

Parental Perception about the Effects of Covid-19 Pandemic on Young Children

By

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M.Sc. on Early Childhood Development

A thesis submitted to Brac Institute of Educational Development in partial fulfillment of
the requirements for the degree of
Master of Science in Early Childhood Development

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Brac University
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Declaration

It is hereby declared that

1. The thesis submitted is my own original work while completing degree at Brac University.
2. The thesis does not contain material previously published or written by a third party, except where this is appropriately cited through full and accurate referencing.
3. The thesis does not contain material which has been accepted, or submitted, for any other degree or diploma at a university or other institution.
4. I have acknowledged all main sources of help.

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Approval

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Ethics Statement

Title of Thesis Topic: Parental Perception about the Consequences of Covid-19 Pandemic on Young Children

Student name: Wang Zhen

1. Source of population

Parents with young child aged more than 25 years old and living in China, they take part in interview by phone

2. Does the study involve (no)

- a) Physical risk to the subjects
- b) Social risk
- c) Psychological risk to subjects
- d) discomfort to subjects
- e) Invasion of privacy

3. Will subjects be clearly informed about (yes)

- a) Nature and purpose of the study
- b) Procedures to be followed
- c) Physical risk
- d) Sensitive questions
- e) Benefits to be derived
- f) Right to refuse to participate or to withdraw from the study
- g) Confidential handling of data
- h) Compensation and/or treatment where there are risks or privacy is involved

4. Will Signed verbal consent for be required (yes)

- a) from study participants
- b) from parents or guardian
- c) Will precautions be taken to protect anonymity of subjects?

5. Check documents being submitted herewith to Committee: (yes)

- a) Proposal
- b) Consent Form
- c) Questionnaire or interview schedule

Ethical Review Committee:

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Executive Summary

This qualitative research aims to explore parents' perception about the consequences of COVID-19 pandemic on their family and young children, which interviewed 6 pairs of parents from a different social and educational background. All participants were aware of the COVID-19 crisis. They shared that it has affected their financial conditions, mental health as well as overall life. Parents also mentioned that it has consequences on physical health, education and mental health of the young children but do not think there exist any long term effect. However, there were some retrogressive behaviors on children during and after pandemic reported by parents.

Keywords: COVID-19 pandemic; parents; young children development; mental health

Dedication

I have to express my thanks to my respected tutor, Ms. Sakila Yesmin. This is a special time for me during this research because I just born a baby, and tremendous trifles have been around me all the time. But Ms. Sakila have been always accompanied with me and help me complete this article. She was so patient and helpful for me so that I can accomplish this research on this tough period.

Acknowledgement

Except my tutor, thanks for the participants who gave me ample information to detect my questions and help me depict a picture about families and young children's status and development. In addition, I need to thanks my husband and parents because it's their effort to care baby day and night that I can have time and effort to work on this research.

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List of Acronyms

COVID-19 Coronavirus Disease happened in 2019

NCI National Cancer Institute

PTSD Post-Traumatic Stress Disorder

UNICEF United Nations International Children's Emergency Fund

WHO World Health Organization

Glossary

Young Children Development: With age of children increasing from birth to third grades, he or she develops with a significant consequence or event from different aspect as intelligence, physic, education, social-emotional and etc., which was affected by different factors (gene, nutrition, environment and etc.). This phrase is the same as early children development.

COVID-19: Corona-virus that happened from 2019(WHO), it is a highly contagious respiratory disease caused by the SARS-CoV-2 virus, which was viewed easy to transmission from person to person through droplets released when an infected person coughs, sneezes, or talks. It may also be spread by touching a surface with the virus on it and then touching one's mouth, nose, or eyes (NCI).

H1N1 Influenza A (H1N1) virus is the subtype of influenza A virus that was the most common cause of human influenza (flu) in 2009. It is an Orthomyxovirus that contains the glycoproteins haemagglutinin and neuraminidase. For this reason, they are described as H1N1, H1N2 etc. depending on the type of H or N antigens they express.

New Frugality:

Chinese have experienced poor period, and experienced fast developing period. Now, we arrive the stage that we can live in a comfortable way, the life materials are abundant rather than luxury. New Frugality is not the habits that formed by extremely poor, we just choose the life we want and rational consumption (purchase things according to our needs) rather than blind comparison. This pandemic help young people realize the importance of rational consumption.

Pandemic:

A disease prevalent over a whole country or the world

Chapter I

Introduction & Background

Introduction

Since the first infectious patient was reported from Wuhan China in December 2019 (Hou et al, 2020), Coronavirus-19 has been affected all over the world (Gumber & Bulsari, 2020; Mahi et al., 2020). To cope with the infection, most countries choose to lock down their countries at first, and lockdown cities gradually. What's more, almost companies had to stop operation also. Not only public lives have been changed a lot, but also the whole industry in countries have been influenced profoundly (Gumber & Bulsari, 2020). In addition, the schools have been shut down for a long time and there is not a good sign that shows school will open soon in most countries till now. It's obvious that children's development has been influenced by this situation from varying aspects. Standing at microsystem perspective, I try to study what the COVID-19 affects on family, early childhood development and the relationship between family factors and children development during this special background, which has been studied that there exists strong relevance between family and children development under different social background (Kathleen & M. Carmen, 2008).

Statement of the Problem

During this special period, we all have suffered from the COVID-19 crisis, it brings tremendous problems, and lifestyles have been impacted profoundly and their emotion and mental health have been also affected because of complex factors. In addition, the interaction between parents and children may become different, which makes differences in early childhood development. At the same time, it provides a chance for

us to study its effect and study how people's lives have been changed by it especially early childhood development.

In the region of early childhood development, they cannot go to school or any other communities, cannot visit relatives, cannot go outside and play with close friends, the kinds of activities have been reduced and their study time has been declined because of this crisis. The task of education have to be taken by parents rather than teacher and institution, some of them have to study online that is a new study mode in China rather than face to face teaching. And they lost the chance to contact with peers and develop their social-emotional ability. What's more, they have to stay at home, even there is little chance for them to go outside because only one people was allowed to go out of their house for buying daily use goods once per day. They may spend much more time on electronic products such as TV and mobile phone than normal time, they may be immersed in computer games or others which hampers their eyes and other developments. This study try to know how these things affect their mood and other aspects.

As for their parents and caregivers, their financial condition, mental health and other factors have been influenced a lot. If we take a view of a whole family, parents have to stay home much more time and reduce their normal work with less salary, but the life cost would not decline, they are easy to feel anxiety because their income has been reduced or they would be fired by their factory. In addition, because of the quick infection of COVID-19 among people, lots of people know a little knowledge about this disease, let alone how to protect themselves and their families. Although children are not easy to get infectious compared with old people, the results of infection could be desperate. The more knowledge parents and caregivers gain, the more measures they

could take, the less chance children get infectious. With infectious people and dead people increasing, one of their relatives or friends maybe get infectious even has died due to COVID-19, which increased their anxiety and depression in their mind. And children cannot go to school and go outside with friends, parents have to use more time and efforts on their children although they have been in a mess status. Whether they could be patient to their children like before and take measures to help children develop from different way or ignore children development and provide electronic products for them to kill time, we want to detect these things.

We plan to detect the relationship between the factors mentioned above and depict a picture of how they interact with each other.

Purpose of the study

The main purpose is to explore the consequences of COVID-19 pandemic on young children.

The specific objectives are

- To explore parents' knowledge about COVID-19 pandemic
- To detect parental understanding of the consequences of COVID-19 pandemic in their family life
- To explore the effects of the pandemic on children's learning and well-being in the early years.

Significance of the study

It's meaningful to study the topic of early childhood development under different background. A man develops from conception, and the fast developmental period is early years which affect his or her throughout life. The brain develops based on both gene code and experience around people. Experience influences the formation of

neuron functions and major neurological pathway also affects the formation of synapses among neurons to establish pathways from different hierarchies of brain function. These pathways control our intellectual, emotional, psychological, physical and others' responses to what we do every day (Mustard, 2006). As children are vulnerable to environmental risks and their physical health, mental health, and productivity in adult life is deeply rooted in early years, close attention and great efforts are required to address these emergency issues effectively and avoid any long term consequences in children (Clark et al., 2020). For example, people are easier to experience cardiovascular diseases when he or she was exposed to a stressful environment in early years, children who are exposed to the dual-language environment before 8 months have more chances to learn the language as native speakers. As for COVID-19, we can detect how it affects our children, whether exist any behaviors or other changes after this crisis.

Till to now, there are million infectious people around the world, COVID-19 is a so profound crisis, there is a demand studying our young children, however, most studies focus on how to cope with this disease, people mental health and economic problems in different districts under this background, little papers spend effort on the lens of family and young children. This kind of crisis has happened in previous such as SARS in 2004 and will happen in the future, we study this topic and find out what happened in a family during this crisis and provide a reference for advocacy and later on study and practice. So we can take advantages of this tough period that almost people stay at home because of COVID-19, and study how children respond to this urgent moment and think about how to adjust their mental inadaptation. In addition, this study can give some enlightenment of how to make our life better for the future if we encounter a similar situation.

Last but not least, this study try to identify the relationship and interaction between caregivers and children in the urban area which can give some reference for the future policy proposal. For instance, if we know that stable family economic status can promote children development, we may suggest government to take relevant measures such as give away subsidy for poor people or organize donation to permit our young children's development. In addition, this study may arise more concerns about young children that are our hope in the future and encourage more researchers to spend effort on early childhood development and other connected topics. It is the responsibility and keen interests of all stakeholders, from governments to parents, to ensure that the physical and mental impacts of the COVID-19 epidemic on children are kept minimal.

Research Topic & Research Questions

This research study young children development under COVID-19 pandemic from micro-system perspective. During this special background, there exist a profound effect on children physical health, mental health, education, social-emotional ability, interaction with parents and other aspects. This research wanted to detect parents' perception about the effect of this disease on their families by COVID-19, in addition, to know how they cope with this crisis with young children and what happened on children develop in different sectors.

There are 3 research questions as follows,

- What do parents know about Covid-19 pandemic?
- What are the effects of Covid-19 pandemic on their families?
- What are the effects of COVID-19 pandemic on young children in Sichuan China?

Chapter II

Literature Review

Because of the outbreak of COVID-19 all over the world, every system has been affected. In the macro-system global economic status become severe, almost countries take the measure of lockdown, they stop lots of collaborations during this special time and reduce connection with each other in economic. In the Exo-system, all factories, companies and other institutions have shut down except hospitals and medicine factories that are necessary to cope with COVID-19, which causes Meso-system almost stop working. All of these shaped many changes in children's microsystem, schools have been locked for a long time and all family members have to stay with each other all the time, some of the families encountered the financial problem that is a stressor for the whole family (Swick & Williams, 2006). As we all know that early childhood development has a profound impact on people's later behaviors and all human being development because of the characterization of the process of human development and the importance of young children development (Orazio, et al., 2020), we need pay more attention on this topic. Moreover, Lots of pandemics has been happened in human history, which cause huge mortality and morbidity in different ages such as seasonal influenza and H1N1 pandemic as well as causing abundant economic lost like this COVID-19 pandemic even worse than it (Sprang & Silman, 2013), but we own more intelligent medical apparatus, instruments and medical resource that can help us cope with pandemic and protect our human. There exist similarities and difference among pandemics, we need to detect the risk and protective factors for early childhood development and reduce inequality and improve development for young children from different countries and varied economic classes. And every system is meaningful to the scholars, we would share the literature from different systems, and this research would

focus on microsystem that is the closest to young children among these system and can get more information about our young children due to the limitation of time and effort.

1. Global Context

COVID-19 has been reported since December 2019 in Wuhan China, then has been found and reported from all over the world. COVID-19 pandemic has led to a devastating effect on human life worldwide and grants an unprecedented challenge to public health, economy, livelihood, social life as well as other sectors. The economic and social disruption caused by the pandemic is devastating. About fifty million people have get infectious, while more than 1 million people have been confirmed dead because of COVID-19 (WHO,2020). Ten million people are at risk of falling into extreme poverty, while the number of undernourished people, currently estimated at nearly 690 million, could increase by up to 132 million by the end of the year (WHO, 2020).

According to WHO (2020), nearly half of the world's 3.3 billion global workforces are at risk of losing their livelihoods. A big group of informal workers are vulnerable as they lack social protection and access to quality health care and have lost access to productive assets. Without the means to earn an income during lockdowns, many are difficult to feed themselves and their families, which affect young children development and whole family members' mental health.

UNICEF reports that children of all ages are affected. According to the analysis jointly carried out by Save the Children and UNICEF, approximately 150 million additional children are living in multidimensional poverty – without access to these essential services – due to the COVID-19 pandemic. Globally more than 1.6 billion children and

young people have been affected by school closures and many of them do not have internet access.

2. Impact of COVID-19 on different countries

According to Centers for Disease Control and Prevention, in the USA, about 4.4 million children between the ages of 3 to 17 years have been diagnosed with anxiety and 1.9 million have been identified with depression because of home quarantine due to COVID-19. In research involved a total of 927 caregivers with children aged between 5 and 11 years completed an online survey, caregivers reported changes in their children's emotional state and behaviors during the lockdown including boredom (73.8%), followed by loneliness (64.5%) and frustration (61.4%), and irritability, restlessness, anger, anxiety, sadness, worry and is likely to argue with the rest of the family was reported by more than 30% of the caregivers. And children spent much more time using screens, and less time doing physical activity and sleeping. More than half of the caregivers reported being moderately or seriously distressed during the lockdown and caregiver level of psychological distress was significantly related to child symptoms (Evren, et al, 2020).

In Italy, the study including 4-10 years old children and 5989 questionnaires shows that many children manifest regressive behaviors as cannot sleep alone as before (26.48%), express fear(18.17%) and enuresis(2.84%), opposite behavior as increased irritability intolerance to rules and excessive demands(55.53%), adaptive behavior to this pandemic as calmer(31.38%), wiser(49.57%), adapt to the pandemic restriction(92.57%) and more listless activities(43.26%) (Luca Pisano, et al, 2020).

And large proportions of children are suffering from mental health disturbances in Bangladesh during the lockdown period, the portion of children who experienced Major

Depressive Disorder on the degree of subthreshold mental disturbances, mild, moderate and severe were 43%, 30.5%, 19.3%, 7.2% separately (Yeasmin et al., 2020). Parents' ability to forestall their emotional pain or manifestation of depression from influencing their role as a parent, might be a significant source of resilience for their children (Yeasmin et al., 2020).

Evidence shows that the effect of the COVID-19 pandemic on children's mental well-being is worrying 60% of parents, according to a survey by parents with primary-aged children and 87% reported that their children were missing school and less than half stated that their children were feeling lonely, which altogether affects their children's mental health and wellbeing (Rawstrone, 2020).

3. Impact of COVID on Families

According to the Bio-ecologic theory put forward by Bronfenbrenner (Swick & Williams, 2006), we can know that family have a profound impact on children's development and other aspects. Under this pandemic, both the immediate and long-term negative effects on children's health and development are likely to disproportionately affect families in communities with high concentrations of poverty, lack of access to quality healthcare and affordable childcare, food and housing insecurity, and limited services for family support (UNICEF, 2020).

There are studies about the economic status under this background (Honerkamp, et al., 2020; Zhang, Lin & Zhu, 2020), showing that socio-economic is mutual affecting with COVID-19 and many families' income have fluctuated because of decreasing workforce caused by social distancing, self-isolation and travel restrictions that are necessary measures to control the pandemic. Many articles are showing that parental income is positively correlated with early childhood development (Katrine, 2010;

Daron & JornSteffen, 2000). Many research has observed that there exist huge differences development discrepancy among different class income families (Noble, et al., 2015; Davis-Kean & Pamela, 2005; Daron & Jorn Steffen, 2000; Katrine, 2010). And many families experienced income fluctuation during this pandemic, it is obvious that the reduction of families' income became a stressor for the whole family that is easy to make anxiety and irritable.

The mental health of the family is not only affected by the income fluctuation but also the increasing number of confirmed case or anyone around them gets infectious, which shaped a nervous atmosphere. Limited space and difficulties that happened during a pandemic can accelerate mental health problem. And mental health problem may happen not only during the pandemic, but also happened after COVID-19 such as fear, and PTSD. Moreover, COVID-19 fear was reported in Fitzpatrick's article (2020) saying that more mental health resources are needed. Besides, anxiety in parents can change how parents interact with their children (parenting style) and affect children social-emotional and behaviour development, and harsh parenting without abuse is significantly associated with lower verbal skills and increased behavioural problems (Berthelon, et al, 2020).

What's more, the lifestyle was changed totally by COVID-19, to avoid the infection all family members stay in the house the whole day, their usual life rhythm has been disrupted that they do not eat food on time, get up and go to bed too late than usual. After that, every member lose their own social circle because they cannot go outside with friends, and the relationship among family members may become strained due to the reduction of social life and limited activity space, lots of conflicts have happened, family coexistence during the lockdown was described as moderately difficult (Evren, et al, 2020). The walking after dinner became difficult too, we know the news that the

staff who came back from Australia jogged in the morning in the park without mask beard the huge price for it that she lost the job because of rejection of wearing the mask, these things showed that people's exercise has been influenced. Except these, purchasing necessities also become a problem for families especially the masks, health service also become strained in the pandemic area like Wuhan.

4. Impact of COVID-19 on Children

There is no evidence showing that COVID-19 affected on child mortality directly, however, there are indirect effects on child survival stemming from strained health systems, household income loss, and disruptions to care-seeking and preventative interventions like vaccination. According to a study covering 118 low- and middle-income countries by the Johns Hopkins Bloomberg School of Public Health, because of disruption in basic intervention and reduction in routine health service, an additional 1.2 million children and 56,700 mothers could die in 6 months and an increase in child wasting based on the worst-case scenario. It is projected that globally 33 million children may go hungry and 370 million children may miss out on school meals (WHO, 2020).

In addition, children may lack stimulating when staying in the home environment, responsive care and developmentally appropriate resources, such as play materials, story books, outdoor play opportunities, socialization, early learning facility, peer communication, inadequate care and supervision that affects children's development, learning and well-being. What's more, this pandemic poses a significant mental health threat among children in many countries. Study shows that the mean post-traumatic stress scores were four times higher in children who had been quarantined than in those who were not quarantined (Sprang & Silman, 2013). Evidence shows that whenever

children are beyond schooling, they become physically less active, have much-prolonged screen time, irregular sleep schedules and less healthy diets, resulted in excess weight or wasting and lack of cardio-respiratory performance (Brazendale et al., 2017), and this situation could be worse when children have been confined in their house without outdoor activities and interaction with peers. Additionally, pandemic stressors such as tension of infection, dissatisfaction and boredom, lack of knowledge, lack of personal space at home, and family's financial loss may have profound influence on children mental health (Brooks et al., 2020).

5. Related statistics on China Context

In order to prevent the spreading of the infection, the Chinese Government has ordered a nationwide school closure as an emergency measure during this special period. The Ministry of Education estimates that more than 220 million children and adolescents are confined to their homes; this includes 180 million primary and secondary students and 47 million preschool children (CCTV, 2020). The online courses made by school and teachers have been given to children and home- schooling plan has been rigorously implemented (MEC, 2020), which moderate parents' concern about children education.

Most Chinese families encountered income fluctuation. Except for family economic status, family members' mental condition have been influenced by this pandemic. The vast majority of Chinese residents have minimal anxiety (85.6%) and depression (83.7%) (Simin, et al., 2020) though most of them have been taken measures to prevent the virus that 97.5% and 99% of participants were required to take body temperature and wear masks in their communities. Another study shows that one in five children (20 percent) in China was either suffering from depression or anxiety, or both (Dunleavy, 2020).

A study about the psychological impact of the COVID-19 pandemic on teenagers and adolescents state that more than one-fifth of junior high and high school students' mental health was affected, and resilience and positive coping were protective factors for the occurrence of depressive, anxiety, stress symptoms and trauma-related distress in junior high and high school students ($p < .05$). However, negative coping is a risk factor for depression, anxiety, stress symptoms, and trauma-related distress in junior high and high school students ($p < .05$)(Zhang, et al., 2020).

Chapter III

Methodology

Research Participants

All of the interviewees were both parents aged more than 25 years old and have one kid under 8 years old. What's more, they live in cities whose normal life may be affected more by COVID-19 than in rural areas. In this study, 12 mother and fathers have been selected for interview.

Research Site

This study has been carried out in Sichuan, a beautiful province in China. Since the outbreak of Corona virus-19, all countries in the world have been affected in different aspects. And it's difficult to organize a formal face to face interview, so this research interviewed all participants by phone.

Research Approach

This research has followed the qualitative approach. The qualitative approach provides an in-depth understanding of the ways people come to understand, act and manage their day-to-day situations in particular settings or context. This helps to understand why

people think, feel, react and behave in the way that they do. In the proposed study, the researcher wants to understand what urban Chinese parents response to COVID-19 pandemic and cope with its consequences on their family life as well as their children's learning and well-being in early years.

Data Collection Methods

Firstly, this study organized a formal structured interview according to research purposes, then revised it again and again with my mentor. Secondly, recruited the people in Sichuan who were volunteer to join this study online or by ads. And selected parents who meet our inclusion criteria that have a child under 8 years old. After that, I will appoint a time with them and interview my participants

Sampling Procedure

Based on the inclusion criteria and willingness, 12 mothers and fathers have been selected for the study. At the same time the In-depth interview (IDI) guidelines were developed by author and reviewed by the experts. And completed data collection and transcription.

Before interview, this research appointed time with participants one by one and took consent and built rapport and explained about the research objective and data collection process in their convenient time. All the interviews have been conducted by myself or research assistant via mobile or other digital platform because face to face IDI would not be possible due to COVID-19 pandemic. The data were recorded by mobile recorder with the permission of the participants. Memos and field notes have been taken. The length of each IDI was 25-30 min (per participants).

Data Analysis

In the qualitative study, data analysis started from collecting the data. Data has been managed and analyzed using the content analysis approach. The following steps content analysis has been carried out,

- a) **Transcribing and Organizing Data into Categories:** After collecting raw data (audio-recorded data), transcribed it and inputted it into the computer using Word and Excel.
- b) **Reading & Memorizing:** Have read this data repeatedly and understood the insights
- c) **Identifying Theme and Sub-theme:** After being familiar with data, the findings have been organized under the different themes and sub-themes that can be emerged from the data.
- d) **Interpreting Data:** The findings have been interpreted and explained.
- e) **Sharing Findings and Discussion:** Finally, the findings have shared and discriminated.

Ethical Issues

The researcher has taken the ethical approval for the study from BRAC IED, BRAC University before the beginning of the study. The oral and written (if possible) has been taken from the participants during IDI and the participation of the participants were voluntarily and they could withdraw themselves anytime form this study and there was no harm or risk in this study. The confidentiality and anonymity maintained in this study. Data would be used only for research purpose.

Validity & Reliability

This study has been studied parents' perception of effects from COVID-19 through interview rather than standard scale, we just detected relevant information after the most anxious time that exists memory bias, which may affect the accuracy of the result, but all the information is real and affected. And due to the participants all from Sichuan province China, it cannot generalize other districts, the reliability of this study is limited.

Limitations of the Study

First of all, these are too many factors affected by COVID-19, this study only detected some parts among these factors and there was not possible to detect all. Another problem was the time constraint. Within a limited time, it would not be possible to take a large sample and face to face interview and try other study design. The third limitation was the sample size and study design. As the sample were selected conveniently and only 12 participants took part in this study so generalization was not possible. In addition, the answer from parents was subjective rather than objective, their perception bias may influence the results we gain.

Chapter IV

Results & Discussion

As this research has divided our total work into 3 segments. First of all, we made an interview question according to the study question and reality. Secondly, recruited our participants and appointed interview time with them, then recorded the content during the interview and analysis it and write down the results through different ways. Thirdly, we discussed deeper information under the results combined with the country culture context.

Results

The purpose of the study is to explore Parental understanding about COVID-19 pandemic, parents' perception about the consequences of COVID-19 pandemic in their life and the consequences of COVID-19 pandemic on children. Here the data took the form of thematic approach identifying and analysing emergent themes and subthemes.

Demographic information of the participants: there were 12 participants, including 6 mother, 6 father and 6 children, the age range of participants is from 26 to 42, their education background is from middle school to postgraduate. Every family extends family that contains 4-5 people. Children's age range is new-born to 11 years old.

Theme 1: Parental understanding of COVID-19 pandemic

All participants have shown a basic understanding of this crisis, they experienced this special time in Sichuan China and kept an eye on the number of infectious people in China and their living districts and surroundings. Moreover, they have attached huge importance on this crisis and thought it can be easy to infection because the transmission routes are air, clothes, attachment and food etc., so they all have to wear masks when going outside, washed hand when coming back, used disinfectant water to clean house and reduced the frequency of travel or cancelled all travels and stayed at home all the time during the severe pandemic period, which may because of government management and villages volunteer organization that stopped people movement.

A father reported that *“when I take the high-speed train, I forgot to wear a mask some times and have to purchase it nearby or I cannot get on the train. Moreover, I start to drive my car rather than the convenient train to avoid my wife and kid getting infectious.”*

Remarkably, the date of this pandemic in China is spring festival which is the same as New Year day in western countries, people visit friends and relatives and purchase lots of good for gifts and family necessities and tremendous stores and shops earn profits in this period previously, which was changed totally by this crisis.

Another father said, *“Although our site has been closed during the pandemic and the atmosphere became strained, there were no relatives and friends were confirmed.”*

Participants think this crisis affected our country first-quarter economic development but have a positive expectation on later economic development and some of them think import and export trade has been influenced deeply. Little people care about other countries' economic and the number of confirmed positive person, only have a rough picture that America own the hugest number of infectious cases.

None of them has been confirmed with Covid-19 as well as the people they have recognized. However, most of them hear about children infections from media, new and Tiktok. After that, they think it is most difficult that children cannot go to kindergarten, school, interesting classes and hospital as usual and their life rhythms were disturbed. What's more, they have a little information about the COVID-19 vaccine and all of them express desires to inject the vaccine for children and themselves if the price is acceptable.

One mother worked as an officer said, *“Because of my position, I collected some data in my work district that two people coming back from abroad were diagnose infectious when they were quarantined at the hotel, but this did not affect our normal life at all, let alone children infection.”*

Theme 2: Parents' perception of the consequences of COVID-19 pandemic in their life from different sectors

Cortex: COVID-19 pandemic happened around the spring festival that is a traditional festival in China as Eid in Bangladesh. Public come back to their hometown and have dinner with relatives and old friends. Moreover, many people spend earning this year on foods, clothes, firework and other products to celebrate this festival or choose to visit interesting places with families.

Sub-theme 1: Effect on families' income by COVID-19

During spring festival period, Chinese often go outside to buy lots of commodities and go back to hometown to renew acquaintance with relatives and old friends, but all people have cancelled these travel plans and consumption plans causing huge loss of businessmen. Half of the participants encountered family income fluctuation because of COVID-19.

One mother worked as a salesperson stated, *“I had to stay at home and my salary was reduced a lot as well as my husband. Because his parents were making business, much more loss was encountered by the whole family, which caused many conflicts among us”*.

In contrast, one father reported, *“My income increased because I started to make business except for the normal work as a security, so I can cover the high living cost although my wife salary cannot be given on time.”*

Because of saving habits in China, all participants go through this long period without too many difficulties. In addition, New Frugality has arisen during and after this crisis, people pay more attention to rational consumption.

A mother shared, *“We did not feel it important to save money before although my family always do it as a tradition or habit, however, this crisis makes us consider reducing*

unnecessary cost and find that we can save more money and use the money to do more meaningful things.”

Sub-theme 2: Effect on families' mental health by COVID-19

For the mental health, half of the participants stated that they have experienced anxiety because of COVID-19, their anxiety came from caring about the infection of themselves, relatives and friends, worry about future income and inconvenience during the pandemic that they cannot purchase goods and travel as usual. However, no one reported that they have experienced depression.

One father complained, *“I was worried about that my families, relatives and friends get infectious, this crisis made me stay in our construction site for 5 months which I should go back to hometown 4 months ago.”*

However, there was one father so positive and shared, *“I felt happy about this crisis, I can spend less time for the journey from house to my workplace because of no car on the road during this pandemic. And I can play computer games at home as normal, by the way, I earned more money because of this crisis. What made my pain is the price of meat increased”*

Sub-theme 3: Effect on families' normal life by COVID-19

All participants reduced or cancelled travel plans, what's more, they felt it difficult to go outside even to park and supermarket, vegetable markets that the public often goes for necessity also have been closed. And all people cannot go back to hometown any more.

One mother with the newborn baby said, *“The whole people accompanied me in my childbirth confinement, Haha... My parents cannot go back to my hometown because*

of COVID-19 and help me care for the baby. Even people who want to go back to the village would be refused by the villager.”

One family that parents are civil servants have to reduce their holiday and work in office for collecting statistical data of COVID-19 and prompt medicine factories keeping production and monitor their safeguard procedures from time to time or other epidemic prevention work. In addition, bank clerk has increased job steps such as wearing the glove and sterilizing the cash by a special machine, reduced their work time, it is interesting that cement factories' income increased because many farmers built their new house to spend the time of lockdown. Most citizens encountered quarantine period so that they cannot go out of their house estate. The policy is that only one person in one family was allowed to go out of the door one time per day to purchase necessities in the supermarket rather than food market that has been closed by government to prevent infection. For people in villages, they cannot go out of village and outsiders cannot enter, but they still can communicate with neighbors. The people who on duty for the festival still work on the construction site and cannot go back home to stay with families, but whole construction has been stopped. Moreover, some of them also find it difficult to buy masks that may be used off soon.

Nowadays, there are few confirmed cases in Sichuan province even in China, all people still keep a good habit to protect themselves from COVID-19. One father used to take a high-speed train from house to workplace, however, he has started to drive his car to avoid the crowded, as well as the route from house to hometown. The public transportation has been so strict that no one can get on train, bus or taxi without a mask, and they're always one or two staff go around the whole train or bus to supervise whether every passenger wears the mask in a right way.

Although the online market is available, affected by spring festival and pandemic, express staffs were in holiday and public were worried the virus on the package and clean the package by alcohol or disinfectant after receiving or did not shopping online.

A mother stated, "I did not buy anything online as usual due to this crisis, I'm afraid that any virus attaches on the express. I heard about my colleges that they receive the express with gloves and clean the package by alcohol at home."

A dad shared, "we prepare many masks in our site because of our job, but it became difficult to buy large quantity masks during the quarantine and the materials were limited causing that I have to borrow necessities from collaboration company in our site."

Theme 3: Parents' perception of the consequences of COVID-19 pandemic on Children

Sub-theme 1: Effect on children's life by COVID-19

Participant shared that all children cannot go outside let alone schools and kindergarten. Two families were leaving the city for the countryside with their young children so that they can contact with neighbors freely and walk around in farmland and play with plants accompanied by their caregivers. But children lost the chance to interact with peers, do exercise and join community life, and changed their normal life rhythm. Most families reported their rhythm was disturbed, their kids were not sleeping noontime, get up and go to sleep too late. One family showed strainer relationships among family members. Besides, health service became difficult for families. From the interview, the people in the city have more limited space, and their parents have to spend more effort to play with them, cost children effort and avoid overuse of TV, Phone or other electronic products.

Sub theme 2: Effect on children's mental health by COVID-19

No one reported that any child has experienced anxiety, depression, acute stress response and other mental disease due to COVID-19 pandemic.

When I ask parents' about children's difference and mental health, most parents answer me that, "*I did not feel any mental problem happened on my kid*".

In addition, one mother shared that "*my child became more compliant and easier to wear mask and wash hand*", another mother also said that her child became more compliant.

One father said that his child start to use words like virus when he play games with peers later on.

Sub-theme 3: Effect on children's physical health by COVID-19

From the nutrition part, no one reported they encountered such kind of problem, and foods supply were enough for the whole families although their normal routine was effected, one of families members were allowed to go for buying necessities one time per day.

As for health service, one mother shared, "*one tough thing is that my baby got cold but did not go to the hospital at firth due to fear of getting infectious in hospital and just bought some medicine nearby, which cause his symptom became worse*".

For the exercise, the participants who stayed in the countryside said, "*They still can run and play in our village with enough exercise*", others all encountered less exercise.

One mom stated, "*Except my work, I have to think of many ways to cost his damn energy*".

Another mom shared, *“he wanted us to play the monsters and he plays the role of superman and runs in limited space, our house. I also try playing with him in the roof”*

Sub-theme 4: Effect on children’s education by COVID-19

Although all school, kindergarten and other education institution closed that period, children can learn online class organized by teachers, schools and Ministration of Education, this model of education has been carried out all cities due to the mature fundamental facility established by the government.

A mother who worked as a salesperson of education institution shared, *“many parents cancelled interest class and refused online class because they think the effects of the online class cannot catch up the effects of face to face class”*.

A father said, *“we purchased many lecture materials, and teaching my son these things make me so painful. It’s lucky that the school opened later or I would be insane.”*

But the overuse of electronic was popular during that time, half of the families reported that there existed overuse of TV, and all parents control phone use for children with conscious. However, only one mother with postgraduate has controlled the use of electronic products strictly.

Another mom said, *“my son went to neighbor’s house to watch TV because we limited his time to use electronic products after completing study task”*

Sub-theme 5: Effect on children’s social-emotional ability by COVID-19

For the peer interaction, all children cannot play with peers face to face but they can communicate with others via phone and computer. But they all can communicate with parents and grandparents smoothly or more compliant that is popular in our culture.

One mother shared that, *“my son wanted to go friend’ house and play, when we called his friend, his friend answered, ’ how dare you are, I do not want to play with you because I do not want to get infectious of COVID-19’, then my son had to stay at home”*

For the mother stayed at countryside *“my daughter cannot play with friends and just play with plants in field.”*

For the ability to deal with the crisis, parents did not reported any problem happened on children mental health, They became more compliant and clingy, express fear in an acceptable way and went through the special period smoothly.

One father shared, *“He no longer refused washing hand, and want to sleep with us. What’s more, my son taught a little girl to be compliant and wear mask to prevent Covid-19 when the crisis passed.”*

Sub theme 6: Effect on children’s relationship with caregivers by COVID-19

Only one family said that the conflicts increased, this family is the only one who made business and they experienced huge economic loss during this pandemic. Others felt the relationship among families fine this period.

The mother shared, *“All people were waiting for foods, however, the income became less and less. The conflicts became unavoidable and my parents in law became more irritated. It may affect my daughter and she became more silent.”*

Another new mother said, *“I felt fine during that period, the family member relationship is good, and they help me care, my newborn baby because I was so weak”*

One father also said, *“There was no difference with before, his mother spend time on teaching him English. Everyone got together to resist this pandemic.”*

Sub-theme 7: Parents’ perception of long and short Effect on children by COVID-19

Parents reported short-term effects on children but they do think there exist long term effect because they do not consider children are mature enough to understand this pandemic and view some behavior strange or ignore some signal from children. For the short-term effect, they feel children daily rhythm was disturbed because they cannot go to school or kindergarten, most of the children learn lots of noun about the virus and attached more importance to wear masks, wash hand and other hygiene issues that they may not do it well enough before, moreover, they more willing to complete parents' requirements and want to spend time with parents.

We have no seen big problem happened such as acute stress response and PTSD in this research.

One father shared, "As for short term effect, my son cannot go to kindergarten and stayed at home with grandparents. He became more compliant and clingy. He often wanted to play with us, which may because he cannot play with peers. When he came back to school, he and his classmates play with each other, but they often stigmatize others by the virus and other similar words, which was interdicted by me when I heard that. For the long-term effect, I do not think there was any long term effect on my son and I feel he is too young to understand COVID-19 pandemic."

What is challenged for parents is that children want to go outside during quarantine, parents have to explain the situation, again and again, parents who still work feel so tied to play with vigorous children, but it's lucky that children's grandparents came to their home to help them in all families. After this quarantine, many children tried to play games to simulate COVID-19 situation with friends.

Discussion

In this part, it would share more thoughts and theory relevant to the results and provide possible explain that why the phenomenon happened during Covid-19 pandemic. **Theme 1: Parental understanding about COVID-19 pandemic**

From the results, we can see that there are few confirmed case in Sichuan province although there are only about 1200 kilometer from Wuhan to Sichuan, but no one treat this pandemic lightly or let their guard down, and everyone has attached enough importance on this crisis and take measures to reduce movements even during traditional holiday. They all have learned the basic knowledge about COVID-19 and taken measures to protect their children and themselves such as storing masks, washing hands and cleaning house with disinfectant from news and advertisement by government. There is no large-scale gathering happening due to any reason, even small family parties with relatives and dinner together with friends were banned by government, let alone marry party and others. It is important that all people take part in preventing this crisis, make it become a problem faced by all public rather than infectious persons only, this kind of thoughts and behaviors help the whole country get together and positively cope with the COVID-19 pandemic.

Theme 2: parents' perception about consequences of COVID-19 pandemic in their life from different sectors.

From the results, no one reported depression, while majority of participants shows little anxiety about this crisis, which is different with my expectation and other researches' results (Simin, et al., 2020; Dunleavy, 2020), and the situation is much better than our anticipant. On the one hand, no one reported have been confirmed positive as well as their relatives, friends and acquaintance, which made them not so nervous, though this

situation cannot represent other severe countries or district like American and Wuhan China. On the other hand, participants may forget or can not identify their feeling of depression and anxiety because memory is easy to change by the owner or participants and they maybe not fully understand the meaning of depression and anxiety. Moreover the degree of anxiety is not high, it may be because the closure of cities did not last too long to make people despise, the economic effect for the participants is limited, the anxiety is from future income and a worrying outbreak in that short time. And they all feel satisfied with life now as there exists little difference with previous except wearing masks.

What they feel the most challenged is the inconvenience for travel and the closure of the school, as well as vegetable market etc., many used express to replace shopping in the mall, and participants use alcohol to clean the package of express every time during this crisis. The good results is because government's efforts (Lockdown of city and country immediately, organize work resumption gradually, make rational measures and available way to keep public normal life) and public's positive participants and abide by the regulation and obey directions given by the government. And enough fundamental facility also relieves much inconvenience.

In addition, most people are still comfortable to stay at home with mobile phone and many of them do not like much exercise like western countries, the most popular exercise is walking after dinner that had to be cancelled due to COVID-19 crisis. And almost people focus on their own life, pay little attention to the situation of COVID-19 on other countries and other cities, they only care about their district, city and adjacent districts. Because half of them have a stable job, and a minority of them make business, only half of the people encountered family income fluctuation, but many in the half people originally plan to change job or has already resigned and welcome to spring

festival. And most of them were so busy in their life before this pandemic, and this crisis gives them a rational reason to relax at home.

What's more, Chinese are used to save money that may explain why all participants can cope with a couple of months of quarantine. This pandemic has also arisen the habits of saving money for public especially youngster that may spend money without a plan before, and we call it "NF", New Frugality that means rational consumption and only purchase the goods according to their own needs rather than pursuing the brands, for comparing with other and affected by the advertisement. Because all find it is meaningful to save money to resist risk during this crisis.

For this research, it is a pity that we did not recruit participants who have experienced COVID-19, and cannot detect their thoughts, it also shows the great achievement of control the transmission of COVID-19 in China.

Theme 3: Parents' perception about effects of COVID-19 pandemic on children

Sub-theme 1: Effect on children's life by COVID-19

Like other researches, there are also some troubles. Most of them cannot go outside and had to stay in a limited space (WHO, 2020), they have the desire to nature, playground or amusement park, but they have to repress this kind of desire. Without school or kindergarten, their life rhythm was disturbed totally (Brazendale et al., 2017), they were easy to go to bed too late or cancelled the nap in the noon.

Sub-theme 2: Effect on children's mental health by COVID-19

As for children part, we have no seen big problem happened such as acute stress response and PTSD that may happen after pandemic (Brooks et al., 2020), and there was no sign for stress response in this research. From one aspect, these children did not face this crisis in a small circle, all people encountered the same problem that cannot go

outside and go to school, and it seems no difference with others, and due to the explanation by parents, other people or the news on TV again and again. What's more, parents' thoughts provides an important support for them, making them more resilient (Yeasmin et al, 2020).

No one reported that any child has experienced anxiety and depression due to COVID-19 pandemic, only one father reported his daughter became irritated because her mother who is middle school English teacher arranged too much homework for her. And two families felt happy that their children formed good habits due to COVID-19, children start to wash hands with less reminders, they became willing to wear masks(flu is also easy to transmit in winter and spring but children are unwilling to wear masks before). And many parents feel their children became much clingier than previous which they don't think it is remarkable, this behavior shows children may exist regression((Luca Pisano, et al, 2020)), and they are also feeling afraid unconsciously even parents are difficult to find out it. After that, when children go back to school or kindergarten and play with classmates, they often use the nouns like coronavirus and pneumonia when they play with each other, these behaviors express their unconscious fear and they are actively looking for ways to eliminate their inner fear.

As for other mild mental effects, it need further detect. And we did not find any other anxiety emotion transporting from parents to children, it is good that caregivers own the ability to control their emotion and reduce the chance to affect children development as well as formed a model for children to control their emotion rather than develop a bad temper.

Sub-theme 3: Effect on children's education by COVID-19

Majority parents value education and control the time of using electronic products, however, the overuse of TV exists so popular, in this research, except one newborn baby and 3 in the countryside, others all spend much more time on TV than school time, which hampers their vision and body health. This situation is the same as the previous study by Brooks(2020).

In addition, the online class technique has become much more mature because of COVID-19, this kind of education model may become mainstream in the future (CCTV, 2020).

In this research, we did not find any relationship between parents' age with children education. It may exist a little relationship between parents' education with children education, the mother who is master spend more efforts for children development and education, try her best to bring out ways to play with her son such as reading the book and use kinds of toys, she is the only one family to control electronic product using strictly.

However, it is obvious that there exists a relationship between the stability of job and children education in this research, the more stable job, the more attention paid on children's development and education, which may because of the stable family income and sufficient energy.

Sub-theme 4: Effect on children's social-emotional ability by COVID-19

Because everyone attached enough importance on this crisis, for instance, one child called Richard, his friends rejected him to his house and play with him due to the pandemic, although there are no confirmed cases around him. And there are lots of ways to kill their time though most of them cannot contact with the peer (the children in the countryside still can commutate with friends), some of the parents play with them,

others read the book with them, and online learning has been also evolved into the form of education, they also can communicate with friends and relatives by mobile phone. We chat is a popular app for Chinese, which can complete video call easily so that they won't feel too lonely. Moreover, some of the parents living in the city also searched for other interesting ways to help children develop at home.

Sub-theme 5: Effect on children's relationship with caregivers by COVID-19

From the results, it is popular that every family members are more than 3 people though 5 of 6 families have only one child, most parents choose to continue working, and grandparents come to their small families to help them care their kids, this may explain two things, on the one hand, parents' pressure to earn money is so big that they cannot give up their job and become housewife or househusband, on the other hand, it is grandparents' effort that provides an abundant human and economic resource to care a child. Even the one-child policy has been cancelled for a period, many people do not want to born and care for another child because the cost is too high and may cause a decline of youngster life quality.

Only one family reported more quarrels happened due to falling income. As the limitation of sampling, we did not detect too many families, there exist the possibility that it is a positive relationship among the degree of income fluctuation, family ties and family members' anxiety.

Sub-theme 6: Parents' perception of long and short Effect on children by COVID-19

According to results provided by parents, most of the participants agree that there is short-term effect by COVID-19, and no one think here exist any long-term effect on their children which is easy to happen (Brooks, 2020; Fitzpatrick et al., 2020; Sprang

& Silman, 2013), because they think children are not mature enough to understand this crisis. Short-term effects include the closure of the school, less exercise, chaotic schedule, online class and less communication with peers etc. which are the same as previous study (Evren et al., 2020; Wang, 2020), we can find the importance attached to their children development in obvious aspects by the parent, however, parents show some innocent to children's mental health, they feel happy for children more obedient because Chinese culture encourages the obedience, but this does not match children's nature. Parents often feel strange for children stigma others with the virus and forbid this kind of behaviors but they ignored that children also felt fear that may transmit from environments and were difficult to express their emotion clearly by language and they also need ways to release their pressure. Though parents said that no long term effects on children, COVID-19 left a deep imprint in children's brain that is why they still use these words in their games.

Sub theme 7: The way to control the Effect by COVID-19

It needs huge courage and cost to close the country and cities, but the earlier we take measures, the sooner we can control the COVID-19 pandemic if our public also obeys the government's instruction. There exist trust between government and public, and two body combine tightly and provide a comparable stable environment for children that is why parents did not hear about infectious children due to discreet prevention measures taken by parents. Moreover, government's fundamental facility permit citizen can go through the tough time smoothly, for instance, children can learn knowledge at home by online class and interaction with teachers online, the family can purchase necessities by express online and no need to go outside, our masks are enough in most districts for normal use.

Conclusion

The findings showed that the COVID-19 pandemic caused inconvenience on travelling and consumption for participants during our spring festival. Compared with other countries, there was no gathering together or holding party in China after the warning from governments, and our country has guided public to wear a mask from the beginning, which was not encouraged in many countries even WHO but it is necessary to control the transmission of COVID-19 (Esposito & Principi, 2020). First, we need to conclude that it is public's and government's effort together that control the transmission of COVID-19 in China and controlled the effect of COVID-19 on the public that we start to operate all industry soon.

Secondly, although adults were stressful enough due to the income fluctuation and worry about infection, with the help from grandparents parents showed enough patience to treat their children, which can help children to form resilience (Yeasmin, 2020). It's lucky that we have the tradition to save money to resist risk, this crisis make us value this good tradition again.

Thirdly, it is important to create a stable environment for children development and education, which can reduce the effect that comes from a big crisis. Parents' job type also affect children profoundly, the stable and comparable higher salary job can permit a comfortable microsystem environment.

Last but not least, the more children developmental information or knowledge was gained by parents, the better measures would be taken to treat their child, the better development would happen on their child. According to this research, we can find that parents with higher education background value children's development and education more. Parents' thoughts and feelings are easy to transmit to their children, society need

to provide accurate and adequate information to the parents and give instruction to teach parents how to deal with their own emotion.

Recommendations

Firstly, the government need to take actions to prevent pandemic as soon as possible from different sectors. This process should involve hospital, school, NGOs and governments. The earlier carry out measures to control this crisis, the less lost the whole society would suffer. Of course, the instruction from the government should be the right direction or we will go in the wrong way.

Secondly, more children developmental information or knowledge should be taught to parents. According to this research, we can find that parents value children's development and education, but they cannot capture children's mental change sensitively and affected by culture too much to ignore children developmental rules. In addition, parents may take the wrong solution to cope with children's behaviors that they think strange, for example, one father forbids his son label other friends with the virus or other similar word, but it is a way for children to get out of the sensitization of these words and release their pressure caused by COVID-19, caregiver ignored that their children have already felt fear. And the government should try best to provide a stable environment for children because their healthy development can permit a good future for the country and the cost is comparatively low.

When we implement these recommendations, it will last a long time, many years or longer time. This process is too long to insist. Scholar and the government should spend more efforts to arise parents' conscious. And we may let guards down after this pandemic and before next pandemic happen. When qualified parents become a

common thing, governments own enough ability to cope with similar pandemic (foundation ability, abundant materials).

This research needs further study to detect whether exist long term effects on children. And due to the limitation of sampling, further study needs to optimize sampling procedure, make the results more reliable. If efforts are enough, study the same problem in different countries and cultural context would be an interesting thesis.

References

- Berthelon, M., Contreras, D., Kruger, D., & Palma, Mar á Isidora. (2020). Harsh parenting during early childhood and child development. *Economics & Human Biology*, 36.
- Brazendale, K. , Beets, M. W. , Weaver, R. G. , Pate, R. R. , & Hippel, P. T. V. . (2017). Understanding differences between summer vs. school obesogenic behaviors of children: the structured days hypothesis. *International Journal of Behavioral Nutrition and Physical Activity*, 14(1). DOI: 10.1186/s12966-017-0555-2
- Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., & Rubin, G. J. (2020). The psychological impact of quarantine and how to reduce it: rapid review of the evidence. *SSRN Electronic Journal*, 395(10227). DOI: 10.2139/ssrn.3532534
- Caiyun Zhang, Maolin Ye, Yunwei Fu, Minyi Yang, Fen Luo, Jinhua Yuan, and Qian Tao. (2020). *JOURNAL OF ADOLECENT HEALTH*, (2020)1-9 DOI:org/10.1016/j.jadohealth.2020.08.026
- CCTV News. Ministry of Education: national elementary and middle school network cloud platform opens for free use today. Feb 17, 2020. <http://www.chinanews.com/sh/2020/02-17/9094648.shtml> (accessed March 3, 2020 [in Chinese]).
- Clark, H., Coll-Seck, A. M., Banerjee, A., Peterson, S., & Costello, A. (2020). A future for the world's children? a who - unicef - lancet commission. *The Lancet*, 395(10224). DOI: 10.1016/S0140-6736(19)32540-1

- Daron Acemoglu, & JornSteffen Pischke. (2000). Changes in the wage structure, family income, and children's education. *European Economic Review*, 45(4), 890-904.
DOI: 10.1016/S0014-2921(01)00115-5
- Dunleavy, B. P. (2020). 20% of children on lockdown in China suffer depression, anxiety, study finds. *United Press International*
https://www.upi.com/Health_News/2020/04/24/20-of-children-on-lockdown-in-China-suffer-depression-anxiety-study-finds/5291587741928/?fbclid=IwAR2Mpw5i93kUzDud7Wi0WNVR6aEkQvSPGW0vRw_kkamKfiHbHsuyXYsFIF4.
- Davis-Kean, & Pamela, E. (2005). The influence of parent education and family income on child achievement: the indirect role of parental expectations and the home environment. *J Fam Psychol*, 19(2), 294-304. DOI : 10.1037/0893-3200.19.2.294
- Esposito, S, & Principi, N. (2020). To mask or not to mask children to overcome covid-19. *European Journal of Pediatrics*. DOI: 10.1007/s00431-020-03674-9
- Evren Morgul, Angeliki Kallitsoglou, Cecilia A Essau. (2020). Psychological effects of the COVID-19 lockdown on children and families in the UK. *Revista de Psicología Clínica con Niños y Adolescentes*.7(3),22-28 DOI: 10.21134/rpcna.2020.mon.2049
- Fitzpatrick, K. M., Harris, C. T., & Drawve, G. (2020). Fear of COVID-19 and the mental health consequences in America. *Psychological Trauma Theory Research Practice and Policy*.

- Gumber, A., & Bulsari, S. (2020). COVID-19 impact on indian economy and health: the emergence of corona-economics. *MPRA Paper*.
- Guanghai Wang, Yunting Zhang, Jin Zhao, Jun Zhang, Fan Jiang. (2020). Mitigate the effects of home confinement on children during the COVID-19 outbreak. *Published Online March 2, 2020* DOI: 10.1016/S0140-6736(20)30547-X
- Honerkamp, Yasine, Honerkamp, Yasine. (2020). The Socio-Economic Implications of the Coronavirus and COVID-19 Pandemic: A Review. *VtechWorks*
- Hou, C., Chen, J, Zhou, Y., Hua, L., & Jia, E. (2020). The effectiveness of quarantine of wuhan city against the corona virus disease 2019 (COVID-19): a well-mixed seir model analysis. *Journal of Medical Virology*, 92(7). DOI : 10.1002/jmv.25827
- Katrine V.L øken. (2010). Family income and children's education: using the norwegian oil boom as a natural experiment. *Labour Economics*, 17(1), 118-129. DOI: 10.1016/j.labeco.2009.06.002
- Kathleen E. Kiernan, & M. Carmen Huerta. (2008). Economic deprivation, maternal depression, parenting and children's cognitive and emotional development in early childhood. *The British Journal of Sociology*. DOI: 10.1111/j.1468-4446.2008.00219.x
- Luca Pisano, Domenico Galimi, Luca Cerniglia. (2020). A qualitative report on exploratory data on the possible emotional/behavioral correlates of Covid-19 lockdown in 4-10 years children in Italy. *PsyArXiv Preprint* DOI : 10.31234/osf.io/stwbn

- Mahi, M., Mobin, M. A., Habib, M., & Akter, S. (2020). Knowledge mapping of pandemic and epidemic studies in economics: future agenda for COVID-19 research. *Social ence Electronic Publishing*. DOI: 10.2139/ssrn.3597812
- Ministry of Education of China, Ministry of Industry and Information Technology of China. Notice of arrangement for “suspension of school does not stop learning” during the postponement for the opening of primary and secondary schools. Feb 12, 2020. http://www.moe.gov.cn/srcsite/A06/s3321/202002/t20200212_420435.html (accessed Feb 29, 2020 [in Chinese]).
- Mustard, J. F. (2006). Experience-based brain development: scientific underpinnings of the importance of early child development in a global world. *Paediatr Child Health* (9), 571-572.
- Noble, K. G., Houston, S. M., Brito, N. H. , Bartsch, H., Kan, E., & Kuperman, J. M., et al. (2015). Family income, parental education and brain structure in children and adolescents. *Nature Neuroence*, 18(5). DOI: 10.1038/nn.3983
- Orazio Attanasio, Raquel Bernal, Michele Giannola, Milagros Nores. (2020). Child Development in the Early Years: Parental Investment and the Changing Dynamics of Different Dimensions. *NBER WORKING PAPER SERIES, No. 27812*
- ParkerJenkins, Marie. (1996). Education, Culture and the Politics of Difference within the British Context. *The Australian Association for Educational Conference*.

- Qin Wang. (2017). Comparative Study of Sino-Japanese Folk Culture and Children's Education. 2017 International Conference on Advanced Education, *Psychology and Sports Science*, 293-296.
- Rawstrone, A. (2020). Survey reveals impact of lockdown on children. *Nursery World*, https://www.nurseryworld.co.uk/news/article/survey-reveals-impact-oflockdown-on-children?fbclid=IwAR087HiEZWQNXb6MK-cqFi_GxS9s_faKjjYf_7npWkh1M_ZejdGIYNI8oPQ.
- Simin Li, Zhiyu Ye, Quan Wei, Chunping Du, Chengqi He. (2020). The residents' mental health status and community's role during COVID-19 epidemic: a community-based cross-sectional study in China. *Research Square*. DOI: 10.21203/rs.3.rs-20269/v1
- Sprang, G., & Silman, M. (2013). Posttraumatic stress disorder in parents and youth after health-related disasters. *Disaster Medicine & Public Health Preparedness*, 7(01), 105-110. DOI: 10.1017/dmp.2013.22
- Swick, K. J., & Williams, R. D. (2006). An analysis of bronfenbrenner's bio-ecological perspective for early childhood educators: implications for working with families experiencing stress. *Early Childhood Education Journal*, 33(5), 371-378. DOI: 10.1007/s10643-006-0078-y
- World Health Organization. (2020). Coronavirus disease (COVID-19) pandemic. Retrived from <https://www.who.int/emergencies/diseases/novel-coronavirus-2019>
- World Health Organization (2020). Coronavirus disease (COVID-19), Situation Report181 (Issue July).<https://www.who.int/docs/default->

source/coronaviruse/situationreports/20200719-COVID-19-sitrep-181.pdf?sfvrsn=82352496_2.

World Health Organization (2020). COVID-19, Bangladesh Situation Report No: 4 (Issue March).https://www.who.int/docs/default-source/searo/bangladesh/COVID-19-who-bangladesh-situation-reports/who-ban-COVID-19-sitrep-04.pdf?sfvrsn=69b6d931_8.

Yeasmin, S. , Banik, R. , Hossain, S. , Mahumud, R. , & Hossain, M. M. . (2020). Impact of covid-19 pandemic on the mental health of children in bangladesh: a cross-sectional study. *Children and Youth Services Review*, 117, 105277. DOI: 10.1016/j.chilyouth.2020.105277

Zhaowang Zhang, Hualiang Lin, Guanghu Zhu. (2020). Dynamical balance between the transmission, intervention of COVID-19 and economic development. medRxiv DOI: 10.1101/2020.08.13.20174755

Appendix A

In- Depth Interview (IDI) Guideline(English Version)

Participant Demographic Information

Parent's name: Parent's age:

Parent's educational qualification: Parent's occupation:

Child's name: Child's age:

Total number of children:..... Interview date:

Interview starts time: Interview ends time:

No of Family members.....

Parental understanding about COVID-19 pandemic

1. What do you know about corona-virus?
2. Do you know how this is infected human?
3. Do you know how to protect yourself and your families from infection?
4. Has many of your family members infected with this virus?
5. Have you infected with this virus? If yes, please share your experience.
6. Do you know about children infection?
7. How much is serious in the case of children?

8. Do you know anything about vaccine for covid-19?

Consequences of COVID-19 pandemic in your life (family life, social, financial, mental health etc.)

1. Do you know the effects/ consequences of COVID-19 pandemic in your country and globally?
2. Is there any difference compared quarantine with normal time? If yes, please explain.
3. Have you faced any difficulties due to covid-19? If yes, please explain
4. If not, what do know about the effects of covid-19 in human life in all aspect?

Consequences of COVID-19 pandemic on children

1. Please tell me some information about your kids? (age, gender, school/ learning center)
2. What did you manage your child during this pandemic situation- lockdown and other time?
3. How did you spend time with your child?
4. Tell me what was child's reaction?
5. Is there any difference on children mental health and behaviors compared quarantine with normal time? If yes, please explain.
6. Do you think this COVID-19 pandemic has effect on children? Please explain- short term and long-term effects, learning, development, particularly social and emotional, play, behavior, mental health etc.
7. What kind of challenge did you face in terms dealing the child?
8. How could you manage / overcome this situation?

Thank you for your answers.