EMPIRICAL ARTICLE

Confidence in China's political system was linked to perception of Covid infection risk, Covid health threat, and attitudes toward dynamic Zero-Covid policy

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Abstract

How was Chinese people's confidence in the political system linked to their perception of Covid infection risk, perception of health threat of Covid infection, lockdown experience, and attitudes toward the dynamic Zero-Covid policy? Using 2 waves of online surveys conducted in 2020 and 2022, we investigated how these factors were related. Individuals who were more supportive of the Zero-Covid policy were more confident. Those who were less supportive of the Zero-Covid policy were from areas with more severe Covid infections and experienced a longer lockdown as well; these individuals also perceived higher Covid infection risk and health threat. As such, their confidence in the political system was also more likely to drop from 2020 to 2022. In sum, these findings suggest that Chinese people's confidence in the political system was linked to their Covid infection risk perception, perceived Covid threat to health, lockdown experience, and attitudes toward the Zero-Covid policy. These findings were corroborated with the severity of Covid infections in the province and individual's political beliefs and orientation.

1. Introduction

During his visit to Wuhan in June 2022, Chinese President Xi stated that 'Implementing the dynamic Zero-Covid policy was determined by the CPC (Communist Party of China) Central Committee in line with the Party's nature and its founding purpose as well as national conditions'.[1] He also mentioned 'If we calculate the general ledger, our epidemic prevention measures are the most economical and effective. We have the leadership of the Communist Party of China, the important grass-roots foundation of the community, and the ability and strength to implement the dynamic zero policy until the final victory'. President Xi's statements suggest that the Covid-19 policy in China was not merely about public health but was highly intertwined with politics and confidence in the political system. President Xi's statement was made at a time when there were controversies even within the country about the dynamic Zero-Covid policy (Burki, 2022) as it has caused significant disruptions to the economy and daily life, while other countries were returning to normal.

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[1]See https://www.chinadailyhk.com/article/278975 and https://www.hk01.com/sns/article/786933.

There was widespread anticipation that President Xi would relax the dynamic Zero-Covid policy after the 20th People's Congress held in late October 2022. However, this did not occur, as President Xi reaffirmed his commitment to the policy in his opening address at the congress; he stated that 'We have adhered to the supremacy of the people and the supremacy of life, adhered to dynamic Zero-Covid . . . and achieved major positive results in the overall prevention and control of the epidemic, and economic and social development'.[2] Subsequently, by the end of November 2022, there were reports of protests against the Zero-Covid policy across China.[3] These incidents motivated an examination of the link between attitudes toward the Zero-Covid policy and confidence in the political system. Unexpectedly, in December 2022, the Zero-Covid policy was suddenly abandoned, and most of the Covid-related monitoring and restrictions were lifted throughout the country. The present research was conducted prior to the abandonment of the strict Covid policy in China.

1.1. Present research

This study attempts to answer several novel research questions. Given that the Covid pandemic is entirely unprecedented, it is intriguing to examine how people form their beliefs when confronted with a shock of this nature. They may develop their beliefs and preferences based on their perception of Covid infection risk, the perceived health threat posed by Covid, their experience with lockdowns, and their political beliefs and orientation. However, there are very few studies on the relationship between Covid policy and confidence in political attitudes in mainland China. Indeed, we are not aware of existing studies on how the Covid outbreak affected Chinese people's confidence in the political system. These are critical and novel questions, given the dynamic Zero-Covid policy is likely one of the most significant policies to shape China in recent decades, with potential long-lasting impacts even after the pandemic.[4] We speculated that when people perceived higher risk or threat from Covid, they might be less confident in the government's ability to manage the pandemic, and as a result, less confident on the political system. Moreover, the severity of Covid infections in the province and the lockdown experience could affect individuals' support for the policy and their confidence in the political system, either directly or through their negative attitudes toward the Zero-Covid policy. That said, this study is exploratory in nature; we were only able to discern associations but not causal links between these variables (due to limitations in conducting experiments in China during that period). It is also possible that individuals with lower confidence in the political system would not trust the government in containing the pandemic, especially when the infection rate was severe, and thus perceived higher risk and threat from Covid. They would also be less positive toward the Zero-Covid policy as well. As such, there should still be significant associations of Covid risk, threat perception, lockdown experience, and attitudes of the Zero-Covid policy with confidence in political system. This study tested these associations.

In addition, the present study was the first attempt to examine how Chinese individual's political beliefs and orientation may be related to their Covid risk and threat perceptions, attitudes toward the Covid policy, and confidence in the political system. As we mentioned above, President Xi's statements suggest that the Covid-19 policy in China was not merely about public health but was highly intertwined with politics and confidence in the political system. We speculated that individual's political beliefs and orientation may matter. To this end, we explored 2 concepts—National collective narcissism and Chinese political conservatism. First, national collective narcissism refers to the belief that one's nation is superior and that the nation's exaggerated greatness is not sufficiently recognized by others (Golec de Zavala, 2020; Golec de Zavala, 2018; Golec de Zavala et al., 2009). This construct (and its measure) has been shown to predict an array of socio-political outcomes. For instance, national collective narcissism among Polish participants predicted conspiracy beliefs that the Jewish out-group aimed to take control

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[2]See https://www.reuters.com/world/china/chinas-xi-open-20th-communist-party-congress-2022-10-15/.

[3]See https://www.economist.com/films/2022/12/02/what-should-xi-do-next.

[4]Chen et al. (2022) estimated that imposing full-scale lockdown on 4 largest cities for 1 month would reduce the national real GDP by 8.6%. Chen et al. (2021) investigated the impact of Covid-19 on consumption in China.

of the world (Golec de Zavala and Cichocka, 2012) and that Russia was involved in a Polish catastrophe (Cichocka et al., 2016). Although most of the previous studies were conducted in Western countries, this construct has been used in China recently and found to predict Chinese participants' defensive blame of outgroup on the responsibility of Covid-19 sufferings (Wang et al., 2021). As such, we predicted that national collective narcissism should matter in the current study. In particular, given that Chinese individuals with higher national collective narcissism hold an exaggerate positive image of China, they would be more confident in the political system and its policy, including the Zero-Covid policy, which in turn may be associated with lower perceived Covid risk and health threat.

Second, Chinese political conservatism (and its measure) was proposed by Li et al. (2020) and is an indigenous construct and relatively new; it involves supporting a strong government and its control on the economy and people's life. To elaborate, Li et al. (2020) defined political conservatism in China as favoring authoritarianism, nationalism, traditional values, social welfare, and state intervention in the economy (Mulvad, 2018; Pan and Xu, 2018). This view differs from political conservatism in Western countries, which typically advocates for low tax rates and less government intervention in the economy. The authors noted that the Chinese interpretation of political conservatism is partly influenced by the socialist system in place, leading to a preference for a strong government and its control (Nathan and Shi, 1996). We included this construct to check the validity of participants' self-reported confidence in political system because individuals endorsing strong Chinese political conservatism should be more confident in the political system and Zero-Covid policy, and thus lower perceived Covid risk and health threat.

We conducted 2 waves of online surveys. The first wave was conducted in April 2020, with 1,430 subjects, while the second wave took place in June 2022 (when the Zero-Covid policy was implemented) involving 503 subjects. Among these subjects, 178 participated in both waves. In both surveys, we elicited the subject's confidence in the political system. In the second wave, we also elicited subject's lockdown experience, attitudes toward dynamic Zero-Covid policy, perception of Covid infection risk and health threat, national collective narcissism, Chinese political conservatism, and their risk and ambiguity attitudes (Ellsberg, 1961).

1.2. Confidence in the political system

The issue of confidence in the political system can be viewed through the lens of the 'four self-confidence' emphasized by President Xi, which include confidence in the chosen path, guiding theories, political system, and culture.

China's Covid-19 policy has been often cited in the country's news media as reflection of the 2 advantages of the Chinese system. First, the Chinese Community Party can exercise overall leadership, and hence better at coordinating all parties and institutions such as enterprises, villages, communities, schools, and social organizations. Second, China's unitary state structure allows for the mobilization and concentration of all levels of government to achieve major national goals and confront significant challenges. For example, in the 'War Against Covid', the joint prevention and control mechanism of the State Council can issue specific instructions to local governments based on the central government's deployment to prevent and control the pandemic. In comparison to the overseas pandemic situation, the Chinese Communist Party views this as a significant success of China's centralized nationwide system. This early success may have led to the government's intolerance of any Covid-19 spread in China, especially with the omicron variant's spread across other parts of the world, resulting in the implementation of the dynamic Zero-Covid policy since early 2022.

It is worth noting that, similar to other countries, the formulation of Covid-19 policy in China was done by the central government, and its execution was carried out at the local level by local government and organizations. However, because the centralized political system in China and the Covid-19 policy in China was not merely about public health but was highly intertwined with politics, it is possible that dissatisfaction with the Zero-Covid policy could result in reduced confidence in the political system.

As such, there is likely a significant correlation between attitudes toward the Zero-Covid policy and confidence in the political system. Our article aims to test this idea.

1.3. *Dynamic Zero-Covid policy*

China's policy toward controlling Covid-19 evolved into the 'dynamic Zero-Covid policy', (Normile, 2020) which was strictly and fully implemented nationwide from January 2022.[5] The policy involves conducting an epidemiological investigation, isolating all persons with the possibility of contact, and controlling the virus's spread to return to zero cases quickly upon confirmation of an infectious disease case. According to the Chinese Center for Disease Control and Prevention (Liu et al., 2022), 'The goal is to take effective and comprehensive measures to deal with localized Covid-19 cases precisely, to quickly cut off the transmission chain, and to end the pandemic in a timely manner (to "find one, end one")'. The policy has had far-reaching consequences for people's daily lives, including business and school lockdowns, limited physical mobility, continuous PCR testing in many areas of China, and strict control of travel in and out of the country. The success of China's previous strict pandemic control policy may have justified the emergence and persistence of the dynamic Zero-Covid policy.[6]

Despite its objectives, the dynamic Zero-Covid policy has been the subject of controversy due to its disruptive effects on China's domestic and global economies, as well as its impact on people's livelihoods in the lockdown areas.[7] For instance, the about 2 months of lockdown in many areas in Shanghai in March 2022 have caused small upheavals within the city.[8] Despite the government has propagated the policy's effectiveness, some people have expressed different opinions on its efficacy on social media.[9] It is estimated that the economic growth rate in the first half of 2022 has dropped to 2.5%, one of the weakest levels in the past 3 decades, raising concerns that the strict dynamic Zero-Covid policy may contribute to an economic downturn.[10,11] Against this backdrop, an interesting question is whether Chinese people's confidence in the political system was correlated with their attitudes toward the dynamic Zero-Covid policy. We also measured people's lockdown experience, perception of Covid infection risk, perception of Covid threat on health, and their political attitudes in terms of national collective narcissism and Chinese's political conservatism.

We have the following main findings. Subjects who perceived a higher degree of risk of Covid-19 infection and a greater health threat from the virus had lower confidence in the political system. Longer lockdown experiences were associated with higher perceived risk of Covid infection and Covid health threat, and lower confidence in the political system, and less support for the Zero-Covid policy. Confidence in the political system was associated with a positive attitude toward the dynamic Zero-Covid policy. Subjects with a higher degree of national collective narcissism and Chinese political conservatism were more supportive of the Zero-Covid policy and more confident in the political system. The severity of Covid infections in wave 2 was associated with greater risk and threat perception, and lower support for the Zero-Covid policy, and thus lower confidence in the political system. In sum, these findings suggest that subjects' confidence in the political system was linked with their Covid infection risk perception, perceived Covid threat to health, lockdown experience, and attitudes toward

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[5]See 'Don't Expect China to Ease Its Zero-COVID Policy After the Beijing Olympics', https://time.com/6139772/china-zero-covid-policy/.

[6]https://www.chinadaily.com.cn/a/202201/17/WS61e4ce13a310cdd39bc8168f.html;   https://www.reuters.com/markets/currencies/chinas-exports-imports-grow-more-slowly-december-2022-01-14/.

[7]https://www.economist.com/finance-and-economics/will-chinas-covid-lockdowns-add-to-strains-on-supply-chains/21808193.

[8]See, for example, 'A clumsy lockdown of Shanghai is testing the "zero-covid" strategy' at https://www.economist.com/china/2022/04/09/a-clumsy-lockdown-of-shanghai-is-testing-the-zero-covid-strategy.

[9]See https://www.washingtonpost.com/world/2022/11/07/china-covid-policy-lockdown-apple/.

[10]See 'China's economic growth slows following Covid lockdowns', https://www.npr.org/2022/07/15/1111652023/chinas-economic-growth-slows-following-covid-lockdowns.

[11]See 'China's Li Gives Dire Growth Warning in Unpublished Remarks', https://www.bloomberg.com/news/articles/2022-05-26/china-s-premier-gives-dire-growth-warning-in-unpublished-remarks?srnd=premium.

the Zero-Covid policy. These findings were corroborated with the local severity of Covid infections and participants' political beliefs and orientation.

The rest of the article is organized as follows. Section 2 reports the study method, Section 3 reports the results, and Section 4 concludes.

2. Method

We conducted 2 waves of online surveys in mainland China using an online platform. The first wave was conducted in April 2020, with 1,430 subjects, and the second wave was conducted in June 2022 with 503 subjects. Subjects of the first wave received a fixed payment of RMB 5 for participation and a payoff from a randomly drawn game. Subjects of the second wave received a fixed payment of RMB 4 and a payoff from a randomly drawn game. In addition, subjects of the second wave received an additional RMB 8 if they have participated in the first wave. The survey items used in wave 1 and wave 2 are shown in Supplementary Materials C and D, respectively. Among these subjects, 178 participated in both waves.[12] We provide the main measures below.

2.1. Confidence in the political system

To assess their personal confidence, we asked subjects that 'Are you confident about the political system in your country?' They responded using a scale of 1 (not confident at all/completely disagree) to 11 (completely confident/completely agree).

Aside from reporting on their personal confidence, we also asked subjects to guess other people's confidence that, 'Please guess the average of all participants' submissions for the following question: "Are you confident in your country's political system?"' They responded using a scale 0 (not confident at all) to 100 (completely confident) in the political system with incentivized procedures (i.e., giving a bonus of RMB 50 to the subject who gave the closest guess). This measure aims to assess subjects' estimated norm in confidence, which was another indicator of confidence in political system.

2.2. Covid infection risk perception (elicited in wave 2)

Subjects indicated (on a scale of 1, not likely at all, to 7, very likely) the risk of being infected by the Covid-19 for people in the community, family members, and the subject himself/herself. We took the average of these responses as the subject's perceived risk of Covid infection; a higher average score indicated a higher perceived risk.

2.3. Covid health threat perception (elicited in wave 2)

Subjects indicated (on a scale of 1, absolutely impossible, to 7, Extremely likely) how fatal, harmful, and dangerous it would be to one's health if contracted the Covid-19. We took the average of these responses as the subject's perceived health threat of Covid infection; a higher average score indicated a higher perceived heart.

2.4. Attitudes toward dynamic Zero-Covid policy (elicited in wave 2)

In the second wave survey, the subjects were asked to rate whether the Zero-Covid policy was unreasonable versus reasonable, not humane versus humane, harsh versus not harsh, harmful versus not harmful, not sustainable versus sustainable, should not be implemented versus should be implemented, bad overall versus good overall on a 6-point Likert scale. The higher the score, the more positive the attitudes. The Cronbach's alpha of these 7 items was 0.88.

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[12]See Supplementary Material B for the distribution of geographic locations of the subjects.

Table 1. *Descriptive statistics.*

Wave 1 ($N = 1,430$)	Mean (SD)	Range
Personal confidence in the political system	10.14 (1.56)	1–11
Others' confidence in the political system	84.10 (19.50)	0–100
Gender	41% female	—
Age	27.90 (7.52)	—
Education	3.47 (0.99)	1–6
SES	5.80 (1.95)	1–10
Income	4.53 (2.46)	1–12
Wave 2 ($N = 503$)	Mean (SD)	Range
Personal confidence in the political system	9.62 (1.91)	1–11
Others' confidence in the political system	78.13 (20.44)	0–100
Perceived Covid infection risk	2.36 (1.02)	1–7
Perceived Covid health threat	3.15 (1.17)	1–7
Attitudes toward Zero-Covid policy	4.47 (1.03)	1–6
Lockdown experience	3.29 (2.83)	1–10
National collective narcissism	4.34 (0.76)	1–6
Chinese political conservatism	4.17 (0.52)	1–6
Gender	45% female	—
Age	32.81 (7.99)	—
Education	3.55 (0.98)	1–6
SES	5.35 (1.64)	1–10
Income	4.97 (2.31)	1–12

Note: Gender denotes the proportion of female. Education denotes the level of education on a scale of 1 (Junior high school or below) to 6 (PhD or above). SES denotes the subjective socio-economic status on a scale of 1 (the lowest) to 10 (the highest). Income denotes the household income on a scale of 1 (less than 5,000 RMB per month) to 12 (50,000 RMB and above per month).

2.5. Lockdown experience (elicited in wave 2)

In the second wave survey, we elicited the subject's lockdown experience by asking the subject 'In the past 2 months, how many days has your community been under lockdown?' on a scale of 1 (zero) to 10 (about 8 weeks [2 months]). The distribution of the responses was negatively skewed (skewness = 1.12); to reduce the skewness, a log transformation was performed on this score.

2.6. National collective narcissism (elicited in wave 2)

To assess subjects' national collective narcissism, we used the same measure as Wang et al. (2021), which was adapted from a widely used 5-item measure (Golec de Zavala et al., 2009). In particular, subjects were asked to indicate their agreement on a scale of 1 (completely disagree) to 6 (completely agree) to statements that, 'China deserves special treatment', 'not many people know the importance of China', 'I get really angry when others criticize China', 'if China can play a bigger role in the world, the world will be a better place', and 'I will only be satisfied if China gets everything it deserves'. The Cronbach's alpha of these 5 items was acceptable ($\alpha = 0.65$); principal component factor analysis showed that a one-factor solution was acceptable (accounted for 48.62% of variance with all items loading above .72, except one problematic item: 'not many people know the importance of China'). If we drop the problematic item and used the remaining 4 items, the internal reliability of the scale would be improved ($\alpha = 0.78$). However, to keep our study consistent with previous studies, we decided not to drop the problematic item. We took the average of subjects' responses on all 5 items as their degree of national collective narcissism; a higher score indicated a stronger belief in national collective narcissism.

2.7. Chinese political conservatism (elicited in wave 2)

We elicited subject's political conservatism using 14 questions created by Li et al. (2020). Sample items were 'Internet contents, which are intermingled with good and bad things, need to be controlled by the government', 'Our nation should increase military expenses', 'Homosexuals and heterosexuals should be treated equally' (reverse-scored). Subjects rated their agreement with each item on a 6-point scale (1 = completely disagree, 6 = completely agree). Principal component factor analysis (with varimax rotation) showed a 4-factors solution (accounted for 60.77% cumulative variance). However, because we are interested in the Chinese political conservatism orientation as a whole, we checked the internal reliability of the entire scale. The Cronbach's alpha of the 14 items was 0.74, suggesting that it is still an internally reliable scale. Therefore, we took the average of participants' responses on the entire scale as their Chinese political conservatism; a higher score indicated a stronger Chinese political conservatism orientation.

We also collected subjects' demographic information including gender, age, education, socioeconomic status (SES), and income. Table 1 reports the demographics of subjects in both waves of the survey. In the second wave, 45% were female, the average age was 32.81, the average educational level was 3.55 on a scale of 1 (Junior high school or below) to 6 (Ph.D. or above), the average SES was 5.35 on a scale of 1 (the lowest) to 10 (the highest), and the average household monthly income was 4.97 on a scale of 1 (Less than 5,000 RMB per month) to 12 (50,000 RMB and above per month).

3. Results

3.1. Confidence in the political system

The average degrees of personal confidence in the political system (on a scale of 1, not confident at all, to 11, completely confident) were 10.14 and 9.62 in 2020 and 2022, respectively. The average estimated degree of confidence in the political system of others was measured on a scale of 0 to 100, with the average scores being 84.10 and 78.13 in 2020 and 2022, respectively. It is worth noting that the average confidence scores were generally high.

Descriptive statistics for the main variables in wave 1 (2020) and wave 2 (2022) are presented in Table 1. On a 6-point scale, the average level of support for the dynamic Zero-Covid policy was 4.47 (SD = 1.03). The average level of perceived Covid infection risk was 2.36 (SD = 1.02) on a 7-point scale, and the average level of perceived health threat caused by Covid infection was 3.15 (SD = 1.17) on the same 7-point scale.

The correlations between the estimation of others' confidence and the primary variables are presented in Table 2. The perceived confidence of others may be a more reliable measure of confidence as it reflects the subject's perception of the average level of confidence. This measure is incentivized, meaning that subjects are motivated to make accurate judgments to increase their monetary gains. Therefore, it should be a reliable measure. We found that there was a significant negative correlation between the perceived confidence of others and both Covid risk perception and perceived health threat caused by Covid.

In addition, we observed significant positive correlations between support for the Zero-Covid policy (elicited in Wave 2), national collective narcissism, and Chinese political conservatism, and significant negative correlation between attitudes toward Zero-Covid policy and lockdown experience (elicited in Wave 2). These correlations are consistent with those found for personal confidence in the political system.

Result 1. Subjects' perception of others' confidence in the political system was negatively correlated with perceived Covid infection risk and threat to health caused by Covid, lockdown experience, and positively correlated with their support for the Zero-Covid policy.

The correlations between confidence in the political system and various variables, including attitudes toward Zero-Covid policy, national collective narcissism, Chinese political conservatism, lockdown

Table 2. *The Pearson correlation coefficients between confidence in the political system and other variables (sample: second wave [N = 503]).*

	Personal confidence in the political system	Others' confidence in the political system
Perceived Covid infection risk	−0.05	−0.14***
Perceived Covid health threat	−0.04	−0.10**
Lockdown experience (log-transformed)	−0.19***	−0.17***
Attitudes toward Zero-Covid policy	0.54***	0.43***
National collective narcissism	0.41***	0.30***
Chinese political conservatism	0.50***	0.43***
Female	−0.11**	−0.09**
Age	−0.12***	−0.09*
Education	−0.04	−0.03
SES	0.13***	0.04
Income	0.14***	0.04

*** $p < .01$;
** $p < .05$;
* $p < .10$.

experience (log-transformed), social desirability responding, and demographic variables including Gender, Age, Education, Subjective SES, and income level are reported in Table 2.

Personal confidence level in the political system was positively correlated with attitudes toward Zero-Covid policy ($r = .54$, $p < .001$), suggesting that those with more positive attitudes toward the policy were more confident about the political system. Additionally, we found positive correlations between personal confidence level and national collective narcissism ($r = .41$, $p < .001$) and Chinese political conservatism ($r = .50$, $p < .001$)). By contrast, there was a significant negative correlation between personal confidence level and the log-transformed lockdown experience ($r = -.19$, $p < .001$), suggesting that subjects who experienced longer lockdown were less confident in the political system. Furthermore, there were significant negative correlations between confidence level and gender, age, and significant positive correlations between confidence level and subjective SES and income, while Education did not show significant correlation.

Result 2. Subject's confidence in the political system was positively correlated with their attitudes toward the dynamic Zero-Covid policy, national collective narcissism, and Chinese political conservatism, but negatively correlated with lockdown experience.

3.2. Perceived Covid infection risk and Covid health threat

In wave 2, we elicited subjects' perceived Covid infection risk and Covid health threat. On a scale of 1 (not likely at all) to 7 (very likely), the average level of perceived Covid infection risk was 2.36. Furthermore, the average level of perceived health threat caused by Covid infection was 3.15 on a scale of 1 (absolutely impossible) to 7 (extremely likely).

There was a significant positive correlation between experience of lockdown and both perceived Covid risk perception ($r = 0.34$, $p < 0.01$) and perceived health threat caused by Covid ($r = 0.29$, $p < 0.01$) (Table 3). This suggests that lockdown may have increased individual's perception of Covid infection risk and health threat. It is also possible that there was an actual increase in infection cases which then rendered greater risk perception and health threat, and at the same time, the government implemented the lockdown.

Our results showed a noteworthy negative correlation between perceived Covid infection risk, national collective narcissism ($r = -0.14$, $p < 0.01$), and Chinese political conservatism ($r = -0.12$,

Table 3. *Pearson correlation coefficients between perceived Covid infection risk, perceived Covid health threat, and other variables.*

	Perceived Covid infection risk	Perceived Covid health threat
Lockdown experience (log-transformed)	0.34***	0.29***
National collective narcissism	−0.14***	−0.15***
Chinese political conservatism	−0.12***	−0.06
Female	−0.06	−0.09**
Age	−0.01	−0.19***
Education	0.08*	0.01
SES	0.00	−0.01
Income	0.11**	0.02

*** $p < .01$;
** $p < .05$;
* $p < .10$.

$p < 0.01$). Additionally, there was a significant negative correlation between perceived Covid health threat and national collective narcissism ($r = −0.15$, $p < 0.01$), whereas the correlation with Chinese political conservatism was negative but not statistically significant.[13]

Result 3. Perceived Covid infection risk and perceived Covid threat to health were positively correlated with lockdown experience and negatively correlated with national collective narcissism.

3.3. Attitudes toward Zero-Covid policy

3.3.1. Lockdown experience
Table 4 reports that there was a significant negative correlation between lockdown experience (log-transformed) and attitude toward Zero-Covid policy ($r = −.17$, $p < .001$), both were elicited in Wave 2.

Result 4. The experience of lockdown was associated with less support for the Zero-Covid policy.

3.3.2. Political beliefs and orientation
We found that subjects with a greater degree of national collective narcissism tended to be more supportive of the dynamic Zero-Covid policy ($r = .35$, $p < .001$), as shown in Table 4. Additionally, we observed a positive correlation between Chinese political conservatism and support for the Zero-Covid policy ($r = .51$, $p < .001$). Taken together, these findings suggest that the attitude toward the dynamic Zero-Covid policy were closely related to one's political beliefs and orientation.

Result 5. Subjects with a higher degree of national collective narcissism and Chinese political conservatism showed a higher degree of support for the dynamic Zero-Covid policy.

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[13]The way in which people perceive the risks and threats posed by Covid-19 may be influenced by their level of risk aversion and ambiguity aversion. We elicited subjects' degree of risk aversion and degree of ambiguity aversion using 2 tasks of menu of choices in which subjects choose between taking a gamble and receiving a sure amount (Supplementary Material A). There were no significant correlations between perceived Covid infection risk and degree of risk aversion, and degree of ambiguity aversion. There were no significant correlations between perceived Covid health threat and degree of risk aversion, and degree of ambiguity aversion. This suggests that people's perception on the risk of Covid-19 infection and health threat were very different from their risk attitudes and ambiguity attitudes elicited in a domain unrelated to Covid-19. There is a line of literature on effect of Covid-19 on economic preferences such as risk aversion, see e.g., Li et al. (2022). In a recent study, Li and Huang (2023) found that ambiguity averse subjects were more pessimistic about the effect of Covid-19 on the economic growth rate.

Table 4. *Pearson correlation coefficients between attitudes toward Zero-Covid policy and other variables (sample: second wave [N = 503]).*

	Attitudes toward Zero-Covid policy
Perceived Covid infection risk	−0.02
Perceived Covid health threat	−0.04
Lockdown experience (log-transformed)	−0.17***
National collective narcissism	0.35***
Chinese political conservatism	0.51***
Female	−0.03
Age	0.05
Education	−0.01
SES	0.06
Income	0.04

***$p < .01$;
**$p < .05$;
*$p < .10$.
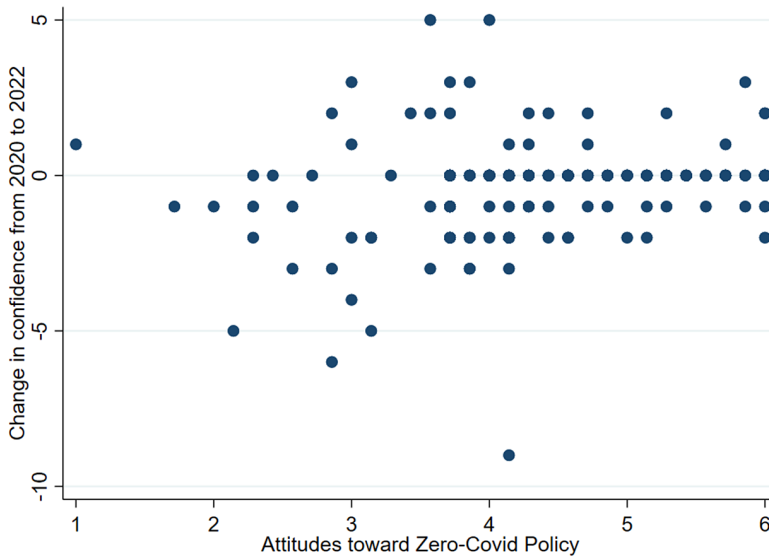
Figure 1. *Change in Confidence from 2020 to 2022.*

3.4. Individuals' confidence changes from 2020 to 2022

Recall that 178 subjects participated in both waves of the study. We analyzed these subjects' confidence change in 2020 (wave 1) and 2022 (wave 2) and tested the link between confidence change and attitudes toward Zero-Covid policy measured in 2022. On average, there is a slight drop in confidence, with the degree of change equals to −0.33 (SD = 1.59), which is significantly different from zero ($p < 0.01$). Figure 1 reports the scatter plot of change in confidence (a positive score meaning increase in confidence) and attitudes toward the Zero-Covid policy. Table 5 reports the correlations for both changes in confidence and changes in perceived others' confidence. The results show that an individual's level of support for the Zero-Covid policy was significantly associated with their change in personal confidence: those who were more supportive of the Zero-Covid policy were more likely to maintain their confidence or showed less decrease in confidence over time. Likewise, subjects' Chinese

Table 5. *Pearson correlation on change in confidence about the political system and change in others confidence (sample: subjects participated in both first and second wave [N = 178]).*

	Change in personal confidence about the political system	Change in others' confidence about the political system
Attitudes toward Zero-Covid policy	0.21***	0.08
Perceived Covid infection risk	0.09	−0.02
Perceived Covid health threat	0.02	−0.03
Lockdown experience (log-transformed)	0.05	−0.03
National collective narcissism	0.08	0.04
Chinese political conservatism	0.14*	0.07
Female	0.04	−0.08
Age	−0.12	−0.12
Education	0.04	0.00
SES	0.06	0.01
Income	0.05	−0.11

***$p < .01$;
**$p < .05$;
*$p < .10$.

political conservatism was also positively associated with less decrease in personal confidence over time. Taken as a whole, these findings suggest that attitudes toward the Zero-Covid policy were a key predictor of temporal changes in personal confidence aside from political orientation. However, we did not identify any variables that could predict changes in perceived other' confidence.

Result 6. There was a significant association between individual attitudes toward the Zero-Covid policy and their temporal changes in confidence, such that those who were more supportive of the Zero-Covid policy were more likely to maintain their confidence or showed less decrease in confidence in the political system from 2020 to 2022.

3.5. Correlations between severity of Covid-19 and the main variables

We investigated the correlations between the objective severity of Covid-19 infections and the main variables. We used the cumulated prevalence rate (which equals to the number of cumulated cases divided by the population of the province) of each province on March 10, 2020, as a proxy for the severity of Covid 19 in wave 1, and the prevalence rate on May 17, 2022, for that in wave 2.[14] Panel A of Table 6 reports the Pearson correlations in wave 1; there was a significant negative correlation ($r = −0.06$, $p = 0.02$) between the cumulated prevalence rate and others' confidence about the political system. However, the correlation between the cumulated prevalence rate and personal confidence was negligible ($r = −0.01$, $p = 0.60$).

Panel B of Table 6 reports the correlations for Wave 2, which were more consistent. The cumulated prevalence rate was associated with less personal confidence ($r = −0.14$, $p = 0.003$) and with less others' confidence ($r = −0.11$, $p = 0.02$). The cumulated prevalence rate was also significantly associated with higher perceived Covid infection risk, higher perceived Covid health threat, and more negative attitudes toward the Zero-Covid policy. In short, the severity of Covid-19 infections in wave 2 seems to heighten participants' risk and threat perception and undermine their confidence in the political system and their support for the Zero-Covid policy.

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[14]Excluding for provinces (Inner Mongolia, Ningxia, Tibet, Xinjiang) of ethnic minorities, and Hong Kong and Macau.

Table 6. *Pearson correlations between the severity of Covid-19 and the main variables.*

Panel A. Wave 1

	Cumulated prevalence rate on March 10, 2020
Personal confidence about the political system	−0.01
Others' confidence about the political system	−0.06**

Panel B. Wave 2

	Cumulated prevalence rate on May 17, 2022
Personal confidence about the political system	−0.14***
Others' confidence about the political system	−0.11**
Perceived Covid infection risk	0.18***
Perceived Covid health threat	0.09**
Attitudes toward Zero-Covid policy	−0.11**

*** $p < .01$;
** $p < .05$;
* $p < .10$.

Result 7. A higher cumulated prevalence rate of Covid infections in the province was associated with less confidence in political system, higher perceived Covid infection risk, higher perceived Covid health threat, and more negative attitudes toward the Zero-Covid policy.

4. Discussions

China was among the few countries in the world that implemented the dynamic Zero-Covid policy during 2022 when most countries around the world have lifted many Covid-related restrictions. The current research aims to understand how Chinese people's confidence in the political system was associated with their perceptions and experiences during this unique context. Our findings revealed that Chinese participants' confidence in the political system could drop (in comparison to a relatively high confidence in 2020 during the early stage of the pandemic). Specifically, participants' political confidence was linked to their attitudes toward the Zero-Covid policy. Those who were less supportive of the Zero-Covid policy were from areas with more severe Covid infections and experienced a longer lockdown as well; these individuals also perceived higher Covid infection risk and health threat. As such, their confidence in the political system was also more likely to drop from 2020 to 2022. By contrast, those who showed a higher political confidence and support for the Zero-Covid policy were those who endorsed higher national collective narcissism and Chinese political conservatism. Taken as a whole, these findings suggest that the negative attitudes toward the Zero-Covid policy and the lockdown experiences could undermine people's confidence in political system, whereas national collective narcissism and Chinese political conservatism may buffer the dent.

Despite the Chinese government's propaganda may affect people's attitudes toward the Zero-Covid policy and their confidence on the political system, our study showed that people's experience and perception still play an important role. People did update their belief in a way consistent with one might expect; when the Covid was more severe (i.e., prevalence rate was higher), they perceived higher Covid infection risk, higher Covid health threat, and were less confident about the political system. Similarly, when they experienced longer lockdown, they were less confident about the political system, and less supportive of the Zero-Covid policy. There were already concerns that implementation of the dynamic Zero-Covid policy contributed to an economic downturn in China (as the economic growth rate in the first half of 2022 has dropped to 2.5%, one of the weakest levels in the past 3 decades). Attitudes toward the Zero-Covid policy, and its associated risk and threat perceptions and lockdown experiences, may also contribute to a downturn in people's political confidence in China. Future research can examine whether there are long-lasting consequences.

This study is exploratory and descriptive in nature; we were constrained by the limited opportunities to collect data during the pandemic and by the sensitivity of our research questions. Several questions

can be pursued in future research. First, we found that some demographic variables (e.g., gender and age) were associated with confidence the political system. These results were not expected. Future research can examine how different gender and age (age effects may result from aging itself or from generational changes) segment support the political system and public policies. Second, future research may include a larger sample size and more representative sample, as well as including different measurement tools. Third, it would be interesting to study how the variables we explored in the present research are related to important individual choices such as consumption and saving decisions in the post Zero-Covid era. It would also be interesting to study how individuals update their beliefs and resolve dissonance given the sudden abandonment of Zero-Covid policy in China.

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