

“Children are the Biggest Victims in the Covid-19 Pandemic” – A Reflection on the Zero-covid Policy and Strict City Lockdown Regulations in China

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Abstract: Since the outbreak of the Covid-19 pandemic in January 2020 in China, the Chinese government has been implementing zero-covid policies and strict city lockdown regulations to control the spread of the pandemic. Nevertheless, the emergence of a new strain of virus – the Omicron - has changed the situation. According to the WHO, the Chinese government’s zero-covid approach is not “sustainable” facing the more transmissible Omicron variant. Therefore, in order to confront and adapt to new circumstances of the pandemic, it is imperative to evaluate and reconsider the zero-covid policies and lockdown regulations and inspect their harms and benefits on the society. Besides huge economic loss due to lockdowns and quarantines, lockdown policies have detrimental impacts towards the psychological well-beings and cognitive development of children and adolescents. From the standpoint of children and adolescents, this paper is going to evaluate the zero-covid policies through Cost-Benefit Analysis. Moreover, the pandemic is perceived by many governments, especially the Chinese governments, as involving a moral dilemma: the Trolley Problem, which involves either sacrificing a group of people or one person. The Cost-Benefit Analysis of this paper is going to expand around the framework of the Trolley Problem and discuss the impacts of zero-covid policies of the Chinese government, especially on the two groups of people: the children and adolescents and the elderlies.

Keywords: Zero-covid policies, Cost-Benefit Analysis, The Trolley Problem, Adolescents’ mental health

1. Introduction

There has always been a moral dilemma that people and world leaders face in the Covid-19 pandemic: whether to protect the lives of the elderly group in the population and sacrifice economic growth and the well-being of the younger aged group or to promote economic growth and well-being of the younger aged group of the population at the cost of suffering and death of the elderly group. In other words, the social policy towards this public health crisis faces a difficulty, as strict lockdowns to prevent the spread of Covid would harm the young people while practicing “appeasement” towards the virus would lead to suffering and death of the elderly group. This paper characterizes this moral dilemma through the framework of the Trolley Problem: an ethical question of whether to let the

running trolley collide with a person (the elderly group of the population) or a group of people (the rest of the younger populations, especially children and adolescents).

Many governments in the world have loosened their grips on controlling the spread of Covid-19 pandemic after the majority of their citizens get vaccinated. The Chinese government, however, are still imposing zero-covid policies and strict city lockdowns as an attempt to reduce cases of infection to zero within its borders. From March to late August 2022, there were 70 Chinese cities including Shanghai, Beijing, and Shenzhen which underwent strict lockdowns until having zero cases[1]. The life of a significant number of people were affected due to city lockdowns, equivalent to 35% of the Chinese population. Among them, there are around 100 million children and adolescents who were restricted to their homes because of school closures. The magnitude of the population affected make it academically significant to investigate the cost and benefit of zero-covid policies and strict city lockdown regulations.

This paper will discuss the cost and benefit of zero-covid policy and social lockdown regulations of the Chinese government from a moral perspective through the Trolley Problem framework. This paper first introduces the Trolley problem and how the framework is related to the Covid-19 pandemic. Then, this paper explains the cost on “a group of people” in the context of the framework from the perspective of pre-school children and school-aged adolescents, explaining the negative effect of social lockdowns on their psychological well-being and cognitive development. After that, this paper evaluates whether the zero-covid policies truly worked to decrease the mortality rate of the elderly group (people aged over 60) during the Covid-19 pandemic in China, that is whether the government manages to protect the life of “a person” in the context of the Trolley Problem. Last, this paper concludes that there is a factual and logical fallacy behind zero-covid policies and disprove its legitimacy by verifying that zero-covid policy cannot fit into the framework of the Trolley problem: the Chinese government fails to protect the elderly population (“a person”) even at the cost of psychological distress and irreversible mental among the children and adolescents. To mitigate the damage of the zero-covid policy, this paper offers three policy alternatives for the Chinese government and recommends two of them, which will help to improve the mental health of children and adolescents in China.

Method of literature review is applied in this paper to explore the negative effects and patterns of the Covid-19 pandemic on the psychological health of children and teenagers in various countries around the globe. Sources of materials come from psychological and sociology papers and journals.

2. Literature Review

The consequences of Covid lock-down policies of governments on children have aroused the interest of scholars and researchers around the world. Many scholars conducted research on the connections between lock-down policies during Covid-19 pandemic and the mental health conditions of children, teenagers, and their caregivers, measuring their levels of stress, anxiety, and depression in countries around the world. Research on PK-12 students in Italy, China, U.S, and U.K all show increased fear, anxiety, loneliness, depression, and behavioral issues in some extent during Covid lockdown [2]. A study in United States discovered that the proportion of children reporting to have “problematic mental symptoms” increased by 19.6% after the 3 months lockdown in 2020 [3]. Qin conducted a study using mental health data from 1.2 million Chinese adolescents and found that 10.5% of them had psychological distress due to increased loneliness and physical separations and isolations. In a sample of youths chosen in Britain, researchers reported 18% of them experienced symptoms of clinical depression during U.K school lockdown from September 2020 to January 2021 [2].

In Addition, research on pre-school children demonstrated that they went through milder level of psychological issues but had problems of cognitive development due to lockdown. In research by Egan which collected data from parents of 300 pre-school aged children in Ireland, reports from these

parents showed that children under the age of 5 were less likely than children older than 6 to miss their friends in school, indicating a lower rate of social anxiety and depression [4].

Moreover, research stated that impact of Covid lockdown disproportionately harms children with low economic status. A study in the U.S demonstrated that adolescents and their families from urban low-income households had greater negative effect on their lives because Covid-19 pandemic and neighborhoods lockdowns [5].

Nevertheless, most of the research focused on examining and demonstrating Covid lockdown's psychological and social effects on children exclusively on the psychological level. There is almost no study on analyzing the legitimacy and effectiveness of zero-covid policies from a moral perspective and a sociological standpoint. Thus, this study investigates and evaluates the legitimacy of Chinese government's strict lockdown policies and its effect on children adolescents from a moral perspective through the framework of the Trolley Problem

3. Trolley Problem – Does it Exist?

3.1. Policy Context

After the emergency of Covid-19 from Wuhan in 2020 which later spread to the world, China imposed strict societal controls, including residential lockdowns, business shutdown, quarantines for travelers, and firm border controls. This policy, though Beijing called it “dynamic clearing”, are mostly regarded as the Zero-Covid policy. It succeeded in eliminating the virus in 2020 and 2021 [6].

However, the advent of Omicron and Delta strain – highly infectious – in late 2021 have pushed Zero-Covid policy to its breaking point. Since the great national outbreak of the Omicron virus strain in China since March 2022, Chinese cities including Shanghai (25 million residents, economic hub), Shenzhen (also an economic hub), Jilin, Xian, Sanya, and Beijing (20 million residents, capital) experienced rounds of stringent lockdowns, locking people in their homes. From March to late August 2022, there were 70 Chinese cities which underwent lockdown until having zero cases [1]. The lockdowns led to economic recessions and national-wide critique skepticism of the Zero-Covid policy. The lockdown, which usually lasted for one or two months, restricted children and adolescents in their homes. The physical isolation from school and society together with confining in small spaces, led to physical and psychosocial issues among students, as demonstrated in the aforementioned study: 10.5% of the 1.2 million children experienced psychological distress from home lockdown [3].

The primary reason for the strict lock-down and quarantine policy is to protect all of its citizens, especially the elderly group who takes up great proportion of the overall population and many of whom are not vaccinated and susceptible to the Covid-19 virus. Lu Xiang of the Chinese Academy of Social Science wrote in an article that the Chinese government will always prioritize protecting lives at any costs, which serves as a justification to the legitimacy of strict city lockdown policies [6].

3.2. The Impact of Zero-Covid Policy on Children's and Adolescents' Health

The zero-covid policy has negligible positive benefits on the health of children and adolescents. The mortality rate and absolute number of death of children and adolescents are both extremely low. According to Unicef, among the 4.1 million Covid-19 deaths reported globally, only 0.4% occurred in children and adolescents under the age of 20, which takes up 33.2% of the overall population [7]. Child mortality rate caused by the pandemic is low for developed nations. According to Robert Koch Institute, there are only 47 death cases of children and adolescents aged 0-19 in Germany because of the pandemic, while for 32 of the death cases, children have serious diseases before they got infected of Covid. In China, a study published in Pediatrics shows that only one child died from Covid-19 during the outbreak of the pandemic in Wuhan[8]. There are no reported cases of death of children and adolescents from 0-19 in mainland China since August 2021. Even for Hongkong, the only city

in China which did not practice zero-covid policies, the death rate for children is extremely low, with only three children under the age of 5 died in Hongkong's spiraling Covid-19 outbreak in 2022, while it's still a doubt whether these three children died of Covid-19 or simply died when carrying the virus [9].

Thus, it become obvious that zero-covid policies and strict lockdowns regulations has negligible positive effects on the younger age group of the population in China, as they are generally unsusceptible to the Covid-19 virus.

3.3. What is the Trolley Problem?

Trolley problem is a series of thought experiments in ethics, involving the ethical and moral dilemmas of whether to sacrifice one person to save a larger group of people [10]. It begins with a decision of whether to divert a running trolley so that it collides and kill one people instead of killing a group of people. From the perspective of Kantian ethics, the decision would be to do nothing and let the trolley kill a group of people, as there is no moral duty to save more lives at the sacrifice of other people's lives [10]. However, from a utilitarianism viewpoint towards the Trolley Problem which aims to "maximize utility", the optimal choice is to divert the trolley and let it collide into one people instead of a group of people.

In the context of Covid-19 pandemic, children, teenagers, and the younger age group are the "group of people" while the elderlies are the "one person". The Chinese government implementation of a series of strict lockdowns and zero-tolerance policies since 2021 is an exemplification of Kantians ethics: even through a group much greater in numbers is negatively affected, it is not morally acceptable to "intentionally" sacrifice and kill the elderly group.

In an interview of Dr. Jay Bhattacharya, professor of medicine at Stanford University, with Václav Klaus, the former Czech Republic's President on August 16, 2021, Dr. Bhattacharya said that it seemed an unallowed option to make the optimal public policy decision through finding the socially efficient level of covid social restriction policies and balancing the cost of having strict policies on the younger group in the population and the cost of not having these strict policies on the elderlies in the population. A trade-off between the "cost of the virus" and "the costs of the lockdown" is not permitted and morally unacceptable [6]. It is only morally acceptable and conscientious to protect the elderlies from Covid-19 infection at the cost of all other groups in the society. Although this viewpoint used to be widely accepted in many European countries, the Chinese government now becomes its biggest advocate, as Xi Jinping, the general secretary of CPC Central Committee, stressed, "Facing the ravaging pandemic, the Communist Party of China gave top priority to protecting people's life and health at any costs." In another sense, the Chinese government adopts the perspective of Kantian ethics towards the Trolley problem, and morally denies the utilitarianism perspective towards this problem.

We will not discuss which perspective is the correct one to choose in the context of the pandemic. Instead, the latter part of the paper is going to explain how Trolley problem, a widely accepted idea and the ethical foundation of the zero-covid policy of China, does not exist in the case of the pandemic, and that even if the government intends to save the lives of the elderlies at the sacrifice of the young people, the zero-covid and strict lockdown policies will fails to reach its aim: protecting the elderlies in the pandemic.

4. Problems of Long-lockdown on Children's Health and Psychosocial Development

Children and adolescents experienced unreversible harm on their psychological well-being and cognitive development because of strict city lockdown. Children, referred by this paper as pre-school children under the age of 6, typically experiences fast periods of cognitive developments and learning.

Adolescents, referred to as school-aged teenagers above the age of 6, experiences slower cognitive developments but are more sensitive to social interactions.

Lockdown and quarantine caused great psychological disruption on school-aged adolescents. A study on Chinese secondary school students showed that 95% of the secondary school students participated in the questionnaires expressed that they underwent inconvenience and psychological distress during online learning, including loneliness and anxiety [11]. Functional smartphones and computers and reliable Internet access are out of touch for many students, as there is a great digital divide existing in the country. It is estimated that there are more than 10% of urban children without access to online classes because of the lack of digital devices and Internet access, and the percentage are higher for rural children in China[2].

Additionally, research points out that long lockdown, which restrains adolescents to their homes, lead to depression, loneliness, and excess social pressure of losing connections to friends because social interactions with peers and others in the society is crucial for their mental well-being and establishment of sense of confidence [5]. A large social study on Chinese student's mental health has demonstrated that 10.5% of the overall 1.2 million adolescents said that they experienced unhappiness, loneliness, exhaustion, and other mental health issues during the lockdown of the pandemic. These psychological issues derive from adolescents' inability to interact with their friends and participate in active social and school life. In addition, adolescents whose families are directly impacted by the Covid-19 pandemic have demonstrated exceptionally high probability of having mental health issues. A study by Corner et al. states that adolescents' psychological well-being has a strong negative correlation to family experiences including economic difficulties, unemployment of parents, food insecurity, and health issues of parents and grandparents. Although adolescents can connect through the Internet and social media, studies have shown that the sense of comfort and psychological relief adolescents receive is limited compared to in person social interactions they get in school [4,5]. While some research state that social media is partially conducive to improvement in mental health conditions among adolescents, other research reach a totally different conclusion. They suggest that social media is a source of psychological distress for teenagers [3]. Therefore, adolescents in general experiences great extent of psychological distress and mental health problems because of strict city lockdowns and zero-covid policies.

For preschool-aged children, they experience disruption in cognitive development and psychological issues. The lockdown policies restrict the most important way of learning for pre-school children: playing games with peers and teachers. When playing, singing, and interacting with peers in kindergartens and schools, pre-school children develop skills that would ultimately be conducive to the development of their writing, reading, math, and science skills [12]. Preschool children experienced the most rapid development of their brains in their whole lifetime. German neurobiologist Gerald Hüther criticized the lockdown policies, saying that for a six years old child, one year's time is as important as a decade of time for a seventy years old, and the lockdown policies prevent them from learning and developing in a supportive environment. The lockdown policies seriously hamper children's freedom of interacting and playing with others, thus causing irreversible damage on pre-school children's cognitive development. Research has shown that pre-school children may demonstrate regression in previously learned knowledge and behaviors, which is a sign of damage to cognitive and learning abilities [12].

Consequently, government's zero-covid policies and strict city lockdown regulations have negatively affected adolescents and pre-school children's psychological well-being and cognitive development. Interpreting the issue in the context of the Trolley problem, the "large group of people" on one side of the rail will definitely get hit and killed by the running trolley if it is heading towards them, considering the huge costs of social lockdown policies on children and the younger aged group.

5. Does the Policy Work Effectively towards Protecting the Elderly?

The zero-covid policy and social lockdown regulations, which are designed and aim to decrease the mortality rate of the elderly population against the Covid-19 pandemic, may not work effectively in protecting them.

For the elderly people who have chronic diseases or diseases other than Covid-19 who need regular medical care and surgeries, their mortality rate during the city lockdowns increases dramatically. The draconian lockdown measures that government authorities in Shanghai employed have greatly impeded people's access to medical care services, as most of the hospital are closed to regular patients with doctors and medical servicemen working to test Covid and treat Covid cases [13]. The Human Rights Watch Organization has accused the Chinese government of not respecting its citizens' basic rights to health. For the 750,000 people in China who have kidney failures and need to receive dialysis treatments, many of them have faced high risks of dying. As there aren't enough dialysis treatment centers in China, many of the facilities are concentrated in top hospitals in big cities including Shanghai. Therefore, when Shanghai underwent complete lockdown from March 2022 to June 2022, more than 20,000 kidney disease patients were cut off from their treatment, which tremendously increased the probability of kidney failures, directly increasing their death rate. The abc news reported a series of deaths of elderly patients with chronic diseases including kidney failures at hospitals in Shanghai because of the lack in medical care services and surgeries.

Lack of treatment prevails in the cases of other chronic disease like diabetes. Routine screening, health risk check, and continuous treatment and caring for people with chronic diseases and conditions become a huge challenge for patients during city lockdowns in China. A study in Wuhan, China demonstrated that the areas of great numbers of Covid infections cases also reported 96% increase in mortality rate related to diabetes, and 89% increase in mortality rate due to cardiovascular diseases [14]. Elderly groups have exceptionally high rate of bearing chronic diseases. Shown in China Health Statistics Yearbook in 2021, the prevalence of chronic diseases in Chinese elderly population aged over 65 was 467.8%. Therefore, although the zero-covid policy and strict city lockdown regulations protect the elderly from Covid-19 infection in some extent, it increases the mortality rate of the elderly with chronic diseases.

6. Conclusions

The foundation and justification of the public policies Chinese government employed towards the Covid-19 pandemic is based on the Trolley Problem. However, even when children and the younger age group of the population go through huge costs, the mortality rate of the elderly are not reduced to a satisfactory level, disproving the existence of the Trolley Problem and denying the legitimacy and reasonability of the zero-covid policies and strict lockdown regulations of the Chinese government. Nevertheless, there are limitations of this research. First, the Trolley Problem, though a popularly adopted idea, may not be the only framework of perceiving the zero-covid policies. There are other frameworks that may lead to different Cost-Benefit Analysis. Second, there are other costs that this paper does not mention, including the cost on the economy, cost on people's support and faith in the government, and cost on trade. Last, there are also certain benefits of the zero-covid policy that are not mentioned by the paper: including decreasing the risk of covid infections. Therefore, more research can be done to include different frameworks and incorporate more factors of benefits and harms into the Cost-Benefit analysis of the zero-covid policies.

One of the most important epidemiologists of the 20th century and Smallpox eradicator Donald Henderson repeatedly highlighted that the fundamental measures to deal with public health crisis is to promote the functioning of the society. When non-governmental institutions are functioning well during a pandemic, it can generate the optimal solutions, and elicit the least anxieties among the

citizens. This requires strong leadership in politics and public health and the key is to make sure the continuous provision of medical care services.

However, because of institutional differences and other limitation factors, the leadership of the Chinese government may feel that implementing strict lockdown and zero-covid policy might be a demonstration of a different pathway in the political context, thus is politically worthy to carry out. However, there can be adjustment or implementation of policies that might help to reduce the cost zero-covid policy has on children and adolescents. The first policy alternative is that mental support programs for adolescents can be enforced by the government: one mental health care providers minimum for each school. Teachers should teach students of identifying common mental health illnesses and ways to seek help. The second policy alternative is that government can open kindergarten, primary, secondary, and high school first before the opening of other public places and facilities after city lock-down, so as to increase the time of the rest of the semester for children and adolescents. Additionally, kindergarten and school can open in summer and winter breaks when there is no outbreak of Covid. The third option, also the most aggressive one, is to end zero-covid policy and to push the society back to normal even in the presence of the virus. We would recommend adopting policy alternative 1 and alternative 2 together, which are politically and socially mild ways for the Chinese government to ameliorate the circumstances of children and adolescents in Covid lockdowns.

The moral dilemma involved in this pandemic: the Trolley Problem may not exist if inspected with closer looks. Even though government actions towards Covid-19 pandemic always involve costs on various stakeholders, it is crucial to balance costs so as to generate the optimal social and public health policy towards the pandemic that is sustainable for different stakeholders in the society. Maybe it's time for the Chinese government to reconsider its public policy towards Covid-19 pandemic, and to end this marathon of the pandemic through running the whole way slowly in a marathonic manner.

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