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COVID-19 Pandemic and Mental Health of Vulnerable Two Groups: Developmental Trauma of the Child-Adolescents and Work Disaster of Health Care Workers

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COVID-19 has spread worldwide. People are struggling to adjust to a new normal, but changes in their daily routines are also causing stress. A person may feel depressed, uneasy, or suicidal and may complain of symptoms such as panic attacks, post-traumatic stress disease (PTSD), psychosis, obsessive–compulsive disorder, or paranoia when personal resilience cannot effectively process the stress. Children, adolescents, and health care workers are especially psychologically vulnerable groups in the pandemic calamity situation; therefore, a long-term intervention plan is necessary for them. When intervening with children and adolescents, it should be considered that each individual has different ways of expressing stress according to the developmental level of cognition, language, and emotion, and taking into account these developmental levels, it is necessary to help them achieve developmental tasks appropriate for their age. Health care workers feel psychological pain from problems such as the risk of becoming infected, the risk of passing the virus to their families, overwork, isolation, and stigma. Therefore, it is necessary to help them recover themselves by supplying personal protective equipment and providing the most basic resources necessary for adequate rest, work-life balance, and childcare.

Key Words: *COVID-19; Mental Health; Psychosocial Support Systems; Adverse Childhood Experiences; Health Personnel*

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INTRODUCTION

Due to the global spread of COVID-19, our daily routines have been completely changing. People cannot go out with masks, there are no spectators in the baseball stadiums, and it is hard to identify an unfamiliar face in a wedding hall. All types of seminars and gatherings have been postponed and people do not know when they are going to take place. Children go to school every other week and freshmen in universities still have not ‘set foot’ on their campuses. Many people are stressed because of problems such as the risk of infection, COVID-19 confirmation of friends, long-term quarantine, social isolation, changes in daily life, uncertainty, financial breakdown, job loss, and conflict between family members, and they are experiencing emotions such as fear, boredom, loneliness, worry, anxiety, and anger.[1] According to a study in China conducted on 1,210 individuals from the general population, >50% of the subjects reported a significant level of psychological stress and a significant proportion of subjects complained of above moderate levels of depression and anxiety.[2] Furthermore, certain people presented signs of panic attacks, PTSD, psychosis, and paranoia, and they felt a suicidal urge.[3,4] Immediately after the first COVID-19 confirmed case in Wuhan, China, in December 2019, every national and social ability was focused on fields such as quarantine system, rapid diagnosis, and development of vaccine or treatment, but psychological support cannot be postponed anymore.

Generally, providing psychological support in a pandemic calamity is different from other calamities.[5] First, in-person consulting is difficult because of infection-related risk. Second, the pandemic is still ongoing and keeps chang-

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ing and does not remain in one form. The situation oscillates between bad and worse from an individual's positio-n.and there are the various perspectives of people in quarantine, people with confirmed cases, people who tested negative after treatment, as well as their families. A victim may simultaneously become a perpetrator sometimes. Consequently, psychological reactions are presented in various forms based on people's positions and circumstances during the COVID-19 pandemic; therefore, a state-specific intervention method should be established. However, there are limitations to the current psychological quarantine programs and guidelines because they are usually designed for ordinary adults. Based on existing research studies, this paper specified two groups that require careful attention and contemplated their characteristics, psychological reactions, and intervention methods.

PSYCHOLOGICAL REACTION AND INTERVENTION METHOD OF TWO VULNERABLE GROUPS

1. Child-adolescents

COVID-19 has had a considerable impact on children and adolescents.[6] They may feel annoyed, frustrated, and helpless about being unable to freely wander around even with their masks on like they did before. Moreover, they may feel fear after watching news reports and observing people's reactions to them. Children are cognitively immature; therefore, they understand the world mostly only from their own perspectives and they are unable to analyze the situation objectively. They cannot go to their childcare centers, kindergartens, or schools and they feel excessive fear about things regardless of how unlikely they may be.[5] Parents who have to spend more time with their children may be more likely to struggle due to difficult financial situations and parenting stresses which results in tranfer of their unease to their children. However, children and adolescents who have to be separated from their parents because they or a family member tested positive may misunderstand that their parents abandoned them and feel sad. Furthermore, they may feel guilty because they blame themselves for the situation or they may express anger toward the individuals who transmitted the virus to them or society. Certain children may be frightened about being avoided by friends or ostracized when they have to go back to daily life after quarantine.

Children and adolescents who feel these emotions react differently than most adults.[5] Their symptoms often present as physical symptoms or changes in behavior such as destructive play, refusal to go to school, rebellion, obsessive –compulsive symptoms, or paranoia rather than directly complaining of emotional discomfort. They understand and react in various ways to situations especially based on their age and cognition, language, and emotional development stage (Table 1).[5] These reactions are caused by the confusion of roles and the collapse of daily life rather than the physical health problems or financial crisis.[7] The developmental tasks of infants is forming stable attachment; however, their parents are exhausted by reduced income, unemployment, and parenting stress. Children, who cannot go to kindergarten or school, cannot make use of learning environments where they can learn autonomy, initiative, diligence, competitiveness, rule compliance, concessions, and friendship. Indeed, school is a resource repository for children's psychological health.[8,9] Adolescents should achieve the developmental task of becoming psychologically independent from their parents and establishing self-identity via secondary separation-individuation; however, in circumstances where they have no choice but to spend a significant amount of time with their parents, there is only an escalation of conflicts.[10] Adolescents selected to use the media to avoid their parents and compensate for the social interactions with peers; however, it is clearly different from face-to-face interactions. The goal-oriented activity of seeking compensation encourages competitiveness and exploration and encourages adolescents' maturation but the media cannot accomplish that.[11,12]

TABLE 1. Common symptoms of children and teens in pandemic calamity[5]

Age	Symptoms
Children	· Hypersensitive, aggressive behavior · Nightmare, change in sleep pattern and appetite · Physical symptoms including headache and abdominal pain · Refusal to go to school · Constricted play · Competition to draw their parents' attention
Adolescents	· Defiance · Agitation, decrease in energy, indifference · Excessive concern about stigma · Obsessive-compulsive symptoms · Paranoia · Social withdrawal · Loss of interest in what they like

When people are exposed to psychological trauma during childhood and adolescence, the trauma both increases the risk of mental illnesses and vulnerability to physical illnesses; therefore, psychological intervention is especially meaningful for these individuals.[13-15] Therefore, to help them, careful consideration of the levels of cognitive and emotional development is important and there are several major principles for such intervention.[5,6] First, accurate information should be delivered. Children and adolescents may imagine a situation as being significantly worse than the actual situation when they do not have accurate information. Even if the information may encourage certain anxiety, the situation should be honestly explained to children and adolescents and that adults are doing their best to solve these problems. Through this, children will develop the ability to predict and control the situation in the right way and unnecessary anxiety may be prevented. Secondly, the children's feelings should be carefully observed and acknowledged as they are; it should be explain-

ed to the children that their responses are normal. Ignorance or blame will prevent children from expressing their emotions to their parents and teachers, and this can aggravate the symptoms. Parents and teachers should understand that their adolescents' rebelliousness is another approach of expressing their anxiety and they should communicate with them about how they feel. Third, a safe environment should be provided to make them feel socially connected. For this purpose, parents must first remain mentally and physically healthy; it is recommended that they develop family activities such as cooking, decorating the home, and cleaning to help the children feel comfortable with a family-oriented daily life. Fourth, help should be provided such that the children can maintain a regular daily routine. Balanced diets, moderate exercise, and sufficient sleep are driving forces that help children and adolescents maintain their mental and physical health amid a stressful situation.

2. Health care workers

A few past experiences helped build a quarantine system more easily; however, COVID-19 is different from other infectious diseases because of its size and uncertainty.[16] Since the infection passes like the common cold in most people, excluding high-risk groups such as patients with chronic diseases or the elderly, people do not thoroughly obey the quarantine guidelines.[17,18] In this situation, it is the health personnel who have to take care of patients on the front line. They are stressed by problems, such as the risk of infection, the risk of transmitting to family members or coworkers, the lack of personal protection equipment, and performing duties that they are not familiar with, the burden of parenting, lack of rest, stigma, isolation, and loneliness (Table 2).[19,20] These stresses lead directly to anxiety, fear, depression, anger, attention problems, insomnia, failure in making proper decisions, and physical symptoms such as headaches and exhaustion.[21]

We focused on the case of China in which people attempted to help health personnel.[22] As COVID-19 confirmed cases surged, a hospital in Hubei Province opened an online course for health personnel to implement psychological education, created a psychological support hotline, and developed group programs to support stress relief activities. However, unlike expectations, these workers refused to get these types of support because they urgently required basic support such as additional rest, personal protection equipment, and education about how to treat troubled patients with confirmed cases rather than an interest in their psychological health. The hospital revised its strategy to provide resting areas, isolation units to protect families, food, and daily necessities. They educated them on how to calm down aggressive patients and positioned a security team to intervene if necessary. They distributed personal protection equipment and manuals and provided the families with videos of the employees' life in the hospital. They deployed a professional consultant in the resting area such that the health personnel can talk about their concerns in a comfortable environment.

TABLE 2. Various stresses of health care workers in pandemic calamity

The risk of infection
The risk of transmitting to family members or coworkers
The lack of personal protection equipment
Performed duties that they are not familiar with
The burden of parenting
Lack of rest
Stigma
Isolation
Loneliness

We are able to learn how to support health personnel through these failures and successes. Impetuous psychological interventions are ineffective and there is evidence that they may in fact be harmful.[23] When the spread of infection reaches its peak, reporting one's thoughts and feelings should be avoided. Most people are capable of recovering on their own after exposure to trauma; therefore, it is important to provide basic support to help people's natural coping mechanisms start effectively.[24,25] Resources necessary for sufficient rest, a balanced diet, regular workout, work–life balance, and parenting children must be provided. Educational programs helping workers adapt to new colleagues, teams, processes, rules, equipment, and new tasks should be provided. Autonomy should be given to those who perform tasks strictly controlled according to the manual.[16,26] Stress can be personally managed using strategies such as maintaining social bonds, self-pity, mindfulness, grounding, acting in the opposite way, and restructuring cognition. The next step is to select vulnerable groups with less resilience by matching people with similar levels of responsibility, life experience, and authority or by deploying a mental health consultant to the workplace.[16,27] This is for selection purposes but in itself, it can be a psychological resource to compensate for an individual's insufficient resilience. Health personnel may share their difficulties in their daily work environment without pressure, and coworkers and consultants can acknowledge them to provide support for individuals; therefore, they do may not lose self-efficacy or hope. Health personnel in need of special help can receive a professional psychological intervention after examining possible risk factors such as current or past mental health issues, history of trauma, families, or social and financial circumstances.[27] Here is a health care worker who presents with depressed mood, survival guilt, and suicidal ideation after watching the death of a colleague who died from the virus. Mental health professionals will need to collect various information to understand the health care worker in crisis, including the history of suicidal attempts, and use rating scales to assess the severity of his depression or suicide risk. In addition, mental health professionals may also need to offer therapeutic help, including supportive psychotherapy and cognitive behavioral therapy, and hospitalize him if necessary. In

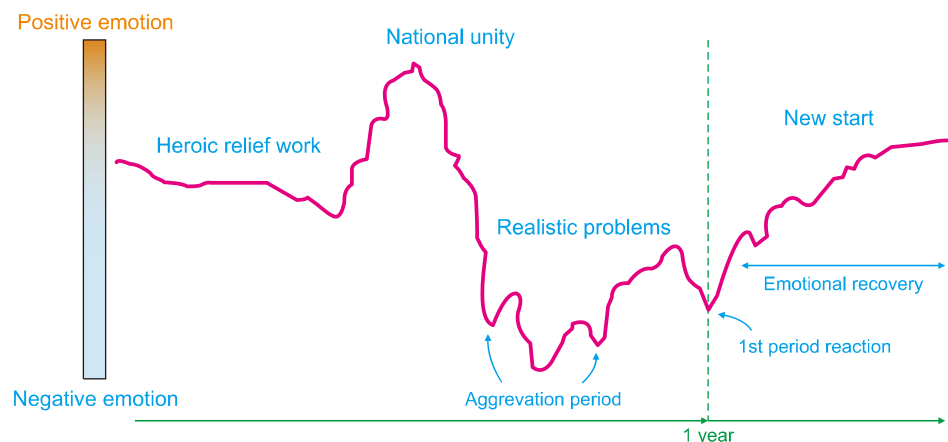

Fig. 1. Emotional reaction of the group after calamity from regular briefing by CDSCHQ.[29,30]

Table 3. Guidelines to protect vulnerable two groups in routine practice

Groups	Guidelines
Child-adolescents	· Careful consideration of the levels of cognitive and emotional development is important. · Accurate information should be delivered. · The children's feelings should be carefully observed and acknowledged as they are. · A safe environment should be provided to make them feel socially connected. · Help (e.g. balanced diets, moderate exercise, and sufficient sleep) should be provided such that the children can maintain a regular daily routine.
Health care workers	· When the spread of infection reaches its peak, reporting one's thoughts and feelings should be avoided. · It is important to provide basic support (e.g. sufficient rest, a balanced diet, regular workout, work–life balance, and resources for parenting children, educational programs for performing duties that they are not familiar with, autonomy) to help people's natural coping mechanisms start effectively. · Stress can be personally managed using strategies such as maintaining social bonds, self-pity, mindfulness, grounding, acting in the opposite way, and restructuring cognition. · Vulnerable groups with less resilience should be selected by matching people with similar levels of responsibility, life experience, and authority or by deploying a mental health consultant to the workplace. · Health personnel who required special help can receive a professional psychological intervention.

this case, telemedicine can be an important means for making immediate psychiatric evaluations as well as providing treatment intervention.[28]

DISCUSSION

People are easily ovewhelmed when they encounter unexpected calamity; however, soon after, they may be consoled by the series of stories such as heroic rescue activities, the sacrifice of health personnel, or national unity. However, the period does not last long and the disillusion period comes soon (Fig. 1).[29,30] When calamity does end and uncertainties increase, people feel discouraged as they experience the limitations of the response by the government and society. Political, social, and economical systems start to break down and individuals began to be psychologically and physically impacted. In the end, even when the pandemic ends, we cannot effectively respond in the face of another similar situation unless we prepare with a long-term perspective.

The country's strategy against COVID-19 pandemic, 'social distancing', ironically blocks the crucial protective factor of alleviating the psychological impact of stress.[7] Therefore, psychological sequelae is particularly important in this situation. We should focus on preparing long-term solutions for the most psychologically vulnerable groups. Other than the two groups that we already discussed, people with mental illnesses, people with chronic diseases, the elderly, people with low socioeconomic status, and minorities have to be most carefully considered. For example, people with low socioeconomic status have a high risk of infection and high transmission rate because of their crowded living situations, commuting environment dependence on public transportation, as well as a working environment in which they have to face many people in small spaces.[31] Many people in this group have metabolic syndrome and cardiovascular diseases such as hypertension and diabetes, which further increases the risk of death after infection.[32] Therefore, they are more likely to lose their families, friends, and neighbors to disease, but they cannot use high-quality medical service, thus resulting in their struggle with many stressors.[33]

Despite significant recent advances in public knowledge of mental illnesses, there is still a stigma associated with

mental health issues and only a few of those who require psychological intervention seek help. Even so, we need to put in the effort to develop a psychological quarantine manual, which embraces a broader spectrum of classes. Considering the size and uncertainty of this calamity, this effort is even more valuable.

CONCLUSION

The intervention methods to protect such two vulnerable groups in routine practice can be summarized as follows (Table 3). For child-adolecent, we should consider the levels of cognitive and emotional development, deliver accurate information, observe carefully the children's feelings, provide a safe environment to make them socially connected, and help them to maintain a regular daily routine. For health care workers, we can provide basic support to help people's natural coping mechanisms start effectively, manage their stress using strategies such as self-pity, mindfulness, and restructuring cognition, and provide a professional psychological intervention after selecting vulnerable groups with less resilience.

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CONFLICT OF INTEREST STATEMENT

None declared.

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