cause a delayed perception of danger. Although eyesight significantly develops in infancy, it is only when children turn five or six years old that it stabilizes to visual acuity of 1.0 or above. Binocular stereopsis is said to fully develop at around five years of age.

For auditory function, the important ability related to safety is the ability to determine sound localization (the position of a sound source), which also develops throughout early childhood. To avoid danger by quickly detecting the position of a car, it is essential to precisely determine the position of the sound source. However, even if visual and auditory functions have developed, the detection of danger may be delayed in cases where children are short in stature and have difficulty detecting things around them or in cases where children have little experience of danger. Because the adults' perspective alone is likely to overlook danger, sufficient attention is needed from the children's perspective.

The development of exercise capacity is another important factor to avoid danger. In exercise, coordination between the visual observation of the target and body movements is important. The rapid development of this coordination is a characteristic of early childhood.

2) Characteristics of the mind and body and behavior of elementary school students

During the six years of elementary school, major changes are seen in growth and development. In particular, children from 10 to 12 years of age are in the secondary rapid growth period and show a spurt of growth, which is represented by height growth. In this period, exercise capacity also develops, establishing the physical foundation needed to behave safely.

However, from the standpoint of safety, psychological/social or behavioral changes are characteristics that are more important than physical growth (**Table 14.1**). Elementary school students greatly expand their field of activities, which is markedly different from early childhood, during which they lived under the protection of their parents. Accordingly, the possibility of encountering danger increases, which requires them to choose safe behavior on their own.

In the upper grades in particular, their inability to solve psychological problems can cause unstable conditions, which may then lead to a major accident/disaster; therefore, guidance, management, and consideration by adults around them are important. In addition, basic lifestyle habits centered around eating, exercise, and rest tend to become irregular as the child ages. After returning home on weekdays, elementary school students spend more time watching screens, including TV, games, and smartphones, except for the time spent on their assignments and chores. This kind of lifestyle pattern is likely to break the regularity of children's lifestyle habits and involves the risk of having consequences on their health (see Chapter 5). Although this does not have direct effects on safe life, it may cause distractions in daily life or lead to dangerous behavior, which is mentioned later; thus, it cannot be ignored from the standpoint of safety education as well (see life accidents mentioned earlier).

Table 14.1 Psychological, social, and behavioral characteristics of elementary school students

School age	Psychological, social	Behavioral
Lower grades	• Become able to understand the consequences of their behavior. • Come to have their own opinion and sometimes rebel against their parents.	• Impulsive behavior decreases. • Activities in a group consisting only of children increase. • Become able to show appropriate behavior by understanding the consequences of their behavior.
Upper grades	• Psychological problems increase, such as feeling stress and being unable to control their emotions.	• Tend to attach greater importance to relationships with friends than to those with adults (teachers, parents). • The inability to appropriately cope with problems may cause a psychologically unstable state and result in violence against people or destruction of things. • Come to show the behavior of losing control. • Come to exhibit a breakdown in basic lifestyle habits. • Spend more time on screens (TV, games, and smartphones) after returning home.

Source: Adapted from Reference[2]

(1) Challenges in the safety education of elementary school students

Psychological development associated with the cause of behavior and the prediction of its consequences is an important factor from the standpoint of predicting and avoiding danger. Elementary school children come to easily understand this kind of causal relationship from the lower grades, allowing for effective

safety education in elementary schools. In elementary schools, students are required to start with the creation of an awareness of dangers around them through experiences and then gradually increase their knowledge of dangers and disasters. Particularly in the upper grades, it is effective to use information from mass media (TV, radio, and newspapers/magazines) and the internet to help students understand and consider safety in safety education.

Elementary school students are in a period in which they have a high **normative consciousness** and are willing to accept the guidance of adults; this period is considered suitable for safety education. However, in addition to providing safety education, it is also important for adults to serve as models of safety behavior. It is the basis of safety education for adults to set an example first, such as complying with regulations. Moreover, it is also important to gradually add consideration for the safety of others, particularly the safety of their family members, juniors, and elderly people, to the contents of teaching.

3) Characteristics of the mind and body and behavior of junior high school students

Reaching puberty in this period, students move toward being mentally independent from their parents, or they rebel against their parents and school more often than before. In junior high schools, the number of incidents of bullying and violence is larger than that in elementary and senior high schools, indicating that it is also a period in which the possibility of dangerous behavior, including problem behavior, increases (see Chapter 11).

The decline in normative consciousness is cited as a factor for dangerous behavior. Junior high school students tend to be more permissive about acts against social rules. Such examples include crossing a road by ignoring the traffic light and using a mobile phone/smartphone while walking. The decline in compliance with social norms does not directly lead to problem behavior, but as its relationship to drug abuse, for example, has been pointed out,[3] it constitutes one of the important background factors.

Susceptibility to **peer pressure** is also a characteristic of this period. Students begin to show a tendency to be afraid of being left out of the group and thus dare to do something dangerous in order to attract attention from peers and enhance a sense of belonging to the peer group.

(1) Challenges of the safety education of junior high school students

The tendency to try to engage in **dangerous behavior** is not limited to particular children. Instead, it is generally seen in young people's normal process of development and plays an important role, good or bad, for their growth into adulthood. Dangerous behavior is a means of become independent from parents and get peers. Conversely, it may lead to a decline in the sense of compliance with social norms represented by school rules. This triggers various dangerous behaviors. It is thought that most dangerous behavior in this period is exploratory behavior (attempts), with only some leading to significant deviations and continuous dangerous behavior.

However, if it is a behavior that may lead children to damage themselves or others and possibly cause them to die, teachers are required to correctly tell their students the importance of respecting their own lives and those of others as well as the consequences of reckless behavior, and to provide justification for behaving safely.

In addition, students need to learn in safety education not only the risk of becoming a victim of an incident/accident but also the potential risk of causing damage to others. For example, riding a bicycle recklessly or without a light can cause a collision with a pedestrian and may even take a person's life in the worst case. Even junior high school students need to be fully aware of their responsibility for traffic safety as citizens.

3. Causes of injuries in accidents involving minors[4]

Traffic accidents in Cambodia account for the largest percentage of injuries due to accidents, with 71.8% of those who were injured in the past 12 months being related to road accidents (Table 14.2). Of the injuries, falls and stumbles accounted for 9.7%, followed by snake or animal bites at 5.1%, violence at 2.4%, severe burns at 1.2%, and guns, drowning, and poisoning at less than 1% each. Others or unknown causes accounted for 9.2% of the injuries.

For **the injuries in those aged 0–9 years**, the leading cause was traffic accidents at 48.7%, followed by falls and stumbles at 22.5%, snake or animal bites at 13.5%, severe burning at 2.0%, violence at 1.5%, and other or unknown causes at 11.7%.

Among **injuries of those aged 10–19 years**, the leading cause was traffic accidents at 67.8%, followed by falls and stumbles at 9.2%, snake or animal bites at 5.1%, violence at 3.7%, severe burns at 2.0%, and others or unknown causes at 12.1%.

Table 14.2 Causes of injuries by age

Age	Type of accident									
	Road accident	Fall from tree/ building	Snake/ animal bite	Violence	Severe burns	Gunshot	Poisoning (chemical)	Drowning	Others	Don't know/ missing
Injured										
0-9	48.7	22.5	13.5	1.5	2.0	0.0	0.0	0.0	6.6	5.1
10-19	67.8	9.2	5.1	3.7	2.0	0.0	0.0	0.0	12.1	0.0
20-39	79.4	6.1	3.3	2.7	1.1	0.7	0.4	0.0	6.3	0.0
40-59	73.1	11.1	4.5	1.6	0.9	0.1	0.6	0.0	8.2	0.0
60+	60.3	13.1	6.4	1.1	0.0	0.0	0.0	0.0	17.6	1.4
Total	71.8	9.7	5.1	2.4	1.2	0.3	0.3	0.0	8.6	0.6

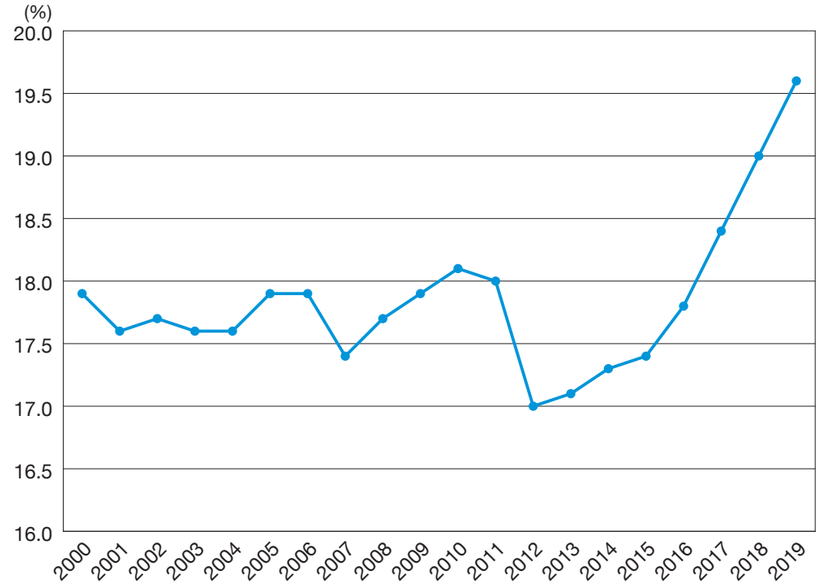
Percentage of the population injured in an accident in the past 12 months by type of accident according to age, Cambodia 2014
Source: Adapted from Reference[4]

4. Traffic safety and the prevention of traffic accidents

Traffic accidents are problems that we all face. In Cambodia, the mortality rate associated with traffic accidents is increasing every year (**Figure 14.1**).[5] It is characterized by a large number of deaths associated with **motorcycles and tricycles**. The prevention of traffic accidents requires the establishment of relevant laws and regulations, the creation of a safe traffic environment (i.e., building road networks and improving the quality of existing roads), the inspection and maintenance of vehicles, and activities to educate people through traffic safety education.

The challenges in Cambodia include drivers' low awareness of the safety of **vulnerable road users** (i.e., children, elderly people, and pedestrians) and low awareness of compliance with laws (e.g., compliance with traffic regulations, helmet use, and particularly, not committing speed violations or driving under the influence of alcohol).

The contents of **traffic safety education** (**Table 14.3**) in schools include understanding dangers in various traffic situations as well as learning safe walking practice and the safe use of bicycles, motorcycles, and tricycles. In addition, it is important to be able to practice safe behavior by learning **to predict and avoid danger**. The major goals of traffic safety education are for children to behave in accordance with traffic rules and to take proper actions to protect themselves on their own, that is, "**stop**," "**watch**," and "**check**."[6] At the same time, these goals serve as the basis for **the creation of a safe traffic society**.



Source: Adapted from Reference[5]

Figure 14.1 Mortality rate caused by road traffic injury (per 100,000 population)

Table 14.3 Contents of traffic safety education

i)	Understanding dangers associated with walking on a road and crossing a road, and how to behave safely
ii)	Inspection/maintenance of bicycles and proper ways of riding them
iii)	Understanding the characteristics of motorcycles and tricycles, and their safe use
iv)	Understanding the characteristics of cars and how to behave safely in a driving car
v)	Correctly understanding and complying with traffic regulations
vi)	Understanding drivers' obligations and responsibilities, including cases where a bicycle is used
vii)	Understanding and considering the traffic safety of children, elderly people, disabled people, the sick and wounded, and pedestrians
viii)	Understanding the importance of creating a safe traffic society through active participation/ cooperation
ix)	Functions of related organizations such as police and firefighters

Source: Created using Reference[6]

Column: School commuters' situations and the challenge of helmet use in Cambodia[7]

In Cambodia, the most common means of transportation is motorcycles. They account for more than 80% of the officially registered motor vehicles, with deaths caused by motorcycle accidents making up 67% of annual traffic fatalities. On top of that, the death toll is rising. Cambodia's law requires drivers to wear helmets but does not require passengers to do so. When both the driver and the passenger use a helmet, deaths can be avoided. The prevention of motorcycle accidents is an important challenge in Cambodia's traffic safety education.

Moreover, although the law allows people aged 16 years and older to drive motorcycles, this regulation is not strictly enforced. For example, we see students who live in areas far from their schools and who have difficulty commuting on foot or by bicycle, driving motorcycles to commute to school every day. There are often two or three students, sometimes even more, on a motorcycle, and they rarely wear helmets. This is a challenge for school attendance and safe commutes.

5. Prevention of criminal damage

With rapid urbanization and computerization, protecting against **criminal damage**, such as **abduction and injury**, has become an important challenge in school safety. The number of criminal damage cases through the use of the internet, which is related to the spread of smartphones and SNSs (social networking services), has increased, and the prevention of criminal damage involving schoolchildren has become an extremely important global challenge (see "Column: Children living in the digital age"). However, this challenge cannot be solved only through measures taken by schools; it should be addressed by the whole society.

This section explains how to respond to the presence of suspicious persons, which schools in Cambodia will also need to address in the future.[2]

1) Hardware aspect of crime prevention measures (facilities/installations)

As a crime prevention measure from the aspect of facilities/installations, the principles of **"Securing visibility and territorial reinforcement/maintenance"** and **"Controlling access and entry"** are important. These mean eliminating blind spots by improving visibility (Securing visibility and territorial reinforcement/maintenance) and preventing those attempting to commit crimes from accessing/entering the school premises and school building (Controlling access and entry). To this end, what can be done first in Cambodia is to place a fence around the premises and post a security guard. With a fence, it will also be possible to prevent entry by stray dogs and domestic animals, such as goats, and to prevent damage to the premises caused by unsanitary excretions as well as damage caused by wild dog bites.

Moreover, as the national and local economies develop, it may become possible to introduce security installations one by one, including security cameras and interphones, automatic lock systems at gates, and emergency alarm systems.

These installations are not expected to be highly effective without the software aspect of crisis management, which is mentioned later. Even with security cameras, if the system for intentionally monitoring them is inadequate, or the notification system has been cancelled, suspicious persons may easily gain entrance. It must be noted that hardware will be effective only when there is software enhancement.

2) Software aspect of crime prevention measures

It is important to establish a crisis management system in schools, and to devise and apply effective measures based on the system, and to devise and apply a crisis management manual. The points to achieve this are described below.

i) Create **a crisis management system** by clarifying the roles of managers and the persons in charge of safety.
ii) Collect information on suspicious persons around the school while collaborating with families and related organizations in the community.
iii) Take feasible and effective measures depending on the various situations.
iv) Collaborate with related organizations/institutions in the community, and seek cooperation from guardians and community residents.
v) Create **a crisis management manual** suited to the situations of the school and the community. In this process, clarify the priority of responses in case of an incident/accident.
vi) Conduct training to effectively apply the crisis management manual.
vii) On the basis of challenges obtained through training, improve the crisis management manual to make it more functional.
viii) Actively provide crisis management training for school personnel to enhance and maintain their awareness of crisis management.

Items that should be included in the crisis management manual for coping with the entry of suspicious persons into the school are shown in chronological order (Table 14.4). It is important to give **the highest priority to the lives of people** in all items.

Table 14.4 Crisis management flow in case of entry by a suspicious person

Item	Response
Early detection and checking of a suspicious person	• As a rule, ask the purpose of the visit before allowing a person into the school premises. • When there is a suspicious person in the school premises, say something to the person. • Ask a person without a proper reason to exit.
Prevention of human damage	• When school personnel sense danger or suspicion, promptly contact other staff of the school as well as police and related organizations. • If the person tries to use violence, take appropriate protective measures while promptly evacuating and guiding schoolchildren. • If someone is injured, give first-aid to the person and promptly check the safety of all people.
Appropriate subsequent response	• Promptly build an organization for post-incident response. • Grasp the situation of the incident and organize information. • Contact guardians. • Take measures to prevent recurrence. • Create a system for providing post-incident mental health care to schoolchildren, school personnel, and guardians.
Common matters	• Gather information at one place (e.g., the principal) and record it accurately. • Check one by one whether the critical situation was appropriately addressed and that nothing has been overlooked.

Column: Children living in the digital age[8]

The United Nations International Children's Emergency Fund (UNICEF) states in its report "Children in a digital world (2017)"[8] that digital technology has already significantly changed the lives and life chances of children. It points out the advantage of this technology by saying that if the technology becomes equally accessible all over the world in the right way, children will be able to connect to life chances around the world and gain skills and knowledge from a variety of learning resources by overcoming disadvantages due to poverty, race, ethnicity, gender, and geographical conditions.

Meanwhile, digital technology has negative aspects as well as positive prospects. One example is the digital divide, by which poorer countries and remote areas within those countries are left behind in terms of "global" information because of their underdeveloped internet infrastructure. In addition, there is harm that can be caused to children's online lives, such as the amplification of existing harm like cyber bullying, the occurrence of new forms of sexual abuse and exploitation, and websites containing information that could induce children to commit suicide and crimes. There has been damage that is serious and less visible from people who are around children. UNICEF cautions that particularly in areas in which the internet has recently spread, such as Africa and Southeast

Asia, inadequate safeguards are exposing children to major risks on the internet.

As a matter of course, guardians are concerned about children's health issues, including effects on eye health, internet addiction disorder, depression, and obesity.

Column: Natural disasters that frequently occur around the world[2]

Natural disasters frequently occur and cause heavy damage around the world. Flooding alone accounted for 47% of all weather-related disasters (1995-2015), affecting 2.3 billion people, the majority of whom (95%) live in Asia. It has been reported that about 90% of the people who lost their lives lived in low-income countries.[9]

In the international community, the 1990s was designated as the "International Decade for Natural Disaster Reduction," and since then, the United Nations Office for Disaster Risk Reduction (UNDRR) has taken the initiative to promote international cooperation aimed at reducing damage caused by natural disasters.

It is necessary to provide disaster prevention education in schools and communities, and consider what schools can do to protect the lives of children and community residents in case of a natural disaster.

Column: Response to lightning[10]

Lightning occurs as follows: Static electricity is generated when light air warmed by sunlight during the day ascends while the upper cool air descends. This static electricity is built up in clouds, and electricity that the clouds cannot hold any longer is discharged as lightning. The effects of lightning on the human body are **the direct lightning stroke** and **the side flash**. The direct lightning stroke is lightning that strikes the human body directly from the cloud. In this case, 80% of victims lose their lives. Areas surrounded by open space, such as flat areas and mountaintops, are dangerous. The side flash is lightning that rebounds off a tree or other tall object struck by the lightning to a person staying near the tree; or receiving an electric shock through the ground from a tree struck by lightning.

Evacuating to a safe place before lightning is generated is important. When you notice signs of lightning, such as black clouds approaching or the sound of thunder, shelter in a house, building, or car. Removing metals from the body or wearing an insulator like rubber boots **will not protect** a person from a lightning strike.

If there is no building that can serve as a shelter, shelter under a tall object that is at least five meters high (i.e., a utility pole, chimney, or steel tower). In doing so, keep a distance of four meters or more from the object while staying within a zone that allows you to look up at the top of the object at an angle of 45 degrees or greater. Staying close to the object will increase the risk of receiving a side flash. Facing down or lying on the ground will also increase the risk of receiving a side flash. It is advisable to **crouch and keep your head as low as possible** (Figure 14.2).

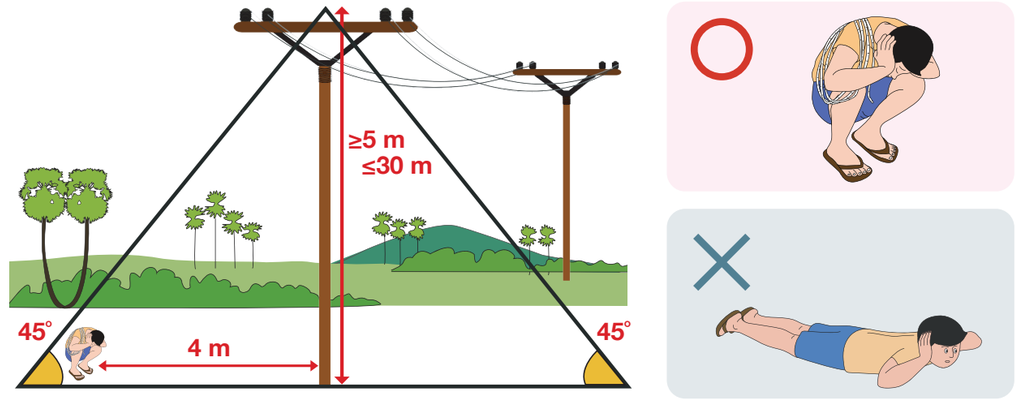


Figure 14.2 Response to lightning[10]

6. School safety

This section explains the concept of safety at school.[6] **School safety** should be addressed with school health in an integrated manner in order to ensure the health and safety of schoolchildren, and to develop the basic knowledge that enables them to nurture mental and physical health and remain safe throughout their lives. **School safety is aimed at** developing schoolchildren's qualifications/skills to behave safely on their own and contribute to the safety of others and society on the basis of respect for their own lives and those of others, as well as at creating an environment to ensure the safety of schoolchildren.

School safety has three fields: **Daily Life Safety**, **Traffic Safety**, and **Disaster Safety (disaster prevention)** (Table 14.5).

Accidents that can occur during school time include accidental falls from stairs, a landing, a veranda, or a balcony, which require sufficient attention in safety management in schools. In addition, accidents caused by the deterioration or lack of proper maintenance of building structures and facilities/installations in schools cannot be overlooked.

In recent years, there has been concern about critical events that take advantage of changes in the environment surrounding schoolchildren, such as the spread of smartphones and SNSs, and which target schools (see Column: Children living in the digital age). Since critical events surrounding schools change as the times and society change, the way school safety operates needs to be flexibly reviewed to respond to the emergence of new critical events that were not considered in the past.

Activities for school safety consist of three major activities, namely, **safety education**, which is aimed at developing schoolchildren's abilities to safely behave on their own and contribute to the safety of others and society by predicting various dangers latent in their own behavior and environment, **safety management**, which is aimed at making the environment surrounding schoolchildren safe, and **organizational activities**, which facilitate both activities.

Table 14.5 Major contents of school safety

Field	Contents
Daily Life Safety	• Injuries and accidents while studying or during school time • Incidents and accidents in family life • Prevention of crime damage (e.g., abduction, bodily harm, theft, and abuse of the network) • Dangers in school routes, safe way to commute to school • Safety of the school environment (facilities/installations), creation of a safe environment
Traffic Safety	• Danger, safety, and the prevention of accidents in various traffic situations • Inspection/maintenance of bicycles, understanding the characters of motorcycles, tricycles, and cars, and safety while riding them • Correct understanding of , and compliance with, traffic regulations • Creation of a safe traffic society based on new scientific technology
Disaster Safety (Disaster prevention)	• Understanding the dangers of natural disasters (i.e., wind and flood damage, drought and famine, lightning, earthquakes, tsunamis, forest fire, and volcanos) • Understanding dangers in case of a fire or disaster, and how to behave safely • Use of information on disasters and preparedness for disasters • Mental health care during and after a disaster

Source: Created using references[1,2,11,12]

7. Crisis management in schools

1) Concept of crisis management in schools[6]

Crisis management in schools must reflect the realities of schools, families, communities, and related organizations. In addition, it needs to assume various situations, including learning time both in and out of school, during commutes, breaks, lunch time, school events, and during the absence of a principal, vice-principal, or person in charge of safety, and requires drawing up a plan that can cope adequately with a variety of incidents/accidents. The most important aspect is to give the highest priority to the security of schoolchildren. The document that states these matters for the purpose of their implementation is called a **school safety plan**.

To conduct proper crisis management, it is necessary to prepare a detailed school safety plan in advance. In considering a school safety plan, the three activities, that is, activities related to safety education, activities related to safety management, and organizational activities related to safety, need to be correlated. The document that specifically provides necessary matters and procedures to properly respond to the process from the occurrence of the accident to emerging from the crisis and restoring safety is called a **crisis management manual**. On the basis of these matters, schools need to create their own crisis management manuals and share a common understanding among all school personnel so that they can properly respond every day as well as in emergencies. In addition, it requires continuous verification and improvement.

2) Actual practice of crisis management in schools[10]

Crisis management in schools is divided into preventing incidents/accidents through early detection of danger (risk prevention), ensuring the safety of children and school personnel (risk management), and preventing the spread of damage through a prompt and proper response to incidents/accidents as well as subsequent measures (crisis management). Crisis management in schools is chronologically classified into the four phases below (**Table 14.6**). The content and flow of these phases are specifically explained below.

Table 14.6 Crisis management in school

Phase	Crisis management item	Specific activity
1 Prevention	Prevent incidents/ accidents from occurring	Safety inspection, development of children's **ability to predict and avoid danger**
2 Preparation	Prepare for the occurrence of incidents/accidents	Creation of a crisis management system, collaboration with related organizations/ institutions, support from guardians and community residents, creation of the crisis management manual, carrying out training
3 Response	Promptly respond to incidents/accidents	Security of children and school personnel, grasping the situation, emergency medical care, prevention/mitigation of the spread of damage
4 Restoration	Subsequent response to incidents/accidents and restoration	Communication/explanation to guardians and related people, preparation to resume education, measures for preventing the recurrence of incidents/accidents, mental health care, review of the crisis management system

Source: Created using rerence[10]

(1) Prevent incidents/accidents from occurring [Prevention]

Inspecting facilities/installations and apparatuses in school as well as the safety of school routes is one of the important aspects of crisis management to prevent schoolchildren from getting involved in incidents/accidents. Efforts to "isolate," "analyze," and "manage" dangerous spots in the environment of school life, including going to and from school, need to be systematically made based on the **Plan-Do-Check-Act/Action (PDCA) cycle**.

a) Isolating dangerous spots

Use the three types of information below for reference to isolate spots where accidents are likely to occur.

i) Information provided by school personnel, schoolchildren, guardians, and communities
Collect information from all the stakeholders, including school personnel, schoolchildren, guardians, and communities, about places where they were injured at school or where they experienced a danger on their way to or from school, and mark them on a local map. Identify places where many schoolchildren were injured and where a danger could have led to a major accident, and narrow down the spots to which priority should be given in taking measures.

ii) Information about the occurrence of past accidents
For example, places where abductions or a suspicious approach incident occurred in the past, places where schoolchildren were injured, and spots where a waterway overflowed should be recorded as objective facts and included in priority dangerous spots.

iii) Information about accident occurrence conditions
The occurrence of accidents involves typical environmental conditions. Use the viewpoints of a **hazard map** and an inspection list for reference to find the environmental conditions that can be linked to accidents in school or in the commuting environment, and inspect them on a regular/irregular/daily basis. Conducting daily inspections for suspicious objects is also important.

For your information, a hazard map is a map that indicates potentially dangerous places and evacuation sites in case of a certain disaster. The map may differ depending on the type of disaster.

b) Analyzing dangerous spots

Analyze isolated dangerous spots to obtain concrete images of possible accidents and identify environmental conditions that can cause a problem.

i) Objective analysis through the eyes of multiple persons
Carry out joint inspections with stakeholders, and observe and analyze dangerous spots through the eyes of multiple persons. As needed, seek cooperation from experts to conduct a more detailed, objective analysis. In regard to the situation of damage when an accident occurred and the place of occurrence, identify the environmental conditions that served as factors of occurrence.

ii) Analysis of schoolchildren's behavior
The occurrence of multiple accidents is linked to **schoolchildren's behavioral characteristics**. Observe how schoolchildren behave in dangerous spots in school and on school routes, and obtain concrete images of possible accidents. After that, determine the environmental conditions and challenges in guidance that should be improved.

iii) Survey by schoolchildren
The analysis of dangerous spots conducted by schoolchildren is useful because it can lead to the identification of problems from the perspective of schoolchildren as well as the safety education of schoolchildren themselves. It is also effective to collect information from schoolchildren about their dangerous experiences and create a **local safety map**, then exchange opinions with guardians and community stakeholders.

c) Managing dangerous spots and the organizational structure

Through the isolation and analysis of dangerous spots, consider concrete improvement plans to take measures. It is desirable that schools, families, and communities come together as one to systematically promote discussions on activities including regular inspections.

(2) Prepare for the occurrence of incidents/accidents [Preparation]

a) Evacuation drills

Evacuation drills are held in order to confirm the roles of school personnel stipulated in the crisis management manual and to nurture schoolchildren's practical attitudes and ability to evacuate safely in case of an emergency.

Evacuation activities are "activities to protect life" from dangers that may occur in the next several seconds, minutes, and hours. The matters below need to be clarified before an evacuation drill wherever possible, by considering what kinds of dangers can threaten schoolchildren's lives and physical health from the standpoint of protecting them.

i) What kinds of dangers can be posed? Evacuation from what?
ii) What kinds of evacuation activities should be taken for each danger?
iii) When should evacuation activities be initiated?

b) Evacuation plans in case of danger

Evacuation activities in case of danger vary depending on the type and scale of the danger as well as each individual's characteristics and situation. Assuming that evacuation activities are "security activities to escape danger," they can be classified into "Wait (stay at the site)," "Move vertically (e.g., move to a secure place on the 2nd or higher floor)," and "Move horizontally (e.g., move to an evacuation site temporarily or for a longer time)" in terms of space. Therefore, it is important to take this into account and consider in advance what activities should be carried out in case of danger. In addition, evacuation activities assuming **secondary disasters** (i.e., a series of disasters triggered by the primary disaster) also need to be considered in advance.

In case of danger, the school must protect the lives and physical health of schoolchildren by establishing a countermeasures headquarters to help all school personnel fulfill their roles, such as information gathering, evacuation guidance, and relief activities. To ensure the fulfillment of these roles, it is necessary to create a crisis management manual in advance and to share a common understanding among all school personnel.

It is necessary to prepare evacuation plans and include them in the crisis management manual by designating evacuations sites and evacuation routes individually and specifically on the basis of the topographical and geological characteristics of the school environment and its surrounding areas, as well as hazard maps created by local governments and organizations.

(3) Promptly respond to incidents/accidents [Response]

In the case of an accident in school, it is essential for the body that established the school (principal) to take prompt and proper action by giving the highest priority to the lives and health of schoolchildren (**Figure 14.3**). To achieve this, it is important for the school to have a flexible system in place as an organization, and for all school personnel to always understand and master procedures for treating sick (wounded) persons promptly and properly without hesitation (see Chapter 15).

When a sick (wounded) schoolchild is found, it is important for the first person on the scene to check the injured or ill schoolchild's symptoms and ask nearby staff and schoolchildren to help while preventing the symptoms from becoming serious by providing first aid, such as immediately stopping bleeding and providing cardiopulmonary resuscitation (CPR), depending on the condition of the schoolchild. In case of an accident, it is required to simultaneously perform many tasks, including contacting the guardian of the affected schoolchildren and caring for other schoolchildren, in addition to providing first aid. All school personnel must have a common understanding of what should be done promptly so that they can respond systematically. In contacting the guardian of the affected schoolchild, make contact as early as possible after organizing minimum information required about the general situation of the accident and the degree of injury (i.e., minor, moderate, and severe).

In cases requiring emergency response, such as those in which the life of the affected schoolchild is being threatened, take prompt action by giving a higher priority to lifesaving treatment than to reporting to the manager. School personnel need to work to reduce other schoolchildren's anxieties without being emotionally disturbed by the situation of the accident or the condition of the affected schoolchild. Try to leave notes as needed regarding the occurrence of the accident, measures taken after occurrence, and the results of those measures while giving priority to first aid, and organize the contents of records once the situation settles down temporarily.

(4) Subsequent response to incidents/accidents and restoration [Restoration]

Concerning accidents in school, the body that established the school (principal) is required to devise and implement recurrence prevention measures by investigating the cause and verifying the previous safety measures, and to provide a sufficient explanation and continued support to the guardian of the affected schoolchild.

Specifically, organize background information about the occurrence of the accident once the response that was needed immediately after the accident is completed. Collect a broad range of information on

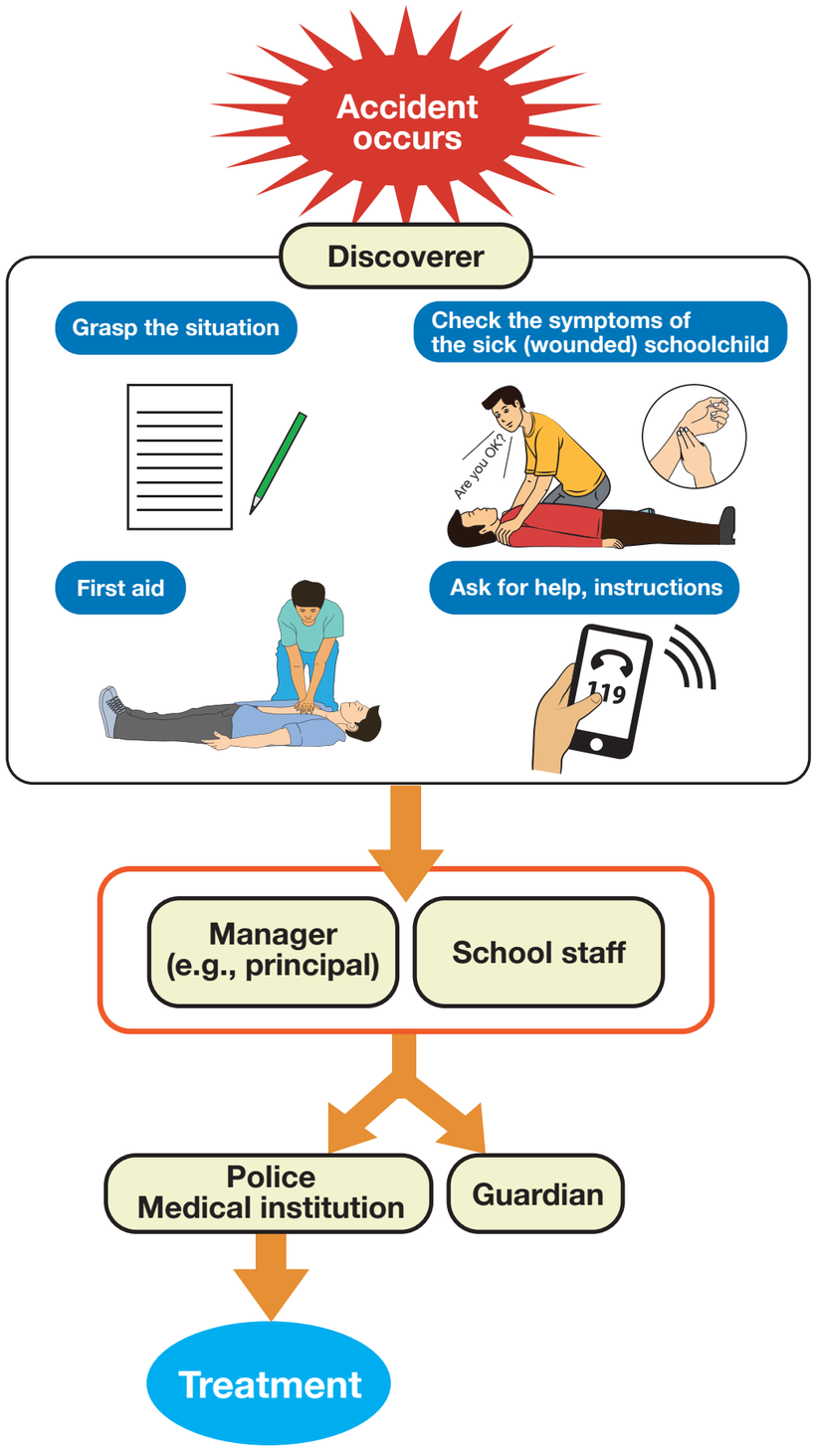


Figure 14.3 Example of response in case of an incident/accident in school (first aid/emergency contact system)

possible causes of the accident, conduct research/verification aimed at preventing accidents in the future, and make use of the results of research to prevent recurrence.

3) Experience of an incident/accident and mental health care[2,10]

Encountering an incident/accident can traumatize schoolchildren because of fear or loss; they may develop symptoms, such as repeatedly remembering the event or reproducing the event in their play, as well as emotional instability and sleep disorder, causing serious problems in their daily lives. These reactions can happen to everyone, and in most cases, subside over time. If this condition persists for three days to one month after the encounter with the incident/accident, it is called **Acute Stress Disorder (ASD)**, and if it persists for one month or longer, it is called **Post-Traumatic Stress Disorder (PTSD)**. Therefore, it is important to provide support for schoolchildren and their guardians immediately after the incident/accident for the prevention and early detection of PTSD. It should be noted there are cases in which schoolchildren develop symptoms of ASD soon after the encounter with the incident/accident, which then become chronic and lead to PTSD, as well as cases in which symptoms are not noticeable at first and cases in which symptoms are reduced once but recur a few months later; thus, it is important to provide mental health care for as long as possible (see Chapter 12).

In addition, the guardians of affected schoolchildren and school personnel may ignore these signs or become insensitive to their own physical and mental disorders, and therefore, they may require mental health care for themselves. For the affected schoolchildren, it is important for their guardians and the school personnel around them to be mentally stable. This is why it is important for all the people involved in the incident/accident to understand that they need mental health care, which includes noticing their own physical and mental disorders as early as possible and take a break or have consultations proactively.

(1) Mental health care provided immediately after the occurrence of a crisis

Like bodily injury, mental trauma requires first aid. **Psychological First Aid (PFA)** is globally accepted as a basic method of mental health care provided immediately after the occurrence of a crisis. PFA provides the specific contents and overall procedures of mental health care that is necessary immediately after the occurrence of a crisis.

The framework of the **Psychological First Aid School Edition (PFA-S)**[13] consists of eight major activities (**Table 14.7**). The PFA-S considers it natural that schoolchildren and school personnel show various early responses (i.e., physical, cognitive, behavioral, and spiritual problems) after an emergency situation. Care provided by experts in disaster relief assistance and mental health can help schoolchildren and school personnel recover from these early responses, and leading such care to assistance tailored to each person's needs will be able to prevent symptoms from becoming severe or persisting for a long time.

Table 14.7 Framework of PFA-S

Activity	Objective
i) Approach sufferers and start activities	Reach out to sufferers (schoolchildren and the staff of the school) in an empathic manner without placing a burden on them, and respond to their requests.
ii) Safety and a sense of security	Ensure immediate security so that sufferers can rest their body and mind.
iii) Stabilization	Quell the disorder of sufferers who are overwhelmed by the situation, and give them a perspective.
iv) Collect information	Collect related information and identify sufferers' present needs and problems.
v) Help solve actual problems	Help sufferers address their present needs and problems in a realistic way.
vi) Promote interactions with surrounding people	Promote sufferers' interactions with their families/friends/teachers/other school officials who stay close to them and with supporting organizations in the community, and provide assistance to make these relationships last for a long time.
vii) Information helpful to respond to the situation	Provide sufferers with information on stress reaction and a coping method in order to alleviate their suffering and enhance their adaptive function.
viii) Introduction and transfer	Introduce services that sufferers presently need or will need in the future, and transfer support.

Source: Created using references[2,14]

Column: Anniversary reaction[2]

People who were traumatized by a disaster or incident/accident may reexperience their trauma, though since healed, on the date when they experienced it first. This is called an **anniversary reaction**.

One method to cope with this is to inform guardians and children beforehand that the previous reaction may recur as the date of the disaster or incident/accident approaches, but they don't have to worry even if it recurs because this reaction can happen to everyone. By doing this, it will be possible to prevent children's anxiety from increasing as well as enable guardians to respond calmly.

8. Roles of school personnel in creating safe schools

This section explains the roles of school personnel required to make schools a safe and secure place/environment.[8,15] School personnel are required to appropriately make decisions and take action according to circumstances to protect the safety of schoolchildren's lives and physical health from danger. They are also required to fully understand the organizational structure in school as well as the importance and urgency of school safety, and to further enhance their safety awareness and safety response skills as well as their safety education skills. To achieve this, it is necessary to provide school personnel with practical training that meets the needs of the school and the community.

Making full use of the latest safety information provided by, for example, the government, international organizations, and international aid organizations, all school personnel must be firmly determined to ensure the safety of schoolchildren, understand matters necessary to protect the health and safety of schoolchildren, and have the basic knowledge and skills on the contents and methods of teaching. This requires the improvement of school safety training provided for school personnel. In doing this, structures within schools also need to be improved to enable all school personnel to share the latest information.

Examples of training include the items below. Concerning forms of training, simulation exercises, in which discussion is held as to what kind of action should be taken by assuming a case that can occur in school, and training by external personnel with expertise are effective, in addition to lectures/classes.

i) Evacuation drills for disaster/crime prevention based on the crisis management manual
ii) Drills to respond to disasters/incidents (including responses to affected or injured schoolchildren and guardians)
iii) Cardiopulmonary resuscitation including AED, and first aid
iv) Matters related to the creation of a safe environment using statistics of disasters and accidents that occurred in school as well as information on specific cases
v) Matters related to the safety education of schoolchildren
(e.g.) Qualifications/skills related to safety that need to be developed, positioning of safety education, common understanding of teaching contents/materials
vi) Mental health care of schoolchildren, school personnel, and guardians

9. Safety education of schoolchildren[10]

To ensure the safety of schoolchildren, it is very important to provide safety education that enables schoolchildren to predict and avoid danger for themselves, in addition to conducting thorough safety management of facilities/installations such as safety inspections. Thus, safety education throughout all educational activities (all subjects and school events) is required.

1) Development of the ability to predict and avoid danger

Schoolchildren may encounter danger in a situation in which there are only schoolchildren, such as on their way to or from school or on holiday. In such a situation, schoolchildren need to predict and avoid danger for themselves by noticing potential dangers they may face, predicting what kinds of accidents can be caused by those dangers, and deciding what to do to avoid the dangers. Safety education must be provided so that schoolchildren can develop their ability to think and decide on their own in all circumstances.

For example, it is important to **nurture** schoolchildren's **ability to predict and avoid danger** in natural disasters specific to the region, such as typhoons, tropical storms, floods, and drought, while making use of materials prepared in each region and involving activities to make schoolchildren think in light of specific situations as well as experimental activities.

2) Use of human resources/resources in communities

In order to ensure more effective practice in the safety education of schoolchildren, it is necessary to obtain cooperation from lecturers of external organizations, including NGOs, and to actively request that homes and communities provide teaching materials and learning opportunities. It is important to choose and consider the contents and methods according to the actual situation of the school and the community. Particularly in school, where learning is pursued according to the curriculum of each subject, it is important to effectively use external human resources by linking curriculums across different subjects instead of providing an isolated, independent learning opportunity. This is one method of curriculum management.

Examples of collaboration with communities include the items below.

i) Utilize guidance from police and disaster prevention/safety experts in safety training provided at school.
ii) Use community facilities and organizations related to safety (e.g., the Commune Committee for Disaster Management, the Village Disaster Management Group[16]) as teaching materials.
iii) Use the region's topography, geology, environment, and past disasters[16] as teaching materials.
iv) Study and experience the contents of work of people who protect safety in communities.
v) Participate in safety events in communities to develop skills to ensure one's own safety (self-help) and the spirit of cooperation (mutual assistance).

Column: Measures related to land mines in Cambodia

In Cambodia, as the result of its long civil war, several million **land mines** and **unexploded ordances (UXO)** still remain uncleared, and thus the country is called a major land mine- and unexploded ordance-contaminated country. These land mines and UXO have caused death and injury to a large number of civilians, most of whom were children, posing very serious humanitarian issues. In rural areas, they threaten safety in daily life and hinder regional development and economic recovery.

Anti-land mine measures in Cambodia are led by the Cambodia Mine Action Center (CMAC). The CMAC reports that the number of land mines it removed during the period from 1992 to January 2020 exceeded 540,000.[17] It carries out activities by developing long-term plans and goals for various issues, including land mine removal plans, compensation for land mine victims, and risk education on land mines and UXO, while receiving support from United Nations agencies, other countries, and NGOs. The issues of land mines and UXO still have a great impact on the health and safety of children and Cambodia's economic development (see Chapter 13).

Exercises for further thought and research

[14-1] What can you cite as characteristics of incidents/accidents involving children? Pick one example of an incident/accident in Cambodia, and discuss factors and the background of its occurrence as well as prevention measures.

[14-2] Are there any dangerous places in and around school? Pick one elementary school nearby, and create danger prediction maps and safety check lists for (1) School premises and (2) Area around the school.

[14-3] Investigate and report the actual situations at nearby elementary, junior high, and senior high schools, including whether a crisis management system is in place, whether safety education is provided, and whether evacuation drills and training of teaching staff are provided.

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