Chapter 1

Has the COVID-19 Pandemic Strengthened Unity and Caring? A Survey of Children on the Chinese Mainland

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ABSTRACT

COVID-19 has had a significant impact not only on our daily life, but also on global economic and political conditions. Does it also potentially impact the psychological well-being and values of children? Is there any link between crisis psychology and values? This research was conducted through a questionnaire completed by 32, 150 Chinese children (9-18 years old) in a typical pandemic area (Hubei Province) and an atypical pandemic area (Jiangsu Province). The questionnaire concerned their experiences during the pandemic. The conclusions are as follows: (a) besides health, unity and caring were prominent reactions to the psychological crisis; (b) a weak "Ripple Effect" in children's psychological reactions to the pandemic was found; (c) the crisis made the children believe common good is more important than their own life convenience during the pandemic; (d) the children's moral judgements highlight the distinction between justice and benefits.

KEYWORDS: COVID-19, unity, caring, children, Chinese mainland

There is no doubt that COVID-19, which has caused more than 530 million infections and 6 million deaths worldwide, has become a global crisis in the 21st century. It has had a significant impact not only on public healthcare but also on global economic and political circumstances. After a relatively stable period in the summer of 2020, a new wave hit many countries and regions in America and Europe, resulting in the reimposition of city lockdowns and curfews. According to the *World Economic Outlook Report* released by the International Monetary Fund (IMF), the global economy shrank by 3.3% in 2020, arguably the largest decline since the Great Depression.

Many studies have demonstrated that a change in individuals' social environment has a significant impact on their moral values (Chen, 2014; Manago, 2012; Weinstock et al., 2014). A dynamic social environment also plays this role in the long term (Greenfield, 2009, 2013). Likewise, emergencies and crises can potentially affect people's cognition, values, and behavior. Furthermore, an empirical study on the impact of the Great Depression on children's values and behavior found that it strengthened the sense of responsibility and lust for money, especially in boys.

Since the outbreak of COVID-19, many experiments have been conducted on the impact of the pandemic on human psychology. Cole (2020) found that due to their substandard living and working environments, low-income residents in the Northern Hemisphere suffer from a higher risk of infection and death, and more severe mental health problems, than high-income residents. Rahman (2020) reported that the pandemic increased terror and agony among Australians ages 30 through 59 as well as frequency of smoking and drinking. Using the Beck Anxiety Scale, Zohn et al. (2020) found that isolation increased people's anxiety, and if they couldn't see the chance of returning to a normal life in the short term, their feelings of depression, loneliness, and despair tended to become worse. Children were found to have an increased number of psychological and behavioral problems during the pandemic. Zhao (2020) found that 22.0% of a sample of 396 school children in China ages 8 through 18 suffered from anxiety, 4.1% higher than before the pandemic. A survey conducted by Fontanesi et al. (2020) on autistic children revealed that they were two times more likely to have more frequent and more severe behavioral problems during the pandemic than before. Neece et al. (2020) found that 85.7% of parents noticed that

their children had abnormally high levels of emotions such as boredom, anxiety, and irritability when required to stay home during the pandemic. Liu et al. (2020) found that during the pandemic there was an increase in somatization symptoms in 10%-22% of a sample of children. In two other studies, both discovered two major triggers of anxiety amidst the children: (1) concern that both children and their family would become infected, and (2) recognition that their learning might be affected by school suspensions and having to take courses online (Tang et al., 2019; Zhou et al., 2020).

Some researchers have focused on the impact of COVID-19 on morality. Borges et al. (2020) reported that the pandemic had an impact not only on mental health but also on moral behavior; she suggested Acceptance and Commitment Therapy (ACT-MI) and prosocial intervention as treatments for psychological and moral problems. Kumar (2020) noted that the new social values that emerged in India during this period might facilitate the development of a more scientific and civilized society.

The research of Bacchini et al. (2014) and Eskin (2013) demonstrated that values play an important role in children's mental health, prosocial behavior, and aggressive behavior. Recent research has been focused much more on children's mental health during the pandemic than their values. One consequence of this trend is that children's mental health and values during the pandemic have tended to be studied separately, with no in-depth discussion of the relationship between them. What has the crisis taught Chinese children about values? Is there any relationship between children's values and their mental health? We conducted the research reported below to answer these questions.

METHOD

Questionnaire Design

To further explore these questions, we had our research participants complete a questionnaire investigation. In developing the questionnaire, our team adopted a five-step procedure to ensure high reliability and validity. First, we created draft items. Second, we invited five scholars with expertise in both psychology and moral education to discuss and revise the items. Third, we invited 15 children of different ages to respond to these items. Fourth, we interviewed them for their advice on how to

modify and improve the questionnaire. Finally, we created the final version of the questionnaire.

Structure of the Questionnaire

The first part of the questionnaire asked for demographic information about age (grade), gender, area of residence (urban or rural, which province). The second part consisted of questions about the four main dimensions of response to the pandemic: lifestyle, feelings and judgement, attitudes, and values. Each dimension is represented by four items, as shown in Table 1.

Table 1

Questionnaire Items for Each of the Four Dimensions

Lifestyle	Feelings and judgement	Attitudes (toward)	Values
Changes in health habits	feelings of the pandemic	People in high pandemic areas	Most important
Changes in learning	feelings when near to the infected person	Volunteers	Freedom vs. common good
Changes in diet	information trust	Medical staff	Ecological ethics
Parent-child relationship	Judgement of the action to pandemic	Speculators	International assistance

Children were selected from two provinces representing different rates of COVID 19 infection. Most provinces had high infection rates at the time of the survey. Hubei Province was chosen as the high infection area. It was the first province in mainland China to experience an outbreak and was the hardest hit of them all. By July 5, 2020, it had recorded 68,162 cases (57.3% of the total for the mainland) and 4,512 deaths (81.5% of the mainland total). Jiangsu Province was selected as the low infection area. By the same date (July 20), it had recorded only 743 cases (14th highest among the 31 provinces other than Hubei) and 0 deaths. Because of the pandemic the

questionnaire was posted and completed online, and 32,150 valid questionnaires were submitted, an impressive response rate of 99.7% of children ages 9 through 18, who volunteered to participate in the investigation. The demographic distribution of the respondents is shown in Table 2.

Table 2

Demographics of the Sample

Category		Sample size	Percentage of sample
Gender	male	17,237	53.61
	female	14,913	46.39
	primary school	20,095	62.50
	middle school	10,429	32.44
	high school	1,626	5.06
Age (years)	9	2,636	8.20
	10	5,951	18.51
	11	6,686	20.80
	12	6,295	19.58
	13	4,090	12.72
	14	3,594	11.18
	15	1,347	4.19
	16	697	2.17
	17	541	1.68
	18	313	0.97
Province	Jiangsu	10,994	34.20
	Hubei	21,156	65.80
Residence	city	14,193	44.15
	town	8,892	27.66
	rural	9,065	28.20

DATA ANALYSIS

IBM SPSS Statistics 22 was employed for data analysis. In order to avoid the influence of large sample size on the significance of difference, this study makes further supplementary explanation on the significance of difference with effect size (ES), the values of which were obtained from chi-square tests. The following criteria were used to label the strength of those effects found to be statistically significant ($p < .05$) and thus considered to be genuine: When ES ≤ 0.1, the effect is considered weak; when $0.1 < \text{ES} \leq 0.2$ the effect is considered moderate; when ES > 0.2 the effect is considered strong.

RESULTS

Weak Psychological Ripple Effect

The data analysis showed that there was a ripple effect of children's emotional states during the COVID-19 pandemic. The term "ripple effect" is used to label the situation in which the higher the objectively defined risk, the higher the levels of fear and other negative emotions (see Burns & Slovic, 2012; Kasperson et al., 1988). The results indicate that the children from Hubei Province, where the infection rate was relatively high, had significantly higher scores than the children from Jiangsu Province, where the infection rate was relatively low, on negative emotions (fear and anxiety), $\chi^2 = 54.927$, $p < .01$, and negative behavior triggered by these emotions (frequent bathing and stockpiling of medical masks), $\chi^2 = 31.936$, $p < .01$, in response to COVID-19. However, both effects are considered weak because the effect sizes were < 0.1 (phi = 0.033). These results are illustrated in Figures 1 and 2 respectively.

Figure 1

Differences Between Hubei and Jiangsu Provinces in the Proportions of Children Experiencing Fear and Anxiety
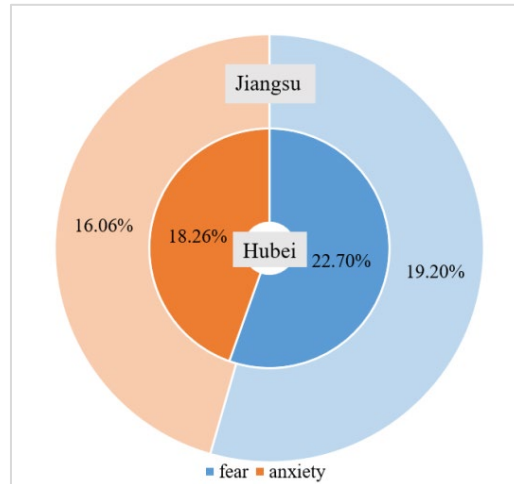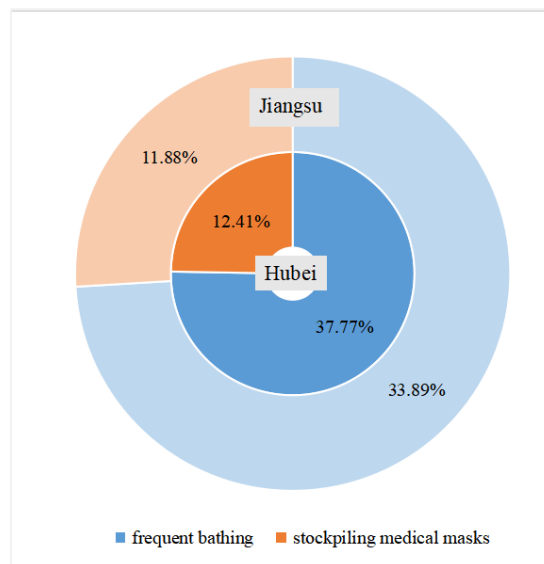

Figure 2

Differences Between Hubei and Jiangsu Provinces in the Proportions of Children Exhibiting Behaviors of Frequent Bathing and Stockpiling Masks
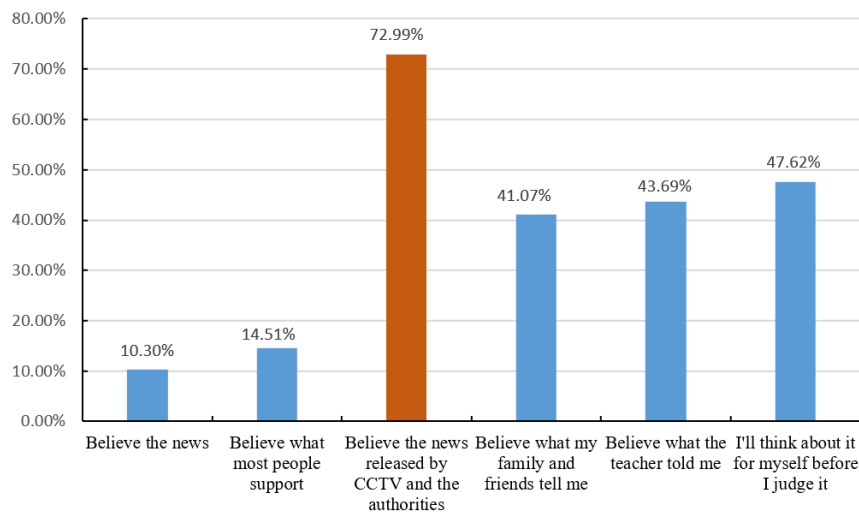

Trust in Sources of Information About the Pandemic

The questionnaire results showed that the most trusted source of information about the pandemic was the news released by China Central Television (CCTV) and the authorities (endorsed by 72.99% of the children), but only 47.62% claimed to

think about it before making a judgment about the information of pandemic (see Figure 3). Moreover, the percentage of children who think before making a judgement does not increase significantly with age (phi = 0.070), nor does trust in any of the specific sources of information (see Figure 4).
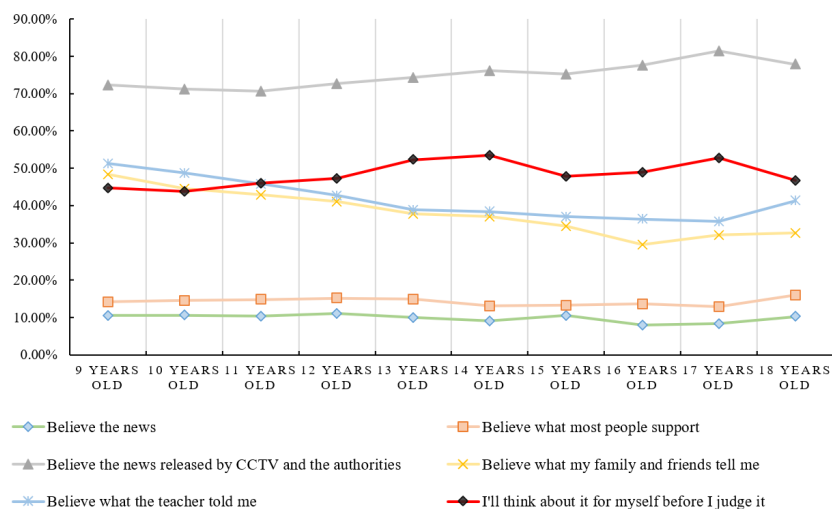
Figure 3

Trust in Sources of Information About the Pandemic

Note. Because respondents could endorse more than one option, the sum of the percentages exceeds 100%.

Figure 4

Changes in Trust in Various Sources of Information About the Pandemic as a Function of Age

Attitudes Toward Morally Relevant Behavior in Response to the Pandemic

Responding to the question about whether they endorsed the policy of home isolation (HI) during the pandemic, 88.19% of children claimed that they endorsed it because it was necessary to protect the life and health of other people, and 70.94% claimed that they endorsed it because it is necessary to follow the rules and regulations of the government; only 4.56% of the children rejected the policy because "it interfered with my normal life," but 29.53% stated that the policy should be voluntary. In general, the children showed a positive attitude toward the government's policy of home isolation during the pandemic, reflecting very good awareness of and affirmation of the social norm that the common good is more important than their own life convenience (see Figure 5). The great majority of the children were strongly against embezzling goods from the government intended for the public, and 27.65% of them went even further, asserting that it is a moral obligation to donate goods to others that you don't need for yourself; only 2.5% found the embezzlement acceptable (see Figure 6).

Figure 5

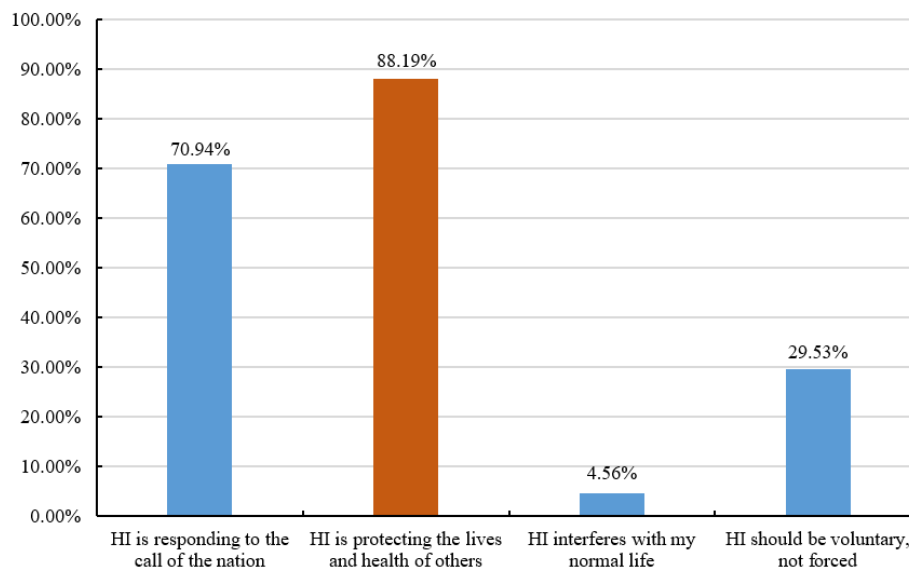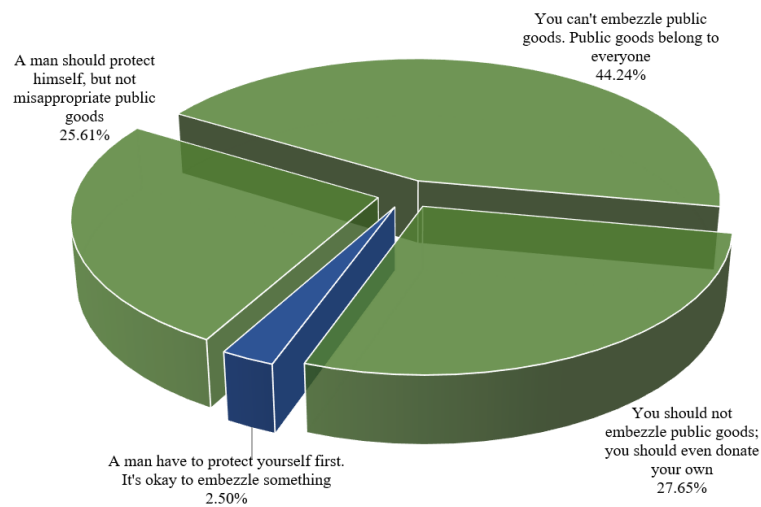Attitudes Toward Home Isolation (HI) Policy

Figure 6

Attitudes Toward Diversion of Goods Intended for the Public

Children's Moral Judgements Demonstrate the Distinction Between Deontology and Consequentialism

The consequentialists such as John Stuart Mill, typically hold that happiness is the only purpose worthy of desire. If other things are also worthy of desire, it is only because they can be used as a means to achieve happiness (Mill, 1861/2019). In other words, the quality of something should be judged according to its contribution to happiness. Although the deontologists like Kant's contention that moral principle and absolute law come from purely practical reason,". . . act[ing] only according to the criterion that you want it to become a universal law at the same time" (Kant, 1785/2013, p. 428)—happiness and the result of action are not included in the agent's concerns.

In our survey, 68.46% of respondents agreed with the statement "Chinese government donated medical materials to other countries" because "there is no benefit for us if the pandemic is not under control globally"; these responses illustrate the perspective of consequentialism. On the other hand, 66.13% agreed with the statement that "they need help and we should not leave them to die"; this response illustrates the perspective of deontology (see Figure 7). In a similar vein, 93.57% of respondents claimed that they were against killing wild animals, including bats, for food, but 44.74 % claimed that "the virus carried by bats is harmful to human beings"; these

responses illustrate consequentialism. However, another 42.36% of them claimed that it is "cruel to kill other creatures," which obviously illustrates deontology (see Figure 8).

Figure 7

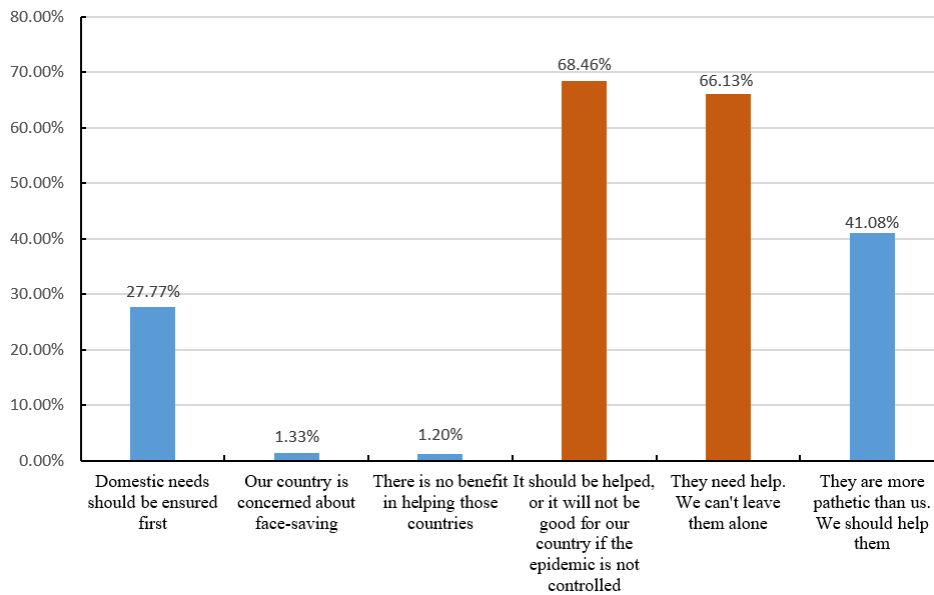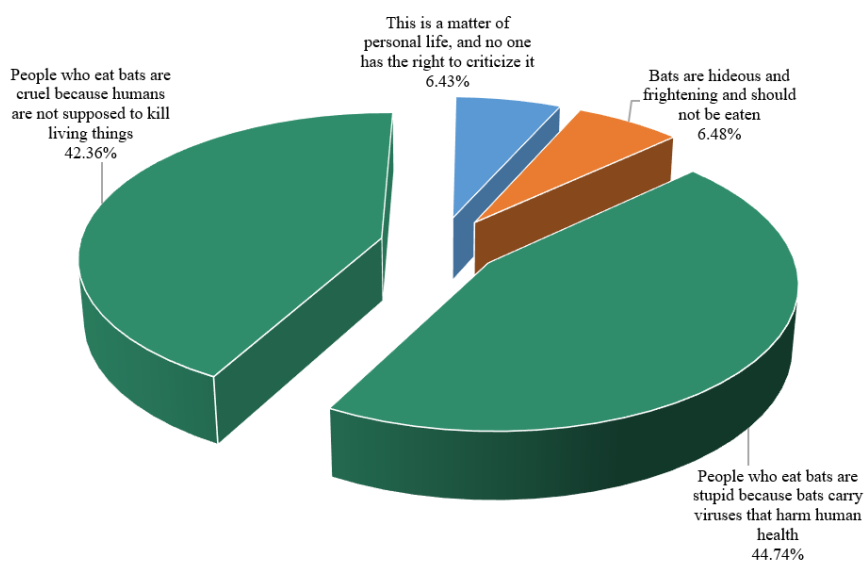Reasons for Helping Other Countries With the Pandemic

Figure 8

Attitudes Toward Killing Wild Animals for Food

Valuation of Unity and Caring Has Been Strengthened

It is evident from our data that Covid-19 has raised the value and importance that residents of the Chinese mainland place on health. After the pandemic, 83.25% of respondents listed good health as their most important value, followed by unity with and caring about others (see Figure 9). In contrast to good health, which is of interest to individuals perse, unity and caring help the community of humans. In fact, the notions such as "As we unite as one, we can overcome difficulties" and "Mankind is a community and we need to help each other overcome difficulties" were the two most frequently endorsed items in the questionnaire (see Figure 10). In a crisis situation, people are desperate for help and caring, and they seek to overcome their difficulties through unity and cooperation with others. The COVID-19 crisis obviously highlights the strong value that the children placed on unity and caring.

Figure 9

Percentages of Children Endorsing Importance of Various Values During the Pandemic
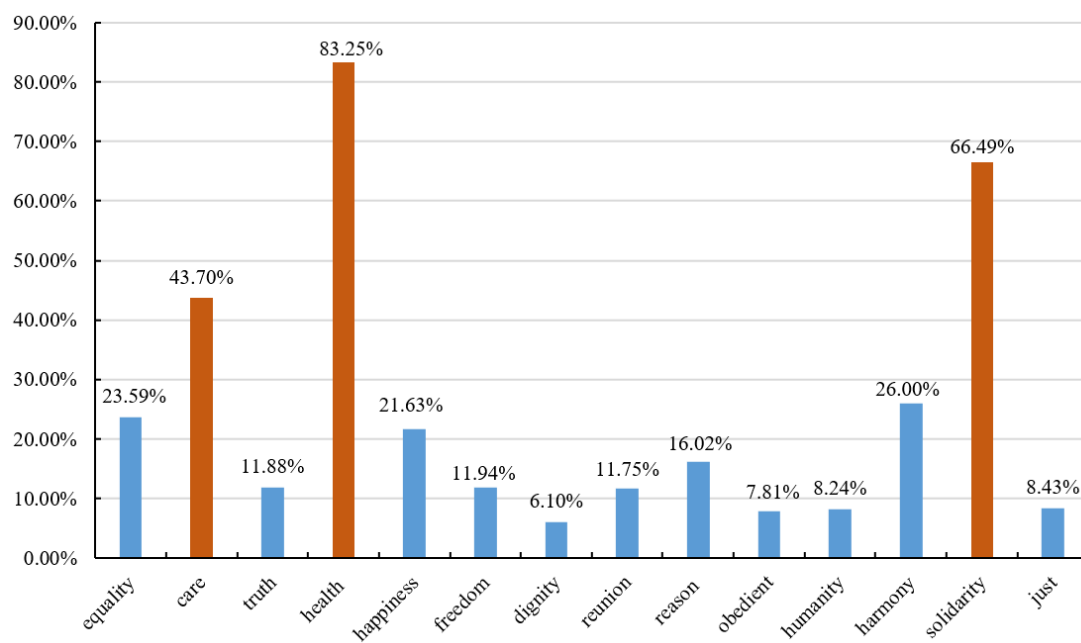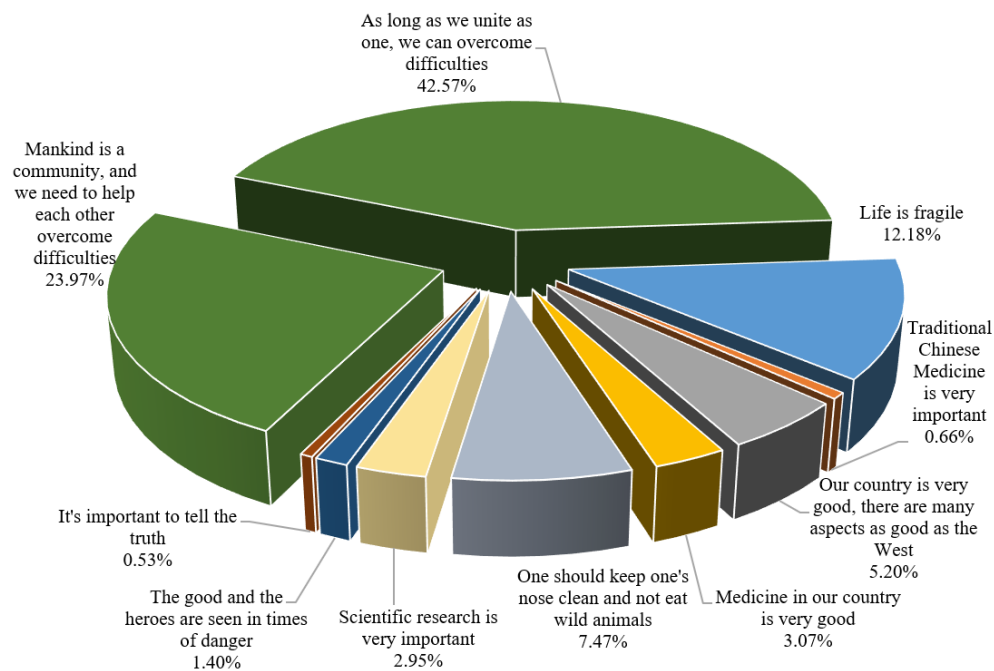
Figure 10

Percentages of Children's Thoughts and Feeling During the Pandemic

DISCUSSION

Weakening of the Ripple Effect Over Time

As predicted by the ripple effect model, children from Hubei Province, which had the greatest virus spread in mainland China, showed more negative emotion and associated behavior abnormalities during the pandemic than children from Jiangsu province, which had the lowest spread. The effect size of the difference was not as large as predicted, which may be partly due to the duration of the pandemic, which was not taken into account in the study. Caplan's (1964) research on crisis psychology shows that although people intended to maintain a stable emotional state during the pandemic, the crisis in fact caused them to break down emotionally at first, but they gradually recovered. This finding suggests the differences in emotion and behavior between children in the two provinces in our sample lessened with time. The data were collected from September to October 2020, when COVID-19 was already under good control in China. By this time, China had seen life and the economy return to normal, and there were no new cases reported from Wuhan for over five months

(since March 18, 2020). Jie et al. (2003, p. 599) reported that people's emotional state began to recover five weeks after the onset of the pandemic. In short, the weakness of the ripple effect is likely attributable to the time at which the data were collected.

Good and Bad Sides of Self-Centeredness

A tendency toward the abandonment of egocentrism was more obvious during the ascendancy of the pandemic than before its onset. To abandon egocentrism in this context refers to whether people care more about others or the common good than themselves and trust authorities more than themselves in making determinations. In this study, the great majority of children chose to believe the information about the pandemic from official media. If people could not deal with the difficulties caused by the pandemic themselves, they sought help from others and relied on authorities to guide them. Individuals may have received encouragement from others, social media, and the central government. The unified nature of the nation's response also gave them more confidence in China's ability to overcome the difficulties. These responses reflect the upside of reduced self-centeredness. On the downside, people may suffer the crisis of getting lost in themselves. Le Bon (1895/2015) suggested that when people in this condition join a group, the condition leads to increased emotionality, less objectivity, and a worsening of cognitive functioning. In other words, it is more easily for people in the group to give up thinking by themselves, and to get emotionally infected by others. This in turn can lead people to trust information from official media without thinking critically. This is extremely dangerous both for individual child, and thus the nation as a whole, because it may lead them to allow themselves to be controlled by the government.

Weakening of Values as the Crisis Ends

People always seek to build emotional connections with others, especially when they cannot move forward alone (Smith, 1759/2009). Psychological state of panic and anxiety can increase the importance of values such as unity and caring in children. These values may not be so salient in ordinary times. For example, when children are exposed to danger, the value of safety becomes salient to them. This proves that values are not inborn but constructed in social interaction. Momentous social events

and impressive personal experiences may change what people value and how much they value them, but we can't know at the time how long the effect will last.

Limitations of the Study Due to Chinese Culture

The participants in this study were from mainland China, which has a long-standing cultural tradition of Confucianism. The social construction of people's personality and other psychological characteristics is conditioned by their cultural experiences and environment. The Chinese are especially conservative, driven by emotions, and used to analyzing problems with holistic thinking. Unity and caring are valued in Chinese culture because the traditional Chinese live in a distinctive and family style social environment, named "Cha-xu" ("差序") by Xiaotong Fei (1948/ 2018), in which the individual is attached to a nexus of ethical norms. With the founding of the People's Republic of China in 1949, collectivism, which places a high value on unity and the common good, became the dominant ethos. The last 40 years have seen big changes featuring a more open society and the development of commercial markets. This represents a transformation from collectivism to individualism, in which people's behavior is determined by what benefits them personally rather than the common good (Fan, 2009; Sun, 2017). However, the traditional cultural norms and social ideology are still the foundation of moral judgments. Hence, what this survey provides is a historical and cultural perspective on China's emotional and moral response to the pandemic.

Need for Further Research

Although there has been a massive amount of research on children's post-disaster emotions, few studies have addressed whether there is a correlation between these and values. Based on the analysis of data from a large sample of Chinese children, we offer the new proposition that emotional reactions to the pandemic indeed have an impact on children's values. However, due to the limitations of our research methods, this conclusion needs to be further verified. First, as values were measured in the questionnaire on nominal variables rather than a continuous, our conclusions about the relationship between psychological traits and values are not as refined as they could be. Second, as the onset of COVID-19 was not predicted, there are no pre-test

data, and the validity of respondents' descriptions of their pandemic experiences depended on the accuracy of their memories. This likely means that their descriptions were more positive than their actual reactions. Fortunately, there was a significant difference (with an albeit small effect size) between children from Hubei Province and those from Jiangsu Province on our emotions and values, providing some support for the hypothesis.

CONCLUSION

From the analysis of data from a large sample of Chinese children 9 to 18 years old, conclusions were drawn as follows. First, besides health, unity and caring were listed as the most important values, far ahead of harmony, equality, and happiness. Second, children's emotional states during the pandemic have weakly followed a ripple effect model. Third, the children believe common good is more important than their own life convenience during the pandemic. Lastly, the children's moral judgments highlight the distinction between deontology and consequentialism.

REFERENCES

Bacchini, D., Affuso, G., & Aquilar, S. (2014). Multiple forms and settings of exposure to violence and values: Unique and interactive relationships with antisocial behavior in adolescence. *Journal of Interpersonal Violence, 30*(17), 422–431. https://doi.org/10.1177/0886260514554421

Borges, L. M., Barnes, S. M. Farnsworth, J. K., Drescher, K. D., & Walser, R. D. (2020). A contextual behavioral approach for responding to moral dilemmas in the age of COVID-19. *Journal of Contextual Behavioral Science, 17*, 95–101. https://doi.org/10.1016/j.jcbs.2020.06.006

Burns, W. J., & Slovic, P. (2012). Risk perception and behaviors: Anticipating and responding to crises. *Risk Analysis, 32*(4), 579–582. https://doi.org/10.1111/j.1539-6924.2012.01791.x

Caplan, G. (1964). *The principles of preventive psychiatry*. Basic Books.

Chen, X. (2014). Exploring the implications of social change for human development: Perspectives, issues and future directions. *International Journal of Psychology, 50*(1), 56–59. https://doi.org/10.1002/ijop.12128

Cole, H. V. S., Anguelovski, I., Baró, F., García-Lamarca, M., . . . Triguero-Mas, M. (2020). The COVID-19 pandemic: power and privilege, gentrification, and urban environmental justice in the global north. *Cities & Health*, 1–5. https://doi.org/10.1080/23748834.2020.1785176

Eskin, M. (2013). The effects of individualistic-collectivistic value orientations on non-fatal suicidal behavior and attitudes in Turkish adolescents and young adults. *Scandinavian Journal of Psychology, 54*(6), 493–501. https://doi.org/10.1111/sjop.12072

Fan, H. 樊浩 (2009). 当前中国伦理道德状况及其精神哲学分析 [Ethics and morality in China: The current situation and an analysis in terms of philosophy of mind]. 中国社会科学 [*Social Sciences in China*], *4*, 27–42.

Fei, X. T. 费孝通 (2018). 乡土中国 [From the soil: The foundations of Chinese society]. 北京大学出版社 [Peking University Press].

Fontanesi, L., Marchetti, D., Mazza, C., Di Giandomenico, S., Roma, P., & Verrocchio, M. C. (2020). The effects of the COVID-19 lockdown on parents: A call to adopt urgent measures. *Psychology Trauma: Theory Research Practice and Policy, 12*(S1), S79–S81. https://doi.org/10.1037/tra0000672

Fujita, K., Henderson1, M.D., Eng, J., Trope, Y., & Liberman, N. (2006). Spatial distance and mental construal of social events. *Psychological Science, 17*(4), 278–282. https://doi.org/10.1111/j.1467-9280.2006.01698.x

Greenfield, P. M. (2009). Linking social change and developmental change: Shifting pathways of human development. *Developmental Psychology, 45*(2), 401–418. https://doi.org/10.1037/a0014726

Greenfield, P. M. (2013). The changing psychology of culture from 1800 through 2000. *Psychological Science, 24*(9), 1722–1731. https://doi.org/10.1177/0956797613479387

Iliyasu, G., Ogoina, D., Otu, A. A., . . . Habib, A. A. (2015). A multi-site knowledge attitude and practice survey of Ebola virus disease in Nigeria. *PLoS ONE*, *10*(8), e0135955. https://doi.org/10.1371/journal.pone.0135955

Jie, Z.钟杰, Qian, M. Y.钱铭怡, Zhang, L. L.张黎黎, . . . Zou, A.邹昂 (2003). 非典" 心理援助热线来电初步分析报告 [The original report of mental assistance hotline for SARS in Beijing]. *中国心理卫生杂志* [*Chinese Mental Health Journal*], *9*, 591–593. https://doi.org/10.3321/j.issn:1000-6729.2003.09.002

Kant, I. (2013). 道德形而上学的奠基 [Groundwork of the metaphysics of morals]. In Q. L. Li (Ed.), *康德著作全集* [*The complete works of Immanuel Kant*] (pp. 393–472). 中国人民大学出版社 [China Renmin University Press]. (Original work published 1785)

Kasperson, R. E., Renn, O., Slovic, P., Brown, H. S., Emel, J., Goble, R., & Ratick, S. (1988). The social amplification of risk: A conceptual framework. *Risk Analysis, 2*, 177–187. https://doi.org/10.1111/j.1539-6924.1988.tb01168.x

Kumar, A. (2020). Rethinking humanity and new social values in India: An analytical study of covid-19. *International Journal of Advanced Research, 7*, 229–241. https://doi.org/10.21474/IJAR01/11285

Le Bon, G. (2015). *乌合之众：大众心理研究* [The crowd：A study of the popular mind] (B. Zhang & Z.G. Yang, Trans.). 华中科技大学出版社 [Huazhong University of Science & Technology Press]. (Original work published 1895)

Liu, S., Liu, Y. & Liu, Y. (2020). Somatic symptoms and concern regarding COVID-19 among Chinese college and primary school students: A cross-sectional survey. *Psychiatry Research*, *289*, Article 113070. https://doi.org/10.1016/j.psychres.2020.113070

Manago, A. M. (2012). The new emerging adult in Chiapas, Mexico: Perceptions of traditional values and value change among first-generation Maya university students. *Journal of Adolescent Research*, *27*(6), 663–713. https://doi.org/10.1177/0743558411417863

Mill, J. S. (2019). *功利主义* [Utilitarianism] (D. J. Xu, Trans.). 商务印书馆 [Commercial Press]. (Original work published 1861)

Neece, C., McIntyre, L. L., & Fenning, R. (2020). Examining the impact of COVID-19 in ethnically diverse families with young children with intellectual and developmental disabilities. *Journal of Intellectual Disability Research*, *64*(10), 739–749. https://doi.org/10.1111/jir.12769

Rahman, M. A., Hoque, N., . . . Cross, W. (2020). Factors associated with psychological distress, fear and coping strategies during the COVID-19 pandemic in Australia. *Globalization and Health*, *16*, Article 95. https://doi.org/10.1186/s12992-020-00624-w

Smith, A. (2009). *道德情操论 [The theory of moral sentiments]* (Z. L. Xie, Trans.). 中央编译出版社 ［Central Compilation & Translation Press]. (Original work published 1759)

Sun, C. P. 孙彩平 (2018). 分层与分叉：当代中国儿童道德发展调查报告 [Stratification and bifurcation: An investigative report on the moral development of contemporary Chinese children]. *教育科学研究* [*Educational Science Research*], *2*, 10–19.

Tang, X, Tang, Q , Ren, Z, & Wong, D. F. K. (2019). Prevalence of depressive symptoms among adolescents in secondary school in mainland China: A systematic review and meta-analysis. *Journal of Affective Disorders*, *245*, 498–507. https://doi.org/10.1016/j.jad.2018.11.043

Weinstock, M., Ganayiem, M., Igbaryia, R., Manago, A. M., & Greenfield, P. M. (2014). Societal change and values in Arab communities in Israel: Intergenerational and rural-urban comparisons. *Journal of Cross-Cultural Psychology*, *46*(1), 19–38. https://doi.org/10.1177/0022022114551792

Zhao, L. L. 赵祿雷 (2020). 疫情对小学高年级学生情绪的影响及调适策略研究 Study on the influence of pandemic situation on the emotion of senior primary school students and its adjustment strategies]. *辽宁教育* [*Liaoning Education*], *20*, 64–67.

Zhou, S. J., Zhang, L. G., Wang, L. L., Guo, Z. C., . . . Chen, J. X. (2020). Prevalence and socio-demographic correlates of psychological health problems in Chinese adolescents during the outbreak of COVID-19. *European Child & Adolescent Psychiatry*, *29*, 749–758. . https://doi.org/10.1007/s00787-020-01541-4