

The Implication of the COVID-19 Lockdown and Quarantine on Child Psychology

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Abstract. The objective of the research was to study the impact of the COVID-19 lockdown on children's psychology, explore potential factors that contribute to mental health symptoms, such as virtual learning, lacking physical exercise and a change of lifestyle, and identify the quarantine-related symptoms of health issues, including anxiety and depression, difficulty in concentration, sleeping and eating disorder. The literature review findings confirmed that lockdown and quarantine play a negative role in children's mental health. The study further discussed that the degree of mental health during COVID-19 varied in different age groups and genders. Therefore, the findings imply that measures should be taken to reduce mental health issues in the COVID-19 confined population, and it urges the government to improve health and social care services, increase expenditure in addressing these pressing needs and develop timely, efficient, and nation-specific interventions.

Keywords: COVID-19; Lockdown; Quarantine; Children.

1. Introduction

In January 2020, WHO identified the novel coronavirus as COVID-19 firstly and declared a spread of COVID-19 as a global pandemic in March 2020. (2) Due to the widely spread of COVID-19, many countries-imposed lockdowns that confined all individuals to their homes. According to the lockdown policy, schools and workplaces were closed. People required to learn virtually and were not allowed to go to the public places or met friends outdoor. (2) The quarantine and home confinement makes families live in close places that threatens both physical and psychological health. (3) Almost all individuals who experiences quarantines and lockdowns arise negative emotions and feel psychologically distressing because quarantines and lockdowns are states of isolation. (2)

Evidence suggests that, particularly when the appropriate preventive steps are not followed, quarantine may have a wide-ranging, significant, and lasting negative psychological impact on children. Children, who have a higher risk of develop psychological disorders than adults, which are particularly vulnerable to have a negative effect from lockdowns and quarantines. (2) The COVID-19 has caused widespread school closures in 188 countries, according to the United Nations Educational, Scientific, and Cultural Organization, affecting more than 1.5 billion pupils. (1) A new study from China that was published in JAMA Pediatrics reported that 1 in 5 kids displayed depressive symptoms while under quarantine. During quarantine, children's anxiety levels increased in addition to their levels of melancholy. Stress-related symptoms related to the quarantine have been linked to a number of unfavorable psychological effects, including depression, irritability, insomnia, aggression, and emotional weariness. Children may show worries about dangerous infections, threats to the stability of their families, separation anxiety from classmates and friends, or more serious worries about mortality. The effects of quarantine on children's daily lives are profound. The social distancing and stay-at-home orders obviously reduce children's opportunities to have physical activities. (1) The boredom of their personal lives makes them more prone to depression and anxiety. Besides, Children's relationships are also greatly affected. The closure of school makes children lack of social interaction and outdoor games. The online courses increased the usage of electronic devices. The lack of social interaction impact children's emotions and mental health. During quarantine, it is especially important to pay attention to and communicate with your child's emotional changes. However, many times parents not only ignore their children, disagree the needs of their mental health attention, but may even pass on psychological distress to them. These detrimental effects have an impact on children's social, academic, and mental health. (1)

As a result, the degree of depression, anxiety, sleeping disturbance, and acute stress symptoms were reported and compared for the both children and adolescents confined in order to evaluate the links between quarantine measures and mental health outcomes during the COVID-19 epidemic. In addition, factors linked to psychological symptoms in the isolated population were found, providing evidence that policymakers should carefully consider any psychological repercussions. A systematic evaluation of prior studies that describe the detrimental impact on children's emotional well-being and mental health was conducted. And further explore the factors that most negatively influenced children and the specific negative emotions or psychological disorders we should pay more attention on the children.

2. Impact on Children Psychology

2.1 Children's Emotion Status

Studies have shown that children may experience psychological stress as a result of confinement procedures like isolation and quarantine during a pandemic or crisis. Being alone is a difficult experience on the mind. The interaction of lifestyle and psychological pressures experienced during isolation can increase negative health impacts, producing a vicious cycle. Since schools, parks, and playgrounds had to be closed during the prolonged lockdown, children's daily routines were altered and interrupted, which might potentially cause anxiety and disorientation. Children increased their demands as a result of these changes. (5) Children as young as 2 years old can notice changes in their environment and are impacted by such changes. (4) According to the research, children experienced anxiety due to the uncertainty surrounding the end of the pandemic, discomfort from the strict social isolation or quarantine, loneliness as a result of the closure of schools, parks, and playgrounds, and boredom as a result of the lack of opportunities to play outdoor games. (4) A great deal of earlier study examined kids' emotional states throughout the lockdown.

Some research found that children felt difficult to concentrate. Orgilés et al. performed a survey in their research. The participants are 1143 parents of children aged 3-18 in Italy and Spain. The survey requested participants provide the information about how quarantine affect their children's emotion status, compared before the lockdown. The result shows that 85% of the parents felt their children's emotional state changed during quarantine. The problems happened mostly were difficulty in concentrating (76.6%), irritability (39%), boredom (52%), restlessness (38%), feeling of loneliness (31%), nervousness (38%), uneasiness (30%), worries (30%), anxiety (28%), anger (25%), increased reluctance (24%), sadness (23%) and fear (23%) of COVID-19. (6) From the result, 76.6% of parents think their children have difficulty in concentrating. Because of the virtually courses, children feel hard to pay attention on it. Children spent more time to use screens such as iPads, TVs, mobiles, or computers compared to before lockdown. (6) The over usage of screen distracts children; the lack of physical activities and longtime quarantine result in difficulty in concentrating.

Jiao et al. performed an online questionnaire to investigate emotional reactions to epidemic in 320 children and adolescents (168 girls and 142 boys) aged 3-18 years. The most common emotional reactions found by study were irritability (31%), distraction/inattention (32%) and fear of asking questions/for the health of relatives (22%). (7) The result shows that younger children (3 to 6 years) have higher risk to manifest clinginess and fear. The older children were more likely to show inattention. The study also mentioned that for all age groups of children, the most severe psychological conditions are clinginess, inattention, and irritability. (7) Children also show inattention due to the lockdown which shows the caregivers need to focus on children's attention.

Beside inattention, some children had some other negative emotions, such as stressful, bored, lonely, and fear. Abdulah et al. designed art-based qualitative research to investigate the emotions of 15 children who were confined at home during COVID-19 pandemic. Children were required to draw their feelings, reflection, and responses on drawings; children were asked if they had any negative emotions, such as loneliness, tiredness, insomnia, depression, worry, or anxiety. According to

Abdulah et al., children experienced a high level of stress during the quarantine. The children also felt loneliness, sad, and depressed due to the lockdown and social distancing. (8)

Morgul et al. performed an online survey to investigate the emotions of the children from 927 families. According to Morgul et al., compare to pre-COVID-19 period, During the lockdown, children had feelings of boredom (73.8%), loneliness (64.5%), sadness (43.4%), frustration (61.4%), irritability (57.1%), restlessness (52.9%), worry (52.4%), anger (48.6%), and anxiety (45.2%), and they were more contentious with the rest of their family (29.7%). (9)

Saurabh compared two groups of children which are 121 children who were confined in home and 131 children who were not quarantined. Saurabh interviewed all children with their parents in detail. According to Saurabh et al., the most common feelings for children during the quarantine were worry (68.59%), helplessness (66.11%), and fear (61.98%). (10)

For most children, distraction is not the only problem. Children fear and worry about get infected by their relatives. Children also feel bored because they can't have any physical activities. The caregivers should pay more attention on their children's feelings about the pandemic, to check whether you children feel fear, worry or bored. And try to help with them. When children have those negative emotions, they have a high risk to have a psychological disorder.

2.2 Children's Mental Health

Children in some countries were confined in home during the pandemic, the quarantine has consequences on children's mental health. (5) Children are always considered as a vulnerable group in some emergency situations or health crises such as COVID-19 pandemic. (11) Mental health and emotional problems related to the pandemic and lockdowns may be more pronounced and potentially more dangerous for adolescents and adolescents. The duration of loneliness has long been shown to be strongly linked to depression and other mental health problems in adolescents, and the effects of COVID-19 (school closures and elimination or reduction of social and physical activities) contribute to months of loneliness in adolescents. Because of this emergency and unprecedented situation, schools and playgrounds were all closed, children must stay at home, and they were not allowed to play outside or have any physical activities with peers. (4) During isolation, children must adjust their routines to an uncertain situation characterized by new and restrictive rules. The adverse conditions such as a large number of COVID-related deaths not only have a negative impact on children's emotional status, but also affect their mental health. (4) The nationwide lockdown produces anxiety and distress to children. There is a need to determine children's mental health status and whether this emergency situation affected their wellbeing. (11) The previous research found that anxiety, depression, sleep disturbance, changing eating habit are common among quarantined children. (4)

2.2.1 Anxiety and Depression

There is growing evidence of increased levels of depression and anxiety among children and adolescents as a result of COVID-19 lockdowns around the world. Reference Zhou, Zhang, Wang, Guo, Wang, Chen, this is not surprising as lockdown measures imply greater social isolation, school closures, and constant uncertainty imposed on the population. China has the longest lockdown period in the worlds. Children in China confined in home for a long time, most children had negative emotions during quarantine. The negative emotions lead to psychological disorder, especially anxiety and depression. A lot of previous research studies about how quarantine influenced anxiety and depression.

An online questionnaire was administered to a total of 359 children and 3254 adolescents in order to investigate the psychological effects of COVID-19. The majority of respondents, almost 91%, expressed fear about the possibility of a pandemic. In addition, 35 percent of respondents and 54 percent of graduates said that the epidemic had an impact on their education. Anxiety was present in considerable amounts in both children and adolescents. According to the findings, adolescents exhibited a higher level of anxiety than children, while the female gender demonstrated a higher level of worry than men. Other key factors, such as the region in which one resides, a coping style that focuses on one's emotions, and having a friend or family member who is infected with COVID-19 all

contribute to an increased level of anxiety. Addiction to electronic devices like smartphones and the internet is one of the main variables that has also been linked to levels of depression. There was a correlation found between spending less time online each day and having a problem-solving approach, which led to lower levels of depressive symptoms. (12)

The lockdown situation appears to have increased parents' awareness of the connection between their children's learning challenges and inattention and symptoms of ADHD. Magson et al. (2020) found an increasing number of adolescents with depressive symptoms and anxiety. They also showed to be less satisfied with their life. Follow-up research indicates a rise in COVID-19-related worries, online learning problems, and more conflict with parents. These were related to gender, COVID-19 distress, media, and social disconnection. (19)

Zhou et al. (2020) conducted an extensive online survey in China, which consists of 8079 students aged 12–18 years, indicating that 43% had depression and 37% had anxiety symptoms, of which mild, moderate, and severe depression accounted for 26%, 15%, and 2% respectively. On the other hand, 27%, 7% and 3% had mild, moderate, and severe anxiety. In addition, it is more like females, residents of rural areas, and students in high school with better academic performance who are about to enter college to have symptoms. While COVID-19 knowledge education and predicting the COVID-19 trend can prevent and protect people with depressive symptoms. (13)

A study on a cross-sectional study in rural China covering 859 high school senior students also looked into students' likability to commit suicide and mental health problems during the pandemic time. The research discussed the likely influential factors. It has similar data that shows nearly 85%, 71%, and 54% had anxiety, depression, and post-traumatic stress symptoms. 31% of students surveyed demonstrated they have the idea of committing suicide, and 7% said they once made suicidal attempts. This risk is closely related to female students and students with poor academic performance. Moreover, the left-behind children are in danger of suffering from depression (14).

Another detailed research on depression also shows in their survey scores that 16.0% of students have depression primarily due to school closure and social isolation (18).

2.2.2 Sleep Disorder and Eating Disorder

Many researchers systematically examined the impact of the COVID-19 pandemic on mental health and its implications for sleeping and eating disorders and numerous studies have verified the concurrent rise in sleep disruption caused by lockdown in both children and adolescents. Specifically, it appears adolescents and students with previous sleeping and eating disorders are the vulnerable groups to confinement.

There are many several existing reviews regarding COVID-19 and eating disorders. The mixed systematic review gives us a fresh insight into the research on COVID-19 eating disorders and will help them comprehend the long-term effects of the pandemic on eating disorder behaviors. According to Segre et al., lockdown measures have changed sleep habits. 50 of 83 respondents (61%) said that their sleep patterns had been shifted, and many of them had difficulties falling asleep, and they also woke up multiple times during sleep. Their sleep time was also later, yet they had to wake up early for school. In addition, (48.8%) of participants showed their preference to sleep in their parents' bed. There were 23 children and adolescents (28%) who said they desired to sleep in their parents' bed. (1)

A study in Italy (Pisano et al, 2020) surveyed a cross-sectional study including 5989 children between 4 to 10 years with a questionnaire containing four questions for regressive, oppositional behaviors and adaptation behaviors. It showed that children (26%) The study found that around 26% of children were asked to sleep in their parents' beds. Among them, 54%, 43%, 31%, 21% and 19% had irritability, listless behavior, anxiety, mood swings and sleep problems, respectively. (21)

The majority of researchers also showed an increase in eating disorders and a change in eating behaviors associated with COVID-19. 72.2% of parents demonstrated that their child's routine has changed during social distancing, including sleep breathing disorders, and sleep-wake transition disorders. (22)

Research on the constraints brought by quarantine during COVID-19 indicated that it harms eating habits as well. According to Segre et al., 63.4% of the participants ((N=83)) have changed their eating

habits. They are mainly primary school students. Moreover, 57.3% of participants reported indulgence in junk food during the lockdown. There are 36 responders (43.9%) who wholly adjusted their dietary habits, taking an entirely different amount of food, including more junk food. (1)

Graell et al. (2020) researched 41.9% of their participants, who are children and adolescents, have reactivated eating disorder (ED) symptoms despite treatment. Adolescents are more outstanding with ED and non-ED symptoms than children. 25.0% of patients were risked of harm and suicide. Weight control in children during quarantine was also loosened. On admission, irritability (45.5%) and mood disturbances (22.7%) were reported during confinement. (23)

3. Conclusion

Studies have shown that containment measures such as isolation and quarantine in the context of a pandemic or disaster can be psychologically traumatic for children. Isolation is a psychologically stressful experience. Negative health effects can be exacerbated by the interaction between lifestyle and psychological stressors during isolation, creating a vicious cycle. Most children have limited access to leisure activities, are less physically active and have fewer opportunities to socialize with peers.

During the pandemic, children most likely to had negative emotions, such as fear, anxious, worry, distraction, and so on. And the quarantine is related to children's mental health; children are most likely to have anxiety/depression, eating disorder and sleep disorder due to the pandemic. Female shows higher risk than male. Children more like to have negative emotions than adolescents, adolescents are more likely had symptoms of psychological disorders. Children with precious mental health difficult have higher risk than other children. Most of them have a severe symptom during pandemic than before. Governments must carefully assess their options to implement quarantines to stem the spread of the virus in extraordinary and dramatic circumstances, such as a pandemic. To make this experience as bearable and secure as possible, the government must strengthen health and social care services and increase expenditure in addressing these crucial requirements.

4. Implication

Children and adolescents are the vulnerable group, in this pandemic period a lot of previous research proved that children and adolescents had negative emotions and psychological disorders. But less of those studies remind caregivers how to take care of them and pay more attention on what specific parts.

Some research found gender difference in emotion responses and mental disorder symptoms. Children's age is also a significant factor influence children's response to lockdown and quarantine. Chen et al. (2020) found 11.8% of participants had depression, 18.9% anxiety and 6.6% depression. Similarly, female students were more likely to be suffering from depression during COVID. Adolescents between 13 and 15 years are more depressed than their younger peers. (15) Similarly, a study on adolescents showed depression, anxiety, and anger. Especially among female participants, they complained. Male participants were angrier. (20)

It is possible to reduce children's negative emotions and mental disorder symptoms. According to Tang et al. (2020), the research found that participant suffered from anxiety, depression, and stress at 24.9%, 19.7% and 15.2 respectively. However, talking to parents relieves their stress and depression, anxiety, and stress. (16) Researchers also indicated that 32.0 of participants had anxiety due to COVID-19. There are 25% of families' self-posed quarantine strategies. Many participants said previous service contact helps reduce anxiety (17). Mental health professionals may also need to consider ways to support children in re-engaging with school and the community once limits are eased, even if a focus on the psychological health of children on the autism spectrum is crucial. As potential limitations, the review did not include studies in more countries and most studies were conducted in China. Further study could be conducted on the effects of more accessible mental health

care for kids and families. There is also a need for more research within different ethnic communities disproportionately affected by COVID-19. It is necessary to conduct more research to comprehend the short- and long-term psychological effects of COVID-19 as well as the results of various therapeutic interventions. The impact of parental stress and physical environment design on children's mental wellness in quarantine is another area that can be further understood.

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