

COVID-19 Pandemic, Mental Health, and Play for Young Children during and after Pandemic

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Abstract

COVID-19 might not have severely threatened young children's physical health; however, it has had profound impacts on their sound development and mental health that could have long-lasting effects on their lives. It is not easy to foresee when this crisis will be over; yet young children's development and learning cannot be stopped. Therefore, efforts to support young children, considering the impacts of the COVID-19 crisis, must be made immediately. The purposes of this study are to review the existing literature on the effects of the pandemic on young children's healthy development, and to revisit the value of young children's play in the context of the COVID-19 crisis. This article begins with general directions for supporting young children during and after the crisis, followed by three sections including (1) impacts of the COVID-19 crisis on young children; (2) mental health and development of young children; and (3) play for young children during and after pandemic. Conclusions and suggestions for future research are provided.

Keywords: Impacts of COVID-19, Mental Health, Play, Development of Young Children

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Introduction

Since the World Health Organization (WHO) declared a global pandemic of the novel coronavirus disease (COVID-19) on March 11, 2020, human beings have gone through unprecedented experiences. A virus approximately 0.125 microns in diameter (Abcdust, 2021), which is not visible to the naked eye, has put the entire world on pause, and all nations have been grappling with the immediate needs of the public health crisis. Fortunately, COVID-19 vaccines were developed quickly, and the world seemed to be returning to normal for a while. In the meantime, researchers reported that they found a specific structure of the Coronavirus and proposed a new way of developing vaccines and antibody treatments which will be effective against several variants (Chen et al., 2021). However, the virus has constantly been evolving and creating different kinds of variants, and on November 26, 2021, WHO designated another variant, Omicron, which seems to have a stronger transmissibility (WHO, 2021). Since then, combined with the cold weather and the holiday season in many parts of the world, the number of confirmed cases has been steeply increasing again in many nations.

The COVID-19 pandemic is different from that of Ebola or SARS. It has been spreading worldwide, lasting for a prolonged period and including successive waves and different variants. Moreover, in addition to threatening human life, it has brought uncertainties in daily lives of almost everyone on the planet. From the beginning of the pandemic, it was considered that COVID-19 might not severely threaten young children's physical health directly (Dias et al., 2020; Goodwin-De Faria et al., McCoy et al., 2021; Yoshikawa et al., 2020). However, the COVID-19 crisis has brought significant, negative impacts on young children. Although more evidence from empirical studies with larger population needs to be collected, several studies reported that the pandemic has had adverse impacts on young children's mental health as well as their development and learning (Baldwin & De Young, 2021; Bartlett et al., 2020; Center on the Developing Child, n.d. b; Dias et al., 2020; Egan et al., 2021; Goodwin-De Faria, et al., 2021; Hauge, 2020; Jalongo, 2021; Kearney et al., 2021; Linnavalli & Kalland, 2021; McCoy et al., 2021; Pattnaik & Jalongo, 2021; Prime et al., 2020; Thibodeau-Nielsen et al., 2021; Yoshikawa et al., 2020). Young children have had high levels of stress from the constant changes in daily lives that occurred with or without advance notice. Moreover, they

have been suffering from the consequences of the COVID-19 crisis on family finances. In addition, many restrictions resulted from the uncertainty have taken away opportunities of learning experiences from young children, whose brain is rapidly developing through their own active interactions with objects, events, and people in their environment.

Despite the uncertainties, changes, and restrictions, the fact is that children's development and learning are ongoing and cannot be paused. Therefore, it is clear that efforts to minimize the adverse impacts of the pandemic on young children's mental health and to support young children's sound development and learning should be made immediately, even during the pandemic, and need to be continued after the pandemic. When making the efforts, multidimensional factors influencing health, wellbeing, and sound development and learning of young children should be taken into consideration. More specifically, efforts must focus on (1) recovering from urgent damages caused by the pandemic on young children, (2) identifying and addressing needs of young children resulting from the unprecedented experiences, (3) providing continuous support for young children's further development and learning, that are healthy and balanced, for their future lives, and (4) including comprehensive support to the families (Dias et al., 2020; Goodwin-De Faria et al., 2021; Jalongo, 2021; McCoy et al., 2021; Shonkoff, 2020; Thomas & Rogers, 2020).

Under these circumstances, the purposes of this study are to identify the impacts of the COVID-19 pandemic on young children through literature review, and to revisit young children's play, which can be an appropriate way of addressing the needs of young children during and after the pandemic. For the literature review, a search using the terms "COVID-19" plus "young children," "COVID-19" plus "child development," "COVID-19" plus "young children's mental health," and "young children" plus "resilience" was conducted via a university's library search engine. Articles that are published in academic journals, for which the full text was available, were mainly included in the review. This paper proceeds with three sections: impacts of the COVID-19 crisis on young children; mental health and development of young children; and play for young children during and after the pandemic.

Impacts of the COVID-19 crisis on Young Children

During the COVID-19 pandemic, the clinical effects of the virus on young children have not been as severe as those on other age groups. However, the COVID-19 crisis has brought enormous impacts on young children in all countries in numerous ways. Figure 1 presents a summary of the specific impacts from literature review of previous studies and surveys (Bahatheg, 2021; Bartlett, et al., 2020; Bigras et al., 2021; Dias, et al., 2020; Egan et al., 2021; Goodwin-De Faria, et al., 2021; Jalongo, 2021; Linnavalli & Kalland, 2021; McCoy et al., 2021; Pattnaik & Jalongo, 2021; Prime et al., 2020; Rao & Fisher, 2021; Shonkoff, 2020; Thomas & Rogers, 2020; Timmons et al., 2021; Toros et al., 2021; United Nations, 2020; Yoshikawa et al., 2020).

Upon the breakout of the COVID-19, in most countries, health care centers have been managed in two categories: one for the confirmed patients of COVID-19 and the other for the patients with other health issues. Due to this, its capacity has been divided, and only limited access to health care centers has been provided for young children with major or minor health problems other than COVID-19. Also, regular health checks or routine vaccination for young children have been delayed or canceled. In addition to the stresses from this limited access to health care services, fears of infection through health care facilities have caused another kind of stress for young children and their families.

Moreover, lockdowns and social distancing measures have been implemented in most countries to minimize the risk of transmission, and these directives brought imperative changes and restrictions in the daily lives of young children. Schools have been closed, and community resources and services have been strictly limited. As a result, young children have experienced lack of various stimuli for their development and learning; long term isolation; disconnection with people in the community; unhealthy eating and lack of exercise/physical activities; limited social services; loss of safety, protection, routine, and social interactions from the school; food insecurity; ineffective learning from the screen; lack of family support for technology use; widened achievement gap; negative perception of the value of schooling; and increased conflict within the households.

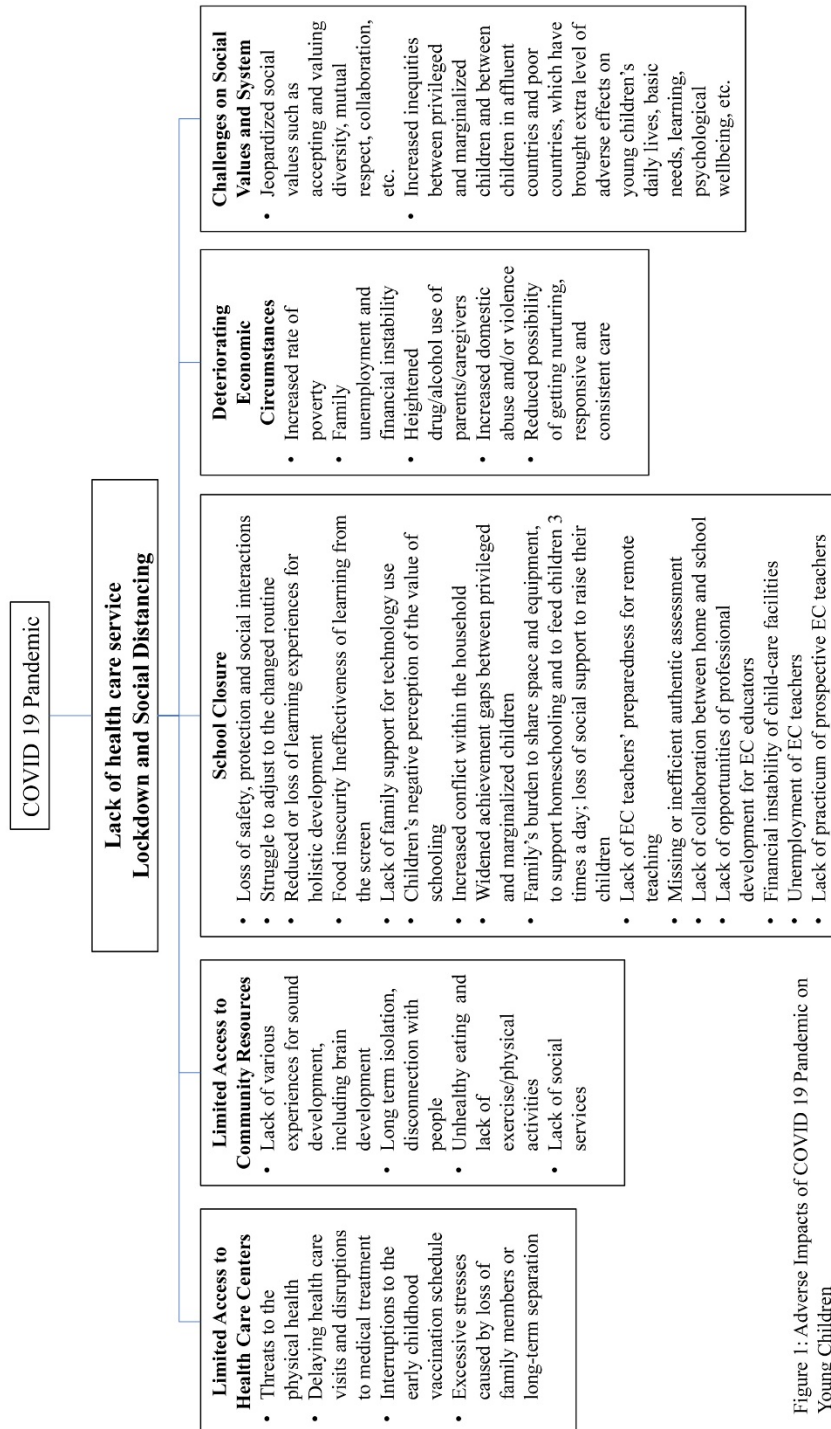


Figure 1: Adverse Impacts of COVID 19 Pandemic on Young Children

Parents/caregivers, teachers, and schools also have faced challenges that can directly influence young children. As all family members had to stay home for schooling and work, parents/caregivers have had the burden to share spaces and equipment; to support homeschooling of their children; feed children 3 times a day, as opposed to one or two, while working at home; taking care of house chores; and dealing with lack of social services and issues related to finance as well as relationships. Schools also have experienced lack of early childhood (EC) teachers' preparedness for remote teaching, missing or inefficient authentic assessment, and lack of collaboration between home and school. Some private sector schools and childcare facilities have experienced severe financial instability. EC teachers have suffered from unemployment, financial problems, or lack of opportunities of professional development, which are needed most during the crisis filled with uncertainties, changes, and restrictions. Finally, prospective EC teachers also have missed hands-on learning experiences of teaching and interacting with young children through their practicum experiences. Although these are not the impacts of the COVID-19 crisis on young children, they could have been major stressors to young children. This is because, as Bronfenbrenner emphasized (Bredekamp, 2011), young children's development is significantly influenced by the relationships among families, teachers, and schools, interacting in complex ways.

Furthermore, prolonged lockdown and social distancing have brought deteriorating economic circumstances in most societies. Many parents/caregivers of young children have lost their jobs and experienced acute and unanticipated poverty. Family financial problems have forced young children to go through multiple challenges and risks, such as drug/alcohol use of parents/caregivers, domestic violence or abuse, and reduced possibility of getting nurturing care, having immediate and/or long-lasting impacts on young children's sound development.

Last but not least, the significant values humanity has built up over the years, such as accepting and valuing diversity, mutual respect, collaboration, etc. have become jeopardized. In addition, the existing and ever-increasing inequities between privileged and marginalized children and between children in affluent and poor countries have become more obvious throughout the pandemic period. Because of these, some young children have faced extreme level of fear and stress resulting from outright discrimination and racism, and many of them have been worried about having their basic needs met in their daily lives.

In summary, the outbreak of COVID-19 and the implementation of lockdown and social distancing measures have brought drastic changes, restrictions, and uncertainties in everyday life. These have caused young children's mental health issues such as high levels of stress, fear, anxiety, and depression, as well as limited experiences for their sound development and learning. Therefore, it can be said that young children have been one of the biggest victims of the COVID-19 crisis since its profound effects may have long-lasting effects on their lives and society.

Mental Health and Development of Young Children

Based on modern science, health is defined as, "the ability of a body to adapt to new threats and infirmities" (The Lancet, 2009), and consists of mental health, the emotional-social state, and physical health, the condition of body functions. Good physical health means body functions are smooth and at good conditions without any disease, whereas good mental health means stable and positive emotional-social state without anxiety, depression, or any other mental disorder or illness (Center on the Developing Child, n.d. e; Felman, 2020). Of these, mental health guides and influences all aspects of human functions such as thinking, feeling, acting, handling stress, relating to others, making decisions, etc. Therefore, when mental health is good, human beings can effectively and positively manage their thoughts, feelings, and behaviors. They can conform to their environment by balancing different elements of life and bouncing back after difficult experiences, and they can function in a healthy manner through setting and working toward healthy goals, reaching their full potential, and maintaining positive relationships (Center on Developing Child, n.d. e; Kostelnik et al., 2019; MentalHealth.gov, 2020).

Although COVID-19 has not affected physical health of young children severely during the pandemic, as mentioned in the previous section, it has had significant impacts on young children's mental health. Most young children have had to adjust to the minor and major changes and difficulties (e.g., school closures, limited experiences, loss of routine, etc.) in daily lives over an extended period. Moreover, they have been directly exposed to stressors, such as loss of loved ones, conflict of relationships within the households, and deteriorating

family finances. These could have caused different levels of mental health problems in young children during the pandemic.

As reported by several studies, young children have been more vulnerable to the adverse impacts compared to older children or adults (Bartlett et al., 2020; Hauge, 2020; Jalongo, 2021; Pattnaik & Jalongo, 2021; Yoshikawa et al., 2020), and the high vulnerability can be explained in two points. First, the negative effects on young children can be more severe than that of on older children or adults. Second, young children's development cannot be fulfilled adequately due to the adverse impacts of the pandemic.

The first point can be explained by the characteristics of development in early childhood (Puckett & Black, 2001). Until 7- or 8-years-old, the ways young children get to know and think about what is going on in their environment are different from those of older children or adults. According to Piaget, young children tend to focus only on one feature of a problem at a time and have difficulty in reversing the direction of their thinking. Also, they tend to think by putting unrelated events/facts in cause-effect relationships (Piaget called these centration, irreversible thinking, and transductive reasoning, respectively). Moreover, often, they add their imagination to their thinking. Therefore, during the COVID-19 crisis, when young children see and hear what is happening or when they notice stress of parents/caregivers, they might have stronger feelings of anger, fear, sadness, or worry and experienced a higher level of stresses that adults get, due to the way they think in their early childhood.

In addition, in terms of language development, during early childhood, vocabularies that young children can understand and use are limited to essential words, and receptive language develops more than expressive language. Therefore, they might not have clearly understood the information about what is going on, unless it is explained to them in the words that they can understand. Also, they might not have expressed their thoughts and feelings fluently, even if they could understand what they see or hear. Young children might have been more stressed due to lack of their ability to adequately understand what is going on around them and express their feelings verbally. Finally, their own ability to cope with hardships, resilience, is not fully developed in young children; and this also might have caused more damages to young children's mental health. In summary, most abilities and skills are still developing in young children, and thus, they might not have been able to clearly understand

what is happening around them. Also, since resilience is still developing, they might not have been able to effectively deal with stress and hardships. As a result, the COVID-19 crisis could have had a stronger adverse effect on young children.

The second point, which was that young children's development could not be fulfilled adequately due to the adverse impacts of the pandemic, can be explained by young children's brain development (Bae, 2014; Center on Developing Child, n.d. d; Kostelnik, 2019; McDevitt & Ormrod, 2010; Wolfe, 2010; Woolfolk & Perry, 2015). Brain deals with and manages all parts and functions of the human body, such as moving, thinking, speaking, feeling, etc. Neuroscientists have emphasized that brain develops rapidly and critically during the first 2000 days of human life, and that brain development achieved during early childhood lays the foundation for later development. In other words, early childhood is a critical period for healthy development of the human brain. Therefore, it is essential to provide young children with balanced nutrition and developmentally appropriate experiences and education during this period. In addition, building supportive and nurturing relationships between young children and parents/caregivers and protecting young children from environmental hazards are critical factors for their brain development.

Owing to the brain development during early childhood, growth and development occurs in all domains of physical, cognitive-language, and social-emotional development (Broderick & Blewitt, 2015; Center on the Developing Child, n.d. f; Center on the Developing Child, n.d. g; McDevitt & Ormrod, 2010; Puckett & Black, 2001; Woolfolk & Perry, 2015). The size of body, internal organs and systems, motor skills, body functions, and sensory and perceptual abilities are growing and developing during this period. Mental processes of knowing, understanding, thinking, and reasoning, which are the basis for development of problem-solving skills, receptive and expressive language, and early literacy develop during early childhood. Social-emotional understandings and skills also develop rapidly during early childhood. Young children develop self-identity, self-concept, and the ability to understand, express, and regulate their emotions during early childhood. They also begin to develop self-regulation (i.e., executive functioning: the ability of the child to voluntarily control their own feelings, thoughts, and behaviors to achieve personal goals and respond to environmental conditions) and social competence including perspective-taking ability, skills for social interaction, and pro-social behaviors/skills (i.e., voluntary behaviors intended to benefit other

people such as sharing, helping, taking turns, caring, cooperating, etc.) during the same period.

In addition, young children's own ability to cope with stressful situations in the environment, which is called resilience, develops during early childhood. Resilience is defined as an ability to overcome the hardships encountered in the environment by rebounding from adverse experiences, positively adapting to them, and moving forward with reasonable optimism and confidence. Although there are some debates about what exactly resilience means and how it can be measured (Panter-Brick & Leckman, 2013), it is commonly agreed that resilience is a power that enables young children to effectively deal with stresses and hardships; to cope with everyday challenges and adversity; to plan, monitor, and regulate behaviors; to develop clear and realistic goals; to solve problems; to interact comfortably with others; and to treat themselves and others with respect and dignity. The important thing is that resilience can be developed as young children build stable, secure, committed, and nurturing relationships with at least one parent/caregiver. Moreover, the development of resilience occurs throughout life, as they have accumulated experiences that they need to adapt to and cope with (Brooks & Goldstein, 2015; Center on the Developing Child, n.d. a; Kostelnik et al., 2019; Linnavalli & Kalland, 2021; Panter-Brick & Leckman, 2013; Prime et al., 2020; Shonkoff, 2020; Zarobe and Bungay, 2017). Afterall, it can be said that early childhood is a critical and sensitive period for human development in all domains, and adverse impacts on young children hinder sound and balanced development. As a result, young children could have been more vulnerable to the effects of the COVID-19 crisis because their development have been adversely affected by the impacts of the COVID-19 crisis.

In summary, keeping good mental health is important since mental health guides all aspects of human functions such as thinking, feeling, acting, handling stress, relating to others, and making choices. The COVID-19 crisis has had profound impacts on young children's mental health, which usually have long lasting effects on their lives. The pandemic could have had a more substantial adverse effect on young children, due to the developmental characteristics. Furthermore, the adverse impacts from the COVID-19 crisis hindered young children's sound development during their early childhood, the critical period for development.

Play for Young Children during and after COVID-19 Pandemic

Although various countries are in different pandemic phases with different vaccination coverage rates, it is evident that there have been significant, negative impacts of the COVID-19 crisis on young children. Therefore, efforts should be made immediately to remediate critical damages to young children's mental health, development, and wellbeing. In addition, needs of young children, who have been through unprecedented experiences, should be identified and addressed, and continuous support for young children's healthy and balanced development and learning, which is essential for their future lives, should be provided. For this, it is imperative to revisit young children's play in various, yet safe, settings during and after the pandemic.

Emphasizing play for young children is not new in early childhood education. However, it is worthwhile to revisit young children's play in the given circumstance. This is because opportunities of play have been overly limited for young children during the pandemic, and because it is worth taking a close look at the benefits and values of play for young children to mitigate adverse consequences of the COVID-19 crisis.

In early childhood education, play has long been considered as one of the best tools to achieve sound development and learning for young children in all domains (i.e., physical, language-cognitive, and social-emotional domains). This, in fact, has been proven and/or reported by a number of previous studies (Bredekamp, 2011; Center on the Developing Child, n.d. c; Elkind, 2010; Fromberg, 2002; Grieshaber, 2016; Hassinger-Das et al., 2017; Kidwai & Narang, 2021; Kostelnik et al., 2019; Nell et al., 2013; Oers & Duijkers, 2013; Rhee, 2016; Schaefer & Drewes, 2009; VanFleet et al., 2010; Weisberg et al., 2016). Whether it is free play (i.e., playful experiences that children voluntarily start and lead from the beginning to the end) or guided play (i.e., playful experiences, which is prepared by a teacher, that induces children's voluntary participation and engagement), through play, young children interact with their environment, explore their surroundings, and create meanings about their environment. While playing, young children practice what they know or learned, interact with other people, and experience the culture. Sometimes, they face expected or unexpected challenges and conflicts during play, which help them learn how to respond to uncertainties. All these unfold naturally and spontaneously in children's play.

In recent years, the significance of play in child development and learning has also been confirmed by the findings from brain research. These findings suggest that play enables young children to develop and practice core life skills, such as self-regulation and executive function. Also, when children and parent/caregivers have accumulated quality time to play together, children develop stable and nurturing relationships with their parents/caregivers, which is an essential ingredient of developing resilience as well as sound development (Bredekamp, 2011; Center on the Developing Child, n.d. a; Hassinger-Das et al., 2017; Weisberg et al., 2016). Therefore, during and after the pandemic, it is necessary to reemphasize the importance of play in early childhood education not only to make-up for young children's loss of learning experiences, but also to enhance their development and learning.

Moreover, in the given circumstance of the COVID-19 pandemic, it is necessary to pay closer attention to other benefit of young children's play, the expressive function of play (Council, 2016; Moula, 2020; Schaefer & Drewes, 2009; Thibodeau-Nielsen et al., 2021; VanFleet et al., 2010; Zarobe & Bungay, 2017). According to the professionals in play therapy, play is a means to help children to express themselves, especially those who lack verbal skills; those who have difficulty in articulating their feelings and problems; or those who have difficulty expressing their inner features. They reveal their thoughts, feelings, anxiety, fears, stresses, and even unconscious conflicts through play without hesitation. Children do this because they feel powerful as they do everything in the way they want in their play-world. In addition, since everything is under their own control, children develop positive self-concepts such as self-control, self-efficacy and self-esteem through repeatedly engaging in play. Therefore, play is a necessary experience for young children during and after the pandemic since they could not have expressed themselves, and many of them could have experienced self-helplessness during the COVID-19 pandemic.

Schaefer & Drewes (2009, p.4) explained that, in a well prepared and emotionally supportive play setting, children know that they are allowed to be "fully themselves," and freely express their thoughts, emotions, anxieties, fears, and stresses. As a result, emotional or mental issues can be resolved. Therefore, it is crucial to provide young children with ample opportunities of play during and after the pandemic, because repeated opportunities of engaging in developmentally appropriate play in a relaxed context will help children feel

secure, give opportunities to alleviate emotional distress, and deal with a wide range of emotional discomfort and problems (Coholic, 2010; Council, 2016; Moula, 2020; Schaefer & Drewes, 2009; Thibodeau-Nielsen et al., 2021; VanFleet et al., 2010; Zarobe & Bungay, 2017).

Play therapy is conducted in a designated setting with specially trained professionals. Therefore, it is granted that children with obvious emotional or behavioral problems of a certain degree or above must be treated by play therapy with a professional play therapist. In other words, playing in educational settings cannot be replaced with play therapy. However, paying more attention to the curative functions of young children's play in educational settings is necessary during and after the pandemic.

Play has already been emphasized and included in early childhood education since Froebel introduced it in the early 1900s (Bredekamp, 2011). If children are provided with various opportunities for play in school settings, more children will benefit from play by reducing and relieving their anxiety, stress and fears stemming from unprecedented experience. Therefore, sufficient play opportunities of various plays (e.g., pretend play, role play, open-ended arts play, play with blocks, sand play, outdoor play, etc.), adequate amount and kinds of play materials, and appropriate prompts should be provided to young children in educational settings. In addition, early childhood teachers, who already know the children and their backgrounds well, must support young children to express themselves freely and fully in their play-world. If needed, early childhood teachers should collaborate with play therapist when they identify children who need professional help or intervention during and after the COVID-19 pandemic (Bateman & Waters, 2018; Coholic, 2010; Council, 2016; McClure et al., 2017; Moula, 2020; Schaefer & Drewes, 2009; Thibodeau-Nielsen et al., 2021; VanFleet et al., 2010).

In summary, play is one of the best tools for young children's learning and development in all domains. Therefore, it is necessary to continue to stress the significance of play for young children during and after the COVID-19 pandemic. At the same time, play provides children with opportunities to express their inner features including thoughts, feelings, fear, or stresses. Therefore, playing in various yet safe educational settings will help more children with no obvious mental issues reap the benefits of play, thereby reducing the adverse impacts on their mental health. If needed, early childhood teachers should collaborate with play

therapist for children with high levels of mental issues.

Conclusion

Although there have been hopeful signs for the end of the pandemic, it seems not easy to foresee when it will happen. Therefore, uncertainties we have experienced in everyday life will continue, at least for the time being. In order to minimize the adverse impacts for young children, appropriate efforts should be made from now on. Support, not only for helping young children recover from the adverse impacts, but also for their further comprehensive development and learning, should be provided on the basis of the best available knowledge generated from relevant and rigorous research. Valuing expressive functions of play and continuing to implement play-based education, as well as transdisciplinary collaborations among professionals in the various fields of study, such as education, medicine, economics, psychology, neuroscience, technology, and food science, should be an essential part of the efforts. In this way, we will be able to effectively support and educate young children during and after the pandemic such that we can prepare them for their future lives. In addition, more empirical studies need to be conducted to: (1) examine specific needs of young children during and after the pandemic; (2) find out specific roles of play in mitigating the negative effects of the pandemic; (3) identify strategies for teachers to utilize expressive functions of pretend play, role play, open-ended arts play, play with blocks, sand play, and outdoor play in educational settings; (4) investigate more effective ways of providing play opportunities on screen ; (5) identify methods to reconcile conflicting necessities of social distancing and providing play opportunities; (6) study appropriate methods and range of providing comprehensive support to families who can support young children's play at home; and (7) examine ways of reducing the gap between privileged and marginalized children in terms of their play opportunities.

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