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Child Psychological Symptoms in Emergency Situation

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Introduction

In the Great East Japan earthquake that struck the Tohoku region on March 11, 2011, approximately 400,000 people used shelters, many of whom had special needs, including children and people with disabilities. Over time, the evacuation center moved from the shelter to temporary housing; children reacted in a variety of ways, and support was carried out in an ad hoc manner[1, 2, 3]. In thinking about how to care for children in a disaster, it is most important to keep in mind that symptoms differ according to the child's developmental age (Table 1)[4]. The purpose of this paper is to create a report for families and supporters so as to minimize confusion in the event of a disaster of a similar scale in the future.

In general, infants are sensitive to changes in the environment, and they are prone to tears and symptoms such as not sleeping. Puberty is a time when children have the ability to accurately recognize what is happening to them and show a reaction that is analogous to that of an adult. When there is a deviation in development, there is first maladjustment due to hypersensitivity, and later behavior with inadequate understanding of an event may also be observed.

Table 1 Responses and appropriate interventions for children in the event of a disaster

Age	Action	Physical symptoms	Feelings	
Preschoolers Ages 1–5	• Bed wetting, finger sucking, etc. • Clinging to parents • Fear of the dark • Unable to sleep alone • Cries easily	• Loss of appetite • Abdominal pain • Nausea • Sleep disorders and night terrors • Difficulty with conversation • Tic disorders	• Anxiety • Terrors • Standing • Sudden anger • Loneliness • Withdrawal	
Children Ages 6–11	• Decreased learning ability • Aggressive behavior at home and school • Excessive activity and antics • Cry like a young child • Compete with younger brothers and sisters for parental attention	• Change in appetite • Headache • Abdominal pain • Sleep disorders and night terrors	• Reluctant to attend school • Avoid contact with friends and family • Sudden rages • Excessive preoccupation with disasters and safety	
Prepuberty—puberty Ages 12-18	• Decreased learning ability • Backlash at home and school • Inability to act responsibly • Impatience, decreased activity, apathy • Negligent behavior • Social withdrawal	• Change of appetite • Headache • Digestive symptoms • Rash • Complaints of ambiguous painparental attention • Sleep disorders and night terrors	• Loss of interest in social activities with peers, hobbies, and recreation • Sadness and depression • Rebellious attitude toward authority • Feelings of maladjustment and helplessness	

Psychological response in a disaster

1. Acute phase reaction

The acute phase is generally a period of several months following a disaster. During this time, there are many reflective physiological reactions associated with the strong impact of this experience. Most of these reactions are temporary and can be regarded as normal reactions to abnormal situations, and a sense of security can be achieved in a few months.

1) Physical symptoms

At an age when it is difficult to express the inside of the chest in words, the conflict may appear as a variety of bodily symptoms.[5] Symptoms are often related to sleep (insomnia, night cry, evening terrors), discharge (night urine, frequent urination), gastrointestinal symptoms (diarrhea, abdominal pain, nausea), etc. In particular, insomnia associated with hypersensitivity is often seen in handicapped children, and temporary medication may be necessary in severe cases. Further, there is a deterioration from the previous disease, such as bronchial edge breath and preparative skin dermatitis.

2) Regression

Regression is a return to infancy; in a sense, it is a phenomenon in which a child who has a scary and painful experience turns back in the growth process. It uses baby talk, hugs its parents, hates the dark, and does not want to be alone. Because this is usually a temporary reaction, it is important for parents to watch children without upsetting them. It is not recommended that parents accept children's requests without limitation.

3) Elevated mood

Some children can be observed immediately after a disaster to be in an elevated mood and to have a hurried demeanor. Their voices and movements may be more pronounced than usual, they may be irritable, and they may be unusually sensitive to stimulation from the surrounding environment. These phenomena can be thought of as a normal response from the nervous system to protect oneself and prepare for unforeseen circumstances. If this behavior continues long after the crisis has passed, it will become a major obstacle in life. If it leads to destructive or deviant behavior, adults must exert control and set clear rules.

	Examples of how to intervene	
	• Giving a reassuring word or giving physical comfort • Follow set calming routines at bedtime • Do not allow unnecessary separation experiences • Sometimes, it is acceptable for a child to sleep with a parent • Encourage the expression of loss experience	• Avoid media reporters as much as possible • Encourage emotional expression through play
	• Further monitoring and consideration • Temporarily decrease demands and rules from home and school • Respond calmly to changes in behavior and set firm rules • Give child a role at home that does not become a burden • Encourage children to express their thoughts and feelings with words and play • Listen calmly and attentively to repeated descriptions of the experience of the disaster	• Prepare for disaster prevention with children • Rehearse security measures for future disasters • Enhance measures taken at school (mutual support, activities to express emotions, disaster education, preparation and planning, identification of high-risk children)
	• Further monitoring and consideration • Temporarily decrease the level of demands at home and in school • Discuss disaster experiences with friends or adults they can trust • Encourage reasonable physical activity • Rehearse security measures for future disasters • Encourage children to return to normal social activities, exercise, and lessons	• Encourage participation and give roles in regional reconstruction activities • Enhance the measures in schools (mutual support and sharing, preparation and planning, contribution to the reconstruction of the community, and identification of high-risk children)

4) Pretend play

Flashbacks expressed as pretend play show that painful experience is stored in the memory with all senses. If a child is old enough to develop language skills, he can express his discomfort in words and organize his experiences and memories by listening to the adults around him. On the other hand, if the child at his age does not yet have language ability, he will reproduce his experiences through play rather than in words. Immediately after the Great East Japan Earthquake, we frequently observed such earthquake and tsunami play.. This behavior need not be restrained unless it far exceeds normal boundaries; it usually decreases over time.

2. Mid- to long-term response

When more than half a year has passed since a disaster, reconstruction of the residential area will begin and the adults in the child's world will regain their sense of calm. With the passage of time, children's

cognitive abilities develop so that they can gradually begin to understand what has happened to them, and reactions associated with their current awareness are observed.

1) Attention seeking

A child who at first may have reacted patiently to the disaster may have a different reaction once the adults have calmed down. Behavior is observed that draws the attention of adults in various ways. Especially if a child has a younger sibling, he may start to compete for his parents' attention. He may regress in time, lie, or yell, or he may do the opposite and try to curry favor.

2) Impulsivity

With rapid cognitive development, a child gradually realizes the magnitude of what she has experienced. There may be feelings of uneasiness due to not knowing when a similar event might occur, and the child may become unable to cherish the present moment or act with a view of the future. The child might spend his or her pocket money immediately and behave impulsively in other ways, such as overeating. At home, this may lead to a backlash against parents, or toward other children at school. It is necessary to keep excessive behavior in check.

3) Various symptoms of anxiety

The symptoms exhibited during this period are often not directly linked to the disaster, and it is difficult for adults around children to understand their behavior in relation to the disaster. Many of these children have long carried feelings of anxiety and fear that they felt at the time without being able to process them. Confirming the presence of their belongings, feeling that they are disliked by those around them, and general anxiety such as being frightened of people are all expressions of these emotions. Children may fear death and be afraid to go to sleep. Adults should listen to children's experiences at the time of the disaster in detail and imagine the events from the eyes of the child and the feelings they provoked; individual specialized responses are necessary.

4) Symptoms of depression

Depression symptoms may indicate a condition similar to that of adults, without appearing as behavioral problems or anxiety; a child may be apathetic or have lowered concentration, experience a decline of interest in favorite things, experience fatigue, or develop insomnia. In many cases, it is necessary to pay attention to these factors because they may lead to poor school attendance. Losses as a result of a disaster (relatives, friends, important things, communities, schools, etc.) may still be felt, and it can be difficult to explain one's inner feelings in words in an interview. Medication is sometimes required. It is hoped that supporters and families will cooperate to support each child under the guidance of a specialist, recommending adequate rest without overdoing things.

Cases of children with developmental disabilities

A characteristic reaction was also observed in children with developmental disabilities. We present three examples; some details have been changed to protect their anonymity.

1. Case 1

A 12-year-old boy was diagnosed with autism and was hospitalized at a medical institution. Throughout his childhood, he had been sensitive to sound, and often, he would panic and cover his ears. After he entered school, he found it difficult to adapt to the group. He was bullied, and his attendance was irregular. At home, he was immersed in games and his computer.

Although he did not live in the area where the tsunami had reached, it was difficult for him to live at home. He took refuge in a neighboring elementary school gymnasium, but it was noisy, and even securing a place to sleep was difficult. He would lie on his futon and try to block out the sounds, but after a while, he began to walk round and round and was unable to remain in the gymnasium. He occupied a game unit that had been stored there and sat in it 24 hours a day. When he moved to a welfare shelter for elderly and those with disabilities, he gradually became calm.

2. Case 2

A 9-year-old girl had been involved in a rehabilitation agency as a child with autism and intellectual disabilities. She was deeply attached to her belongings, ate using only certain dishes, decided in advance what to wear for each day of the week, and had a special set of belongings for when she went out. She rarely

got upset or panicked, and unless a promise was broken, she did not have difficulty dealing with her surroundings.

During the earthquake, the tsunami reached her home. She evacuated to a nearby hill with her family and silently watched as her home and town were destroyed in the tsunami. Although the family was moved to an evacuation shelter, they decided to relocate to the relatively undamaged home of the child's grandparents. A few days later, she arranged her favorite things around her in an orderly fashion, and before she went to bed, she began to check their numbers and positions repeatedly. Additionally, she refused to throw away empty candy bags and the like, and the family eventually stopped shouting at her to do so. This action continued for some time after leaving the shelter, but as school resumed and life stabilized, it became less frequent.

3. Case 3

A 10-year-old boy went to a medical institution with a diagnosis of attention deficit hyperactivity disorder (ADHD). He had strong hyperactivity and impulsiveness; he often got lost and was constantly getting into trouble at school with his classmates. He was treated at specialized medical institutions, where he received both support and medication. On holidays, he took lessons with his father. His family relationships were peaceful, and he liked to write.

During the earthquake, the tsunami reached his home, but he did not witness it because his family evacuated early. Fearing the effects of radiation, his family was forced to relocate and live in a different prefecture. After the evacuation, the boy began to go on tirades and express violent behavior toward his mother and siblings. He was also not sleeping enough. He was verbally and physically disruptive at school and did not follow the teacher's instructions. He also got into trouble with his classmates. As a result of major adjustments to a regimen of antipsychotic drugs, by the time he participated in the local memorial festival in his home community, his violent words and actions had diminished.

How to respond

It is necessary to consider the unique characteristics of each child. We provide appropriate support in consideration of the child's developmental age and inclination, experience at the time of the disaster, and life situation since that time, and of how much time has passed since the disaster.

1. Providing a sense of security

The first priority is to provide a sense of security. Although the physical security of the evacuation shelter as well as food, clothing, and basic needs are crucial, it is important for children to feel safe and close together. This can also offer them a sense of security to discuss and prepare for how to respond in the event of a similar disaster. Evacuation training immediately after the disaster was avoided based on adults' consideration of the situation, but children's anxiety was reduced by actively participating in disaster prevention activities.

2. Returning to everyday life

The rhythm of everyday life can be disrupted by a disaster. Eating three meals each day, ensuring a reasonable amount of sleep, and spending time with friends and teachers helps provide mental and physical stability. Further, it is important to return to daily social activities such as clubs and lessons. Children with developmental disorders tend to immerse themselves in their favorite things, such as games, and it may be necessary to reconfigure the existing patterns of daily life.[6]

3. Imparting accurate knowledge

Out of a desire to avoid exacerbating a child's grieving, adults may not provide accurate knowledge concerning a disaster. As is appropriate for the age of the child, however, it is important to be clear about the facts surrounding a disaster and to prevent unnecessary anxiety about future possible disasters and losses of family or friends. Additionally, after a painful experience, it is possible to teach children coping mechanisms that can help prevent mental health symptoms. Results have been reported concerning this topic and about what can be done on a daily basis.[7]

Things that can be done on a daily basis

1. Connection with local community in ordinary times

In hearing from families that foster children with developmental disabilities, we can discern the importance of connection with the community. When a child's developmental disorder is mild, the family may not willingly reveal that information. However, this can change in a crisis, and it is important to realize its importance during ordinary times. Children with disabilities who are living in a community should be provided with necessary support in ordinary peaceful times. In fact, the number of people wishing to take advantage of welfare services such as afterschool programs after the earthquake has increased, and this can be seen as a positive change. Various family associations and social media tools such as Twitter and Facebook (social networking services, SNS) have also been reported to be useful as sources of connection to the community.

2. Importance of support

A "support book" is a record of information concerning people who have a variety of disabilities that communicate their characteristics and symptoms. Many children with developmental disabilities receive daily medical treatment from their family physicians, who already have information about their personal histories and characteristics. Children who are not accustomed to life after an earthquake, however, can undergo physical symptoms such as loss of appetite or nausea. In such a situation, these children may not be able to see their family physicians and are less likely to consult a temporary physician. The "support book" gives a new doctor necessary information to allow for a smooth examination process.

3. Knowledge about the mental health care team

During the Great East Japan Earthquake, the Ministry of Health, Labour, and Welfare dispatched a mental health care team in response to a request from the affected municipalities. This team was composed of psychiatrists, nurses, mental health workers, clinical psychologists, administrators, and others. They cooperated with the activities of community health nurses and visited disaster-stricken homes. The team focuses on care for children and provides necessary consultations, prescriptions, and the like, and may connect residents to local specialty medical institutions when necessary. The experience of the earthquake necessitated special support for children, including child psychiatrists, and the team was dispatched many times. Because similar support is assumed for similar disasters in the future, it is useful in the case of an emergency to know that such a consultation team exists.

Conclusion

Needless to say, a "support book" is useful for children with various health issues; in the case of a disaster, many unforeseen events can arise. When a disaster of this scale occurs, normal organizational structures are destroyed, and it takes time for a community to regain its mental equilibrium. The best approach to disaster prevention is to create a wide variety of connections beginning in ordinary daily life and to build a local community that will be strong in the face of any disaster that might occur.

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