

How Unofficial Media Use Shapes Perceptions of Political Transparency: The Mediating Effect of Subjective Well-Being and the Moderating Role of Official Media Use Among Chinese Youth

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Abstract

This study examines the impact of unofficial media use on perceived government transparency in Chinese youth, focusing on the mediating role of subjective well-being and the moderating influence of official media use. Based on a cross-sectional survey of 405 participants aged 18-35 in Guangzhou, China, the results indicated that frequent use of unofficial media significantly reduced perceptions of political transparency, consistent with the media depression theory. In addition, subjective well-being played a critical mediating role in this relationship, while official media use mitigated the negative impact of unofficial media use. These results provide valuable insights into the role of the media in the political context and inform strategies for enhancing government transparency.

Keywords: unofficial media use, political transparency perception, subjective well-being, official media use, Chinese youth

1. Introduction

Transparency has garnered increasing scholarly attention due to its critical role in effective government and democracy participation. Transparency continues to be viewed as the fundamental principle of efficient governance and democratic participation (Rebolledo et al., 2016). It may enhance accountability (Rebolledo et al., 2016), reduce corruption (Harrison & Sayogo, 2014), improve decision-making (Matheus et al., 2021), strengthen public trust in the government (Alessandro et al., 2021), and foster a more knowledgeable and empathetic citizenry (Peng et al., 2022). Perceived transparency denotes citizens' comprehension of governmental operations through the public dissemination of information about its activities and processes for making decisions (G. Porumbescu, 2017; Song & Lee, 2016). Therefore, the citizens' perceptions of government transparency are crucial for democratic governance and societal advancement.

The media can influence perceived government transparency, owing to its role in distribution and nurturing, as well as the existence of ideology. The emergence of the internet has allowed for speedy and transparent access to government information (S. G. Grimmelikhuijsen & Meijer, 2014; G. A. Porumbescu, 2015). According to the most recent numbers published by the China Internet Network Information Center, by December 2020, the number of Internet users in China had risen to 989 million, with an Internet penetration rate of 70.4% (CNNIC, 2021). The Internet has become a vital element of modern society and the lives of its constituents. The widespread popularity of social media and the spread of information have significantly reduced uncertainty in social life and offered more insight into social dynamics. At present, people increasingly use social networking sites to get political information and communicate with political personalities (Kalogeropoulos et al., 2017).

This trend is particularly evident among youth, who are early adopters of emerging technologies and continue to serve as their most dedicated user group (Boulianne & Theocharis, 2020). Not only are they at the forefront of the adoption of new technologies, but they also demonstrate deep use and high levels of enthusiasm for these technologies (Kahne & Bowyer, 2018). In the process of political socialization, youth are experiencing a critical turning point in their lives, and their political identities and positions are in the shaping stage. When it comes to political disengagement, young people are always a matter of concern. Studies show that young people generally show a low level of interest in political activities (Fahmy, 2017; Pontes et

al., 2018). Because young people are the main foundation of a nation, they are the future of a country, and their attitudes and behaviors now will affect the development of a nation (Sihombing, 2018). Considering the essential function of digital media in individuals' daily lives, it is reasonable to believe that these mediated channels will significantly and enduringly affect their political opinions and behavioral patterns (Kligler-Vilenchik et al., 2020; Kruikemeier & Shehata, 2017).

Compared to the Western media system, China's media system exhibits unique features (P. S. N. Lee et al., 2018). The media can be divided into official and unofficial based on its political stance (Hu & Pu, 2023). The rapid development of Internet technology not only strengthens the media industry's growth but also engenders unauthorized media, therefore disrupting the official media's monopoly on information debate. This alteration is primarily evident in the "crowding effect" of unofficial media on official media (Hu & Pu, 2023), which leads to diminished public access to information via official channels and increased opportunities to interact with unofficial media and adverse political news. In this media environment characterized by the "crowding effect," it is imperative to investigate how unofficial media attention influences public perception of political transparency and its underlying mechanisms. This exploration offers empirical evidence for the enhancement of the national governance system and valuable insights for countries with situations like that of China.

Although there have been studies exploring the extensive use of social media, empirical research on how official and unofficial media affect public perceptions of government transparency in the Chinese context, especially for the youth population, is still insufficient. This study is devoted to systematically analyzing the mechanisms by which unofficial media use affects perceived transparency, and makes the following major contributions to this field:

First, we propose and validate a conceptual model of the impact of unofficial media use on perceived transparency through rigorous empirical research from a media perspective. This contribution not only enriches the existing body of research on the influences of perceived transparency but also provides a more in-depth expansion of it. By focusing on the specific variable of unofficial media, this study reveals its important role in shaping public perceptions of government transparency. Second, this study innovatively examines the potential role of subjective well-being as a mediating variable. Unlike previous studies, this study does not simply analyze unofficial media use side-by-side with official media use but rather adopts a more refined moderating effect research approach. Specifically, this study explores how official media use affects the mediating relationship between subjective well-being and perceived transparency, thereby further revealing the deeper reasons why unofficial media use affects perceived transparency. This approach not only deepens our understanding of the mechanism of the role of unofficial media but also provides new perspectives and ideas for subsequent research. To summarize, by focusing on the mechanism of the effect of unofficial media use on perceived transparency and introducing subjective well-being as a mediating variable, as well as adopting the moderating effect research method, this study provides new empirical evidence and theoretical support for research in related fields. These contributions not only help us better understand the role of media in shaping public political perceptions and behaviors but also provide useful insights for enhancing government transparency and public trust.

2. Literature Review and Theoretical Hypothesis

2.1 Unofficial Media Use and Perceived Transparency

Unofficial media encompasses a variety of communication channels such as self-media, overseas media, and interpersonal exchanges (Chen et al., 2022). Compared with official media, unofficial sources possess a stronger and faster ability to disseminate information. Especially with the rapid development of online media technologies in recent years has enabled unofficial media to offer alternative narratives—often focusing on negative or under-disclosed content, which may influence public perceptions of government transparency. The concept of information asymmetry theory, originally developed by economists George Akerlof, Michael Spence, and Joseph Stiglitz in the 1970s, describes the unequal distribution of information between parties and its effects on market efficiency (Devos et al., 2012). In the field of political communication, similar asymmetries exist between citizens and government. Unofficial media use is seen as a mechanism through which individuals attempt to reduce such imbalances. The use of unofficial media can improve individuals' political knowledge, enhance their political participation, and promote trust in the government. Overall, these positive effects enhance individuals' understanding of politics and behaviors, invigorating the robust development of the political system (Arshad & Khurram, 2020; S. Lee et al., 2022; Zhu et al., 2019). Perceptions of government transparency can be increased by actively providing information (Alessandro et al., 2021). However, more information and positive citizen perceptions of government transparency do not necessarily go hand in hand (S. Grimmelikhuijsen, 2012a, 2012b). Media influence theory emphasizes the role of the media in the dissemination of information, where citizens learn about different perspectives than those of the official media through information provided by unofficial media. Moreover, the public pays more attention tends to gravitate toward negative news (De León & Trilling, 2021), and unofficial media frequently amplify sensationalized news, providing an outlet for the dissemination of negative social news. Long-term public exposure to such negative news may subconsciously affect the public's evaluation of government transparency, leading to political alienation. Accordingly, we propose the following hypotheses:

Hypothesis 1: Unofficial media use has a negative impact on perceived transparency.

2.2 The Mediating Role of Subjective Well-being

Subjective well-being refers to individuals' subjective evaluation of their lives, which includes reflective cognitive judgments. When people make judgments about their whole life, work, health, etc., they compare it with the good life in their mind (Diener et al., 2018). Due to the limitations of time, space, and cost, people's perception of the objective world often comes not only from in-person experience but also often relies on media. For young people in particular, social media usage plays a crucial role in shaping their well-being. Studies have shown that when social media is used for social support and social interaction, it can positively affect subjective well-being while moderating psychological problems (Hatamleh et al., 2023). Prior research has also found a positive correlation between social support obtained through social media and the subjective well-being of the audience (Kim et al., 2020). However, overuse of social media may lead to neglect of real-life experiences. Social comparison theory states that people tend to assess their situation by comparing it to the lives of others (Buunk & Gibbons, 2007). If audiences misinterpret the idealized virtual content presented in unofficial media for the real world, they may engage in upward social comparisons and perceive their own lives as less enjoyable and comfortable, leading to a decrease in their life satisfaction (Chou & Edge, 2012; Jang et al., 2016). Similarly, a study by Verduyn et al. (Verduyn et al., 2017) found a negative correlation between using social media for social interactions and subjective well-being.

Subjective well-being may mediate the relationship between unofficial media use and perceived transparency. Unofficial media platforms provide a channel of communication and expression for youth to analyze and talk about what they learn about political news online, especially news that is critical in nature. However, these unofficial channels also disseminate a great deal of false, inaccurate, distorted, and even fabricated information, sometimes serving commercial interests rather than promoting public interests (Xu & Sattar, 2020). If the public's needs and interests are not met in this process, it can further affect their mental health and subjective well-being. This may increase the public's uncertainty about the government and lead to a decrease in their perception of government transparency. According to attribution theory (Nguyen et al., 2021), when the public is exposed to negative information through unofficial media, they usually attribute it to external factors such as the government's inaction, which ultimately makes people skeptical of government transparency. Accordingly, we propose the following hypothesis:

Hypothesis 2: Unofficial media use has a negative impact on subjective well-being.

Hypothesis 3: Subjective well-being plays a mediating role in the influence of unofficial media use on perceived transparency.

2.3 The Moderating Effects of Official Media Use

In addition to hypothesis 2, this study explores the impact of official media use, particularly its moderating role in the relationship between subjective well-being and perceived transparency. If subjective well-being indeed mediates the relationship between unofficial media use and transparency perception, and official media further moderates this mediation, the presence of a moderated mediation effect can be established. This study is significant because it provides insight into the entire process of the influence mechanism. Framing theory highlights the media's capacity to shape public opinion by emphasizing certain aspects of information while omitting others (Entman, 1993). As a communication bridge between the government and the public, official media plays a significant role in spreading mainstream values and winning public support (Bulovsky, 2019; H. Huang, 2018). The intensity of official media use may impact how subjective well-being affects perceived transparency. When youth consume official media frequently, it may reinforce positive emotions, optimism, and trust, thus strengthening the positive impact of subjective well-being on perceived transparency. Conversely, when the low intensity makes the positive effect of official media weaker, the youth is more likely to attribute the decline in subjective well-being to the dereliction of duty of government agencies, which in turn reduces perceived transparency. Accordingly, we propose the following hypothesis:

Hypothesis 4: Official media use has a positive moderating effect on the relationship between subjective well-being and perceived transparency.

The theoretical model used in this study is illustrated in Figure 1.

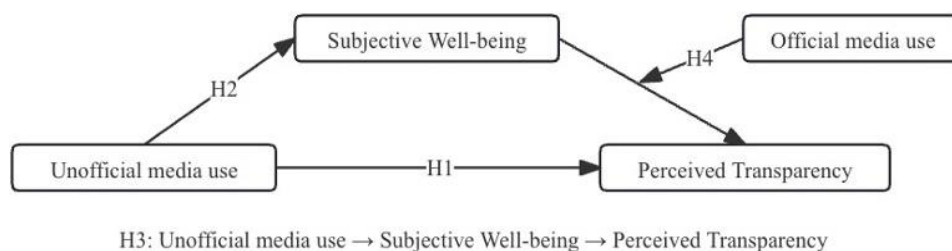


Figure 1. Theoretical model

3. Research Methodology

This section provides an overview of the research methodology used in the study, including details of the sampling and data collection procedures, the measures used for data collection, and the analytical techniques used to obtain results.

3.1 Sampling and Data Collection

This research adopted a quantitative, cross-sectional research design. Primary data were collected through an online questionnaire administered over one month, from July 1 to August 1, 2024. The survey was conducted using an online questionnaire and the data was collected using a questionnaire. The survey was conducted using an online questionnaire, a method that would encourage respondents to answer the questionnaire questions honestly and minimize the tendency of social desirability bias, especially when the questions of the data may involve sensitive content. The researcher prepared a questionnaire to answer the research objectives and proposed hypotheses, which was translated into Chinese to make it easier for respondents to understand. The questionnaire included respondents' demographic information, official and unofficial media use, subjective well-being, and perceived transparency. The selection of these variables was closely related to the research hypotheses.

Respondent participation was entirely voluntary and anonymous, with each participant receiving RMB 2 yuan upon completion of the survey, and the completion time for filling out the online questionnaire was approximately 7 minutes. The study used convenience sampling to select participants. Data were collected from a sample of young adults aged 18-35 years in Guangzhou, China. Participants were recruited through WeChat, TikTok, and Microblog, among others, and online media is considered cost-effective to reach a wider group of respondents. A final valid sample of 405 was obtained.

3.2 Measures

This research pre-developed instrument to measure these variables.

Perceived transparency refers to citizens' understanding of the internal workings of government through public disclosure of information about government activities and decision-making processes (G. A. Porumbescu, 2015; Song & Lee, 2016). Perceived transparency was assessed using Al-Aufi et al. (Al-Aufi et al., 2017) 4-item assessment with a 5-point scale (1 = "Strongly Disagree", 5 = "Strongly Agree").

Subjective well-being refers to people's subjective evaluation of their lives, which includes reflective cognitive judgments (Diener et al., 2018). We used the 4-item assessment of the subjective well-being Scale developed by Diener, using a 5-point scale (1 = "Strongly Disagree", 5 = "Strongly Agree").

For media use, this research adopted the classification distinguishing between official and unofficial, as proposed in previous research (Cui & Wu, 2021). Official media use refers to respondents' consumption of information published by media that have an official background, are controlled, and supported by the official government, or bear the burden of reacting to official attitudes. Therefore, official media use mainly refers to the frequency of respondents' access to current political news, current affairs commentary information, etc., through channels such as CCTV, Xinhua News Agency, People's Daily, Sina, and other websites. The unofficial media use mainly refers to the frequency of respondents' access to current political news, current affairs commentary, and other news from other channels such as Microblog or an online community, WeChat, Grapevine or chatting with friends, and Overseas media. A 5-point scale was used (1 = Almost Never, 5 = More than One Hour Per Day).

As shown in Table 1, the component analysis yielded two common factors that were categorized into unofficial media use and official media use based on whether they were official channels. Unofficial media use includes four items: Microblog or an online community, WeChat, Grapevine or chatting with friends, and Overseas media, while official media use includes three items: CCTV, Xinhua News Agency and People's Daily, and Sina portal. The study found that browsing the web or chatting with friends is the most frequently used media source, while CCTV is the least frequently used media source. The analysis also shows that unofficial media has a "crowding out effect" on official media, i.e., netizens have a higher preference for unofficial media compared to official media.

Table 1. Factor analysis of media use

Extraction factors and the corresponding original question item	Factor loadings			
Extraction method is the main component analysis; Maximum variance rotation method; KMO=0.800	Unofficial media use	Official media use	Mean	SD
The cumulative variance contribution rate is 75.963%				
Microblog or an online community	0.872	0.004	2.90	1.275
WeChat	0.860	0.010	2.86	1.281
Grapevine or chatting with friend	0.862	0.042	2.95	1.293
Overseas media	0.861	0.043	2.89	1.309
CCTV	-0.034	0.878	2.60	1.283
Xinhua News Agency, People's Daily	0.059	0.878	2.69	1.268
Sina and other websites	0.051	0.883	2.67	1.279

3.3 Reliability and Validity

To assess the consistency and stability of the measurement tools and to test the degree of internal consistency of the scales, this manuscript adopts the Cronbach's α method to evaluate the consistency and stability of the measurement tools. In this research, Cronbach's α coefficient is used as a criterion of reliability, and the higher the value of Cronbach's α , the higher the internal consistency of the scale. In this manuscript, the acceptable reliability requirement is that the α value is more than 0.7. As shown in Table 2, the α values of the constructs in this manuscript are all above 0.8, which indicates that the scales in this manuscript have good reliability. In terms of convergent validity, the combined reliability (CR) value of each variable in this manuscript ranges from 0.863 to 0.930. The average variance extracted (AVE) value ranges from 0.612 to 0.767, which satisfies the criteria of CR higher than 0.6 and AVE higher than 0.5, indicating that the convergent validity of the scale is good.

Table 2. Reliability and convergent validity analysis

Types	Variables	Items	Factor loadings	Cronbach's α	CR	AVE
Independent Variable	Unofficial media use	NOMU1	0.852	0.887	0.903	0.699
		NOMU2	0.843			
		NOMU3	0.833			
		NOMU4	0.816			
Mediator Variable	Subjective Well-being	SW1	0.847	0.818	0.863	0.612
		SW2	0.767			
		SW3	0.785			
		SW4	0.727			
Dependent Variable	Perceived Transparency	PT1	0.930	0.911	0.930	0.767
		PT2	0.867			
		PT3	0.856			
		PT4	0.849			
Moderator Variable	Official media use	OMU1	0.873	0.855	0.907	0.765
		OMU2	0.872			
		OMU3	0.878			

Discriminant validity is used to detect the extent to which a study variable differs from other study variables in terms of traits. Good discriminant validity is indicated when the square root of the AVE for each variable is greater than the correlation coefficient between that variable and the other variables. As shown in Table 3, the AVE open root sign value of each variable in this manuscript is greater than the correlation coefficient between those variables and other variables, so the scale has good discriminant validity. At the same time, in testing the hypothesized relationship between variables generally needs first to analyze the correlation of each variable, as presented in Table 3, the correlation between the main variables of this manuscript, unofficial media use, subjective well-being, and perceived transparency, is statistically significant. The findings provide initial support for the hypotheses.

Table 3. Distinguishing Between Validity and Correlation Analysis

	1	2	3	4
Unofficial media use	0.836			
Official media use	0.058	0.875		
Subjective Well-being	-0.477***	0.017	0.787	
Perceived Transparency	-0.186***	0.180***	0.279***	0.876

Note: n=405, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

3.4 Hypothesis Tests

We obtained confirmatory results in all three hypotheses.

3.5 Main-Effect Test

The research hypotheses were tested using multiple regression analysis conducted in SPSS 26.0. To examine the effects of unofficial media use and subjective well-being on perceived transparency, a stepwise regression approach was applied. Perceived transparency is set as the dependent variable of the model, and four types of control variables, namely gender, political affiliation, education, and annual income, are added sequentially, as shown in Model 1 of Table 4. Model 1 shows that gender, political affiliation, and education all significantly and positively affect perceived transparency ($\beta_{\text{Gender}} = -0.165, p < 0.05$; $\beta_{\text{Political party}} = 0.113, p < 0.05$; $\beta_{\text{Education level}} = 0.218, p < 0.05$). Subsequently, the independent variable Unofficial media use was added to test the hypothesis, and with the control variables, Model 2 showed that Unofficial media use significantly negatively affects perceived transparency ($\beta_{\text{Unofficial media use}} = -0.183, p < 0.05$), thus hypothesis H1 is supported.

Table 4. Multiple regression analysis (MRA)

Variables		Perceived Transparency				Subjective Well-being	
		Model1	Model2	Model3	Model4	Model6	Model7
Control Variable	Gender	-0.165***	-0.159***	-0.115*	-0.097*	-0.264***	-0.250***
	Political Party	0.113*	0.123**	0.072	0.065	0.219***	0.246***
	Education Level	0.218***	0.211***	0.176***	0.179***	0.227***	0.208***
	Annual Income	0.091	0.097*	0.052	0.056	0.206***	0.223***
Independent Variable	Unofficial media use		-0.183***				-0.483***
Mediator Variable	Subjective Well-being			0.187***	0.186***		
Moderator Variable	Official media use				0.170***		
Interaction Term	Official media use×Subjective Well-being				0.165***		
	R ²	0.092	0.125	0.119	0.178	0.205	0.437
	ΔR ²	0.083	0.114	0.108	0.163	0.198	0.430
	F	10.106	11.398	10.828	12.244	25.861	61.972

Note: n=405, *p<0.05, **p<0.01, ***p<0.001.

3.6 Test of the Effect of the Mediating Variable

The test the mediating role of subjective well-being, we first examine the effect of unofficial media use on subjective well-being. As shown in Model 6 of Table 4, subjective well-being was treated as the dependent variable of the model, and four types of control variables, namely, gender, political affiliation, education, and annual income, were added sequentially. Model 6 shows that the control variables all have significant positive effects on subjective well-being ($\beta_{\text{Gender}}=-0.250$, $p<0.05$; $\beta_{\text{Political party}}=0.246$, $p<0.05$; $\beta_{\text{Education level}}=0.208$, $p<0.05$; $\beta_{\text{Annual income}}=0.223$, $p<0.05$), Model 7 adds the independent variable unofficial media use to Model 6, and the results show that unofficial media use significantly and negatively affects subjective well-being, and hypothesis H2 is supported.

Subsequently, the mediator variable, subjective well-being is added to test the hypothesis, with the control variables, as shown in Table 4 of Model 3. Subjective well-being significantly and positively affects perceived transparency ($\beta_{\text{Subjective well-being}}=0.187$, $p<0.05$). Therefore, hypothesis H3 is supported.

Further, a bootstrapping method was employed to test the mediating effect ($K=5000$, $p=95\%$). As shown in Table 5, the standardized coefficient of the indirect effect between unofficial media use and perceived transparency is -0.118, and the confidence interval of the Bias-Corrected 95% Confidence Interval is [-0.172, -0.068]. The confidence interval does not contain 0, indicating that the indirect effect of unofficial media use on perceived transparency is significant, and the mediating effect of subjective well-being exists. The standardized coefficient of the direct effect between unofficial media use and perceived transparency is -0.068, and the confidence interval of the Bias-Corrected 95% CI is [-0.175, 0.039], the confidence interval includes 0, which does not reach the level of significance, indicating that the direct effect of unofficial media use on perceived transparency is not significant. These result confirm that subjective well-being fully mediates the relationship between unofficial media use and perceived transparency.

Table 5. Mediation effect test

Variables	Effect	SD	Bias-Corrected 95% CI		Relative Effect
			Lower	Upper	
Total Effect	-0.186	0.049	-0.283	-0.090	100%
Unofficial media use→Perceived Transparency Direct Effect	-0.068	0.055	-0.175	0.039	36.6%
Unofficial media use→Perceived Transparency Indirect Effect	-0.118	0.027	-0.172	-0.068	63.4%

3.7 Test of the Effect of the Moderating Variable

In Model 4, the moderating variable official media use and its interaction term with subjective well-being were added based on Model 3. Results show that official media use had a significant positive effect on perceived transparency ($\beta_{\text{Official media use}}=0.170$, $p<0.05$), and the interaction term between official media use and subjective well-being is positive and significant ($\beta_{\text{Interaction term}}=0.165$, $p<0.05$). Meanwhile, compared with Model 3, the R² of Model 4 increased significantly ($\Delta R^2=0.058$, $p<0.05$), indicating an improvement in model fit. This suggests that official media use strengthens the positive effect of subjective well-being on perceived transparency, and Hypothesis H4 was supported.

In order to show more intuitively, this manuscript plotted the moderating effect of official media use according to the test results of the moderating effect, as shown in Figure 2. As shown, the slope of the regression line is steeper under high levels of official media use, indicating that the positive impact of subjective well-being on perceived transparency is stronger when individuals consume more official media.

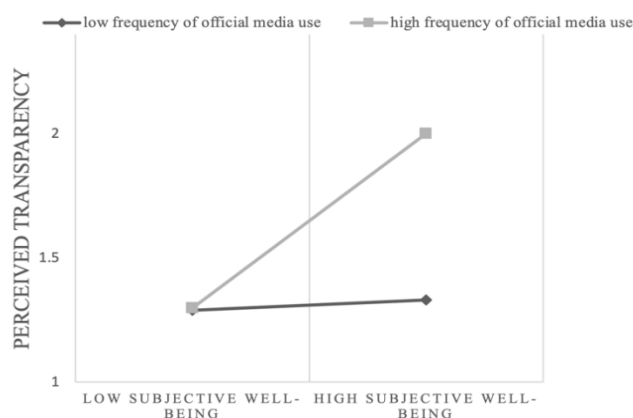


Figure 2. The moderating effect of official media use on the relationship between subjective well-being and perceived transparency

3.8 Heterogeneity Analysis

Based on the previous analysis, which showed that control variables influenced perceived transparency differently across subgroups, this research conducted a heterogeneity test. Specifically, participants with a high school education or below were categorized as the low-education group, and those with annual household incomes below 60000 RMB were classified as the low-income group. The remaining participants were assigned to the high-education and high-income groups, respectively. This research further explores whether the relationship between unofficial media use and perceived transparency persists across these subgroups. The results of the analysis are shown in Table 6, which indicates that the effect of unofficial media use on individuals' perceived transparency varies across group types.

3.8.1 Gender Heterogeneity

It was found that among different gender groups, Chinese women tend to focus primarily on three areas: daily life, family, and work (Zhou et al., 2018), which may lead to the negative news they are exposed to in unofficial media being ignored. Specifically, this study also found that the main effect of unofficial media use on perceived transparency was not significant in the female group, while in the male group, unofficial media use significantly negatively affected perceived transparency; the mediating effect of subjective well-being was not present.

3.8.2 Political Appearance Heterogeneity

As shown in Table 6, the main effect of unofficial media use on perceived transparency was not significant among party members, while the mediating effect of subjective well-being between unofficial media use and perceived transparency exists for the non-party members' group. However, the moderating effect of official media use on subjective well-being was not significant.

3.8.3 Educational Heterogeneity

Research has found that more educated individuals are generally more politically knowledgeable and tend to hold stronger political convictions than their less educated counterparts (Lane et al., 2023). As shown in Table 6, the main effect of unofficial media use on perceived transparency is not significant for any of the tertiary educated groups across education groups. In contrast, for individuals with only basic education, unofficial media use continues to have a significant negative impact on perceived transparency. The more negative social news this group is exposed to through unofficial media, the more likely they are to become skeptical of government transparency.

3.8.4 Income Heterogeneity

As shown in Table 6, the main effect of unofficial media use on perceived transparency is not significant for the high-income group, while for the low-income group only, unofficial media use still significantly negatively affects perceived transparency. This finding is consistent with previous research in China, which suggests that low-income individuals tend to have weaker cognitive abilities (Cui & Wu, 2021), making them more susceptible to rumors or misinformation. In comparison, high-income individuals generally possess stronger cognitive skills, which may help

them filter out biased or negative content encountered through unofficial media, thereby reducing its impact on their perception of government transparency.

Table 6. Heterogeneity test

		Female	Male	Non-party	Party-member	Basic education	Higher education	Low income	High income
	Group	1	2	3	4	5	6	7	8
Main Effect	Control Variable	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Effect	-0.090	-0.203**	-0.176*	-0.111	-0.191**	-0.055	-0.182**	0.007
Moderating Effect	Control Variable		Yes	Yes		Yes		Yes	
	Effect		0.129*	0.113		0.156**		0.152**	
Mediating Effect	Control Variable		Yes	Yes		Yes		Yes	
	Effect		-0.059	-0.103		-0.071		-0.082	

Note: n=405, *p<0.05, **p<0.01, ***p<0.001.

4. Result

A substantial body of research has consistently found mass media to have a shaping and influencing role on political attitudes, political behavior, political literacy, political efficacy, and culture (Anderson et al., 2021; Bobkowski & Rosenthal, 2022; Q. Huang et al., 2022; Kwon et al., 2021; Li & Chan, 2017; Tang & Wen, 2023; Tariq et al., 2022; Yue et al., 2019). However, China's media system differs significantly from those Western countries (P. S. N. Lee et al., 2018), rendering the relationship between mass media and youth-perceived transparency among Chinese youth both complex and context-specific. This research focuses on systematically exploring the impact of unofficial media use on perceived transparency among Chinese youth in Guangzhou, China. The findings support our hypothesis to explore the complex interactions among media use, subjective well-being, and perceived transparency through multiple research paths.

First, the results indicate that youth's use of unofficial media diminishes perceptions of government transparency. This echoes the Media Depression Theory, which emphasizes the impact of negative information content on youth's political attitudes. Since the youth group has a higher level of use and reliance on unofficial media, their perception of government transparency may be more susceptible to negative information that is false, inaccurate, or exaggerated.

Second, the mediating role of subjective well-being is particularly critical. People often post embellished information or pictures of their lives in the media and publish exaggerated negative news to attract public traffic and eyeballs. According to Social Comparison Theory, exposure to such content may diminish life satisfaction among youth, which may reduce their perceived transparency of government processes. This underscores the duality of the role of unofficial media. It can serve as a source of political information and potentially as a catalyst for emotional distress among youth users, leading to a decrease in the perceived transparency of the government's political behavioral process.

Third, this research emphasizes the moderating role of official media use. Official media are not powerless in today's complex and changing media environment. If the official media can be responsive and sincere in explaining and responding to events, following up and clarifying inaccuracies when informing the public about them, this can have a powerful effect in weakening and counteracting the negative influence of the unofficial media. This supports the Virtuous Circle Theory, which posits that positive feedback loops in media communication can enhance democratic engagement and institutional trust. This also illustrates the need for youth to balance media consumption, contributing to the understanding of media effects in China and providing insights for countries in similar contexts to better shape youth perceptions of governance.

Finally, this research conducted heterogeneity analysis across different demographic groups. The study found significant differences in the impact of unofficial media on perceived transparency. For example, gender, political affiliation, educational background, and income level factors showed varying media impact effects, which complicates the purpose of achieving impact on perceived transparency through official media use.

Nonetheless, we recognize that some limitations to this study require further refinement. This study has several limitations. First, the sample was drawn from youth in Guangzhou via an online survey, which limits representativeness and affects the generalizability of findings beyond this region. Second, reliance on self-reported data may introduce social desirability bias, especially given the political sensitivity of some questions. Third, the cross-sectional design restricts causal inference and fails to capture changes over time. Future research should consider longitudinal designs, more diverse and representative samples, and cross-national comparisons to enhance the robustness and applicability of the results.

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Authors contributions

Xianlu Zhao was responsible for the study design, data collection, data analysis, and manuscript drafting. Dr. Moniza Waheed provided overall supervision, theoretical guidance, and was involved in manuscript review and editing. Dr. Adlina Ab. Halim contributed methodological advice and participated in the review and editing of the manuscript. Zhuang Tian assisted with literature collection, data verification, and manuscript proofreading. Tao Yuan contributed to content validation, critical review, and final proofreading. All authors read and approved the final version of the manuscript.

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