

Why people participate in collaborative governance through the government hotline: from the perspective of the theory of planned behavior

Yingfa Song¹
Jiangxia Ji²

Abstract

The government hotline has a good application prospect in the field of public participation. To explore the influencing factors of public engagement through the hotline will provide practical solutions to improve the hotline system. Based on the theory of planned behavior, this study constructed a model of influencing factors for the public to use the hotline to participate in collaborative governance. Hypothesis testing was conducted by structural equation model, and regression analysis was used to explore the moderating effect of each influencing factor on different governance behaviors. The results showed that the attitude, subjective norms, perceived behavioral control, government trust and participation resources have a positive and significant impact on the public's behavioral intention to use the hotline to participate in collaborative governance, and the behavioral intention further leads to the actual governance behavior. The attitude was influenced by subjective norm and public trust, while attitude and participation resource significantly affected the perceived behavioral control. Public departments should adopt methods such as multi-channel integrated publicity, inter-departmental collaboration, and focusing function positioning to promote the public to participate in collaborative governance by using hotline.

Keywords: Government hotline; Collaborative governance; Public participation; Theory of planned behavior; Structural equation model

¹ Professor, School of Public Policy and Management, China University of Mining and Technology, China, e-mail: songyf@cumt.edu.cn

² Postgraduate student, School of Public Policy and Management, China University of Mining and Technology, China, e-mail: 15957200948@163.com

1. INTRODUCTION

Under the integration of Internet information technology into social governance, public's e-participation has been defined as an important branch of e-government, with emphasis on the guiding role of public participation in government decision-making and deliberation (Welch, 2012, p. 347-367). As the most popular and widely used government-to-citizen service in the digital era so far (O'Brien *et al.*, 2017), the government hotline (GH) has played an important role in improving public participation and promoting collaborative governance with its advantages such as low cost and user friendliness.

In China, 12345 government service hotline is a public service platform set up by municipal governments in various parts of China. It is composed of telephone hotline, mayor's mailbox, SMS, mobile application, Weibo, WeChat and other ways to deal with nonemergency services, which provides the round-the-clock manual service (Zheng & Ma). China's 12345 system originated in 1983. After going through the multi-line integration and standardization stage, it has gradually transformed from the public service approach into the social data center, improving the efficiency and quality of public services with the smart infrastructure and open data. Beijing, Hangzhou, Chengdu and other cities integrate the functions of multiple service hotline, and implement the operation mechanism of "one number to public, multi-line linkage, unified handling, classification disposal, and joint collaboration" (Zheng *et al.*, 2018).

While many practical achievements have been made, the GH also has some practical difficulties, such as fuzzy function positioning, lack of standard systems, service fragmentation (Wu *et al.*, 2014), insufficient data governance capability (Zheng *et al.*, 2020) and so on. Further focusing on the demand side, the low utilization rate of the public is one of the biggest risks faced by GH and other collaborative governance approaches in the digital era (Faulkner *et al.*, 2019; Li & Shang, 2020). The establishment of the GH system is originally intended to create a convenient way for the general public to obtain services and participate in governance. However, the low utilization rate of the public brings the phenomenon of "hotline being cold". The public value and functional orientation of GH need further exploration.

From the perspective of demand side, we constructed the model of influencing factors of public participation through GH. On the basis, we explored the intention and behaviors of public participation via hotline service, in order to improve the usage rate of the hotline and build a service-oriented government in the digital era.

2. LITERATURE REVIEW

2.1 *The motivation of public participation through the GH*

As one of the main bodies of governance, the public has become a decisive force in promoting the modernization of governance ability and system. Its heterogeneous and multi-level individual needs give rise to diversified participation motives. Some scholars, based on the specific links of the public's handling of affairs through channels such as the GH, have refined the motives of public information acquisition, appeal expression and evaluation feedback (Meng *et al.*, 2017).

According to the functional attributes of the public in grass-roots governance, some studies divided the participation modes of the public in the operation of the GH into problem discovery, evaluation and supervision, and interactive feedback (Ma *et al.*, 2020). When the public participates in politics through the hotline, it can be regarded as the collaborative governance between the public and the government in the two modes of "citizen" and "partner". The former refers to the public using GH system to submit suggestions related to democratic elections to the government; The latter means that the public uses GH as a tool to participate in social governance, including informing road congestion or garbage disposal problems. (O'Brien *et al.*, 2017).

2.2 *The practical obstacles of public participation through the GH*

Due to the influence of users' individual attributes and the service quality of the hotline, there are many practical obstacles in the application of the GH. The low usage rate of the hotline causes the transmission of public demands to be blocked, and the original intention of the hotline to provide services, solve conflicts and coordinate governance is difficult to realize (Yao & Mei, 2018). In the process of using the hotline, the public tends to use the expression strategies such as information asymmetry and discourse protection due to their privatization needs. The collaborative governance function of the public cannot be realized at this time, which may lead to the service alienation of the public sector and further weaken the public's trust in the government (Lei, 2018).

2.3 *The optimization path of the GH*

In order to play a better role of the GH as a mediator in public participation, some scholars proposed to combine it with traditional media, new media and democratic evaluation activities, so as to expand the social participation scope through the integration of multiple channels (Wu *et al.*, 2014). It is urgent to improve the ability to receive and collect data on public's livelihood needs through data opening and sharing, which contributes to the dual transformation of functions and positioning, and support for promoting collaborative governance (Zheng & Ma, 2018).

2.4 The influence factors of public participation through the GH

Individual differences exist among the user groups of the GH, which may cause the public's application be affected by multiple factors. From the perspective of external environment, the public's regional location, economic situation and the representativeness of regional government will all affect the intention of the public to interact with the government, thus affecting the usage of the GH (Minkoff, 2016). The user-friendliness index of the hotline system, such as the availability and ease of use, is positively correlated with the public usage rate (Wu, 2020). From the perspective of the public, studies have proved that the public's personal political attributes such as past experience and political enthusiasm are positively correlated with the frequency of political participation through information channels such as GH (Mcneal *et al.*, 2008). In addition, the public's personal economic situation, perceived needs, social capital, technology acceptance and other factors also show certain correlations with the use of GH and other e-participation channels (Naranjo-Zolotov *et al.*, 2019; Lee & Kim, 2018; Wu, 2020).

The current research in this field has the following limitations. First of all, academic researches on the GH mostly choose the perspective of the service supply side, and pay little attention to the demand side, namely the social public group. Secondly, most studies focus on the public's intention to use the GH when participating in governance, but the transformation between intention and behavior is not an inevitable relationship (Li *et al.*, 2019). On this basis, the influence effect of this variable should be tested.

3. THE EXPERIENCE OF 311 GOVERNMENT HOTLINE IN THE UNITED STATES

The government service hotline originated in the United States. In 1996, Baltimore city established the 311 hotline system in order to divert a large number of non-urgent problems or requests from the 911 alarm system. To make it easier for citizens, the portal in Baltimore's 311 civic service divides its services into six categories: garbage and nuisance, streets and streetlights, signs/signals/parking, city employee feedback, water/sewer/storm and others. The system has a total of 29 small items in order to refine the service items and clear governance issues (Chatfield & Reddick, 2018).

Baltimore's success was quickly followed by the federal government and other cities. In 1997, the Federal Telecommunications Commission decided to reserve 311 as a non-emergency call number nationwide. New York, Chicago, Washington, Los Angeles, Detroit and other cities have also set up 311 citizen service systems. Among

them, New York City 311 Customer Service Center (NYC311) was officially established in 2003 (Liu, 2018). NYC 311's answering service operates 24 hours a day, seven days a week, year-round, and is known as the city hall that never closes and the government agency that never sleeps. To accommodate New York's cosmopolitan status and meet the complex needs of a diverse population, NYC 311 also launches the Language Access Plan. The portal offers services in more than 50 languages, and is available in more than 175 languages (Yao & Mei, 2018).

The service provided by the hotline system is a process in which citizens participate in public governance through consultation and complaint, and an important field in the study of citizen participation and cooperative production. In the co-production model, some studies have pointed out that citizens' participation relies more on a sense of belonging and responsibility. This study found that the sense of community belonging, seeking benefits for the community and the sense of responsibility to establish community norms had a positive impact on citizens' participation based on the 311 system (Offenhuber, 2015).

When the 311 hotline expands its service and participation channels, it does not accurately understand the actual effect of its operation and promotion. Some scholars found that the connection degree between citizens and 311 hotline in the social media field was relatively low, and the citizen participation based on this channel did not achieve the expected effect. The GH has the ability to perceive the city, which is based on the full participation of citizens (Gao, 2017). Therefore, the level of citizen participation determines whether the government can correctly perceive public needs and urban problems to a certain extent. The 311 service hotline needs to have a more accurate understanding of the status quo and problems of citizen participation.

In general, in the past 20 years, the service capacity of 311 hotline in the United States has been constantly improving. Its technology has gradually matured, leading the development of hotline systems in the world in terms of concept and practice. However, the 311 system in the United States also faces problems. For example, the actual effect of hotline service and citizen participation is difficult to meet the expectations of the public. Meanwhile, the mining and transformation of the data value of GH itself is insufficient.

In the future, the government should continue to optimize the management process and governance model, and enhance public participation in the use of GH, so as to make the service more efficient and intelligent. It is not only an important issue concerned by the 311 hotline in the United States, but also provides a certain reference for the development of the government service system in China.

4. THEORETICAL FRAMEWORK AND HYPOTHESIS

4.1 Theory of planned behavior

The theory of planned behavior emphasizes that a certain behavior of the public will be affected by the behavioral intention, and that behavioral attitude, subjective norms and perceived behavioral control jointly act on the behavioral intention (Ajzen, 1991). A large number of studies have proved that the theory has good reliability in predicting and explaining individual behavior.

In the theory of planned behavior, behavioral attitude refers to a person's positive or negative feelings towards a particular behavior and its possible consequences. The behavioral attitude will directly influence the behavioral intention. The more positive a person is towards a certain behavior, the stronger the intention to carry it out will be. In this study, behavioral attitude referred to the public's positive or negative judgment on using the GH to participate in collaborative governance. Therefore, the following hypothesis was proposed:

H1: Behavioral attitude would positively influence the public's behavioral intention to use the GH for collaborative governance.

When individuals take a certain action, they will be subject to social pressure exerted by individuals or groups that have influence on their behavior decisions, which is called subjective norm by the theory of planned behavior. The stronger the public's subjective norms for a specific behavior, that is, the greater the perception of social pressure on the surrounding groups, the stronger the public's intention to carry out the behavior. If the public perceive that the surrounding people accept and approve their use of the hotline for collaborative governance, this behavioral intention will be strengthened. With the widespread use of information and communication technology (ICT), the promotion of hotlines by the official media and authorities in the field of e-government will encourage the public to use this approach for collaborative governance.

The following hypotheses were proposed:

H2a: Subjective norms would positively influence the public's behavioral intention to use the GH for collaborative governance.

H2b: Subjective norms would positively influence the behavioral attitude of using the GH for collaborative governance.

Perceived behavioral control reflects an individual's perception of how easy it is to master and execute a certain behavior. The subject of behavior judges the anticipated obstacles of a specific behavior by integrating his skills, experience, opportunities, resources, etc., thus generating a sense of self-efficacy (Turcanu *et al.*, 2014). Some scholars have included behavioral belief, normative belief and control belief as variables into the theoretical model of planned behavior, and proposed that

behavioral attitude, subjective norm and perceived behavioral control may be affected by the same belief, so there is a correlation between them (Ajzen, 1991).

The following hypotheses were proposed:

H3a: Perceived behavioral control would positively affect the public's behavioral intention to use the GH for collaborative governance.

H3b: Perceived behavioral control would positively affect the public's actual behavior to use the GH for collaborative governance.

H3c: Behavioral attitude would positively affect the perceived behavioral control of the public's use of the GH for collaborative governance.

H3d: Subjective norms would positively influence the perceived behavioral control of the public's use of the GH for collaborative governance.

According to the theory of planned behavior, individual behavior is the outward manifestation of behavioral intention, and positive behavioral intention will promote the implementation of the behavior. So that, the stronger the intention of the public to use the GH to participate in collaborative governance is, the more inclined they are to take practical actions. When the members of the public enter the public domain and participate in urban governance, due to the diversity of individual needs and social functions, the collaborative governance behaviors implemented by them become increasingly complicated.

The following hypothesis was proposed:

H4: Behavioral intention would positively influence the public's actual behavior to use the GH for collaborative governance.

4.2 Public trust and participation resources

The public's trust in the government is an important factor affecting its e-participation behavior, and the public trust will directly affect the success of e-government policies (Tsui, 2019). Studies have shown that when the public has a trusting attitude towards ICT and the public sector, their usage intention of e-government is relatively stronger (Belanger & Carter, 2008). Therefore, we introduced the variables of public trust, including the public's trust perception of government purpose, privacy protection, service effectiveness and other aspects in the process of using the hotline for collaborative governance. Based on the above reasons, the following hypotheses were proposed:

H5a: The public trust would positively influence the behavioral intention to use the GH for collaborative governance.

H5b: The public trust would positively influence the behavioral attitude to use the GH for collaborative governance.

In the process of e-participation of the public, the necessary resources provide them with the means and ability to engage in collaborative governance. The civic voluntarism model takes resources as the most influential explanatory factors for people to participate in political or civic activities, including time, money, citizen skills, etc. (Verba *et al.*, 1995). Some scholars combined the characteristics of

citizens' political participation in the digital era and included information channels into the resource category of e-participation (Kusumarani & Zo, 2019). Specifically, when the relative scale and substitutability of the resources required for collaborative governance are larger, the public's dependence on these resources is lower. Therefore, the following hypotheses were proposed:

H6a: The participation resources would positively influence the perceived behavioral control of the public's use of the GH for collaborative governance.

H6b: The participation resources would positively influence the public's behavioral intention to use the GH for collaborative governance.

H6c: The participation resources would positively influence the public's actual behavior to use the GH for collaborative governance.

4.3 Initial research model

Integrated the theory and hypothesis, this research framework based on the theory of planned behavior, increasing two dependent variable named "public trust" and "participation resource". It would be used as the independent variable of actual behavior according to three public participation behavior including decision-making advice, service feedback and coproduction. Finally, we built up the initial influencing model of public's intention and behaviors to use the GH for collaborative governance (see Fig. 1).

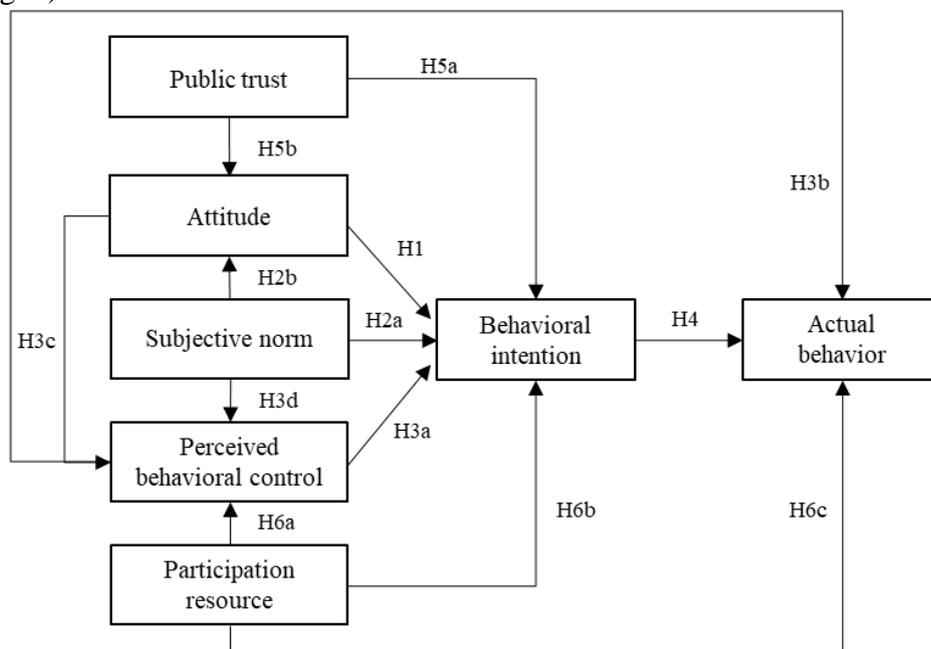


Figure 1. Initial research model

5. METHODOLOGY

5.1 Research instrument

Referred to the existing literature of the theory of planning behavior, we added questions related to "public trust" and "participation resources", and generated observation variables and corresponding questionnaire questions based on the characteristics of the GH. For example, we set three items to measure the variable "Attitude", including "I believe it is beneficial for me to use the hotline to participate in collaborative governance" and so on. The measurement items in the questionnaire adopted a 7-point evaluative semantic difference scale, and the logical choices from "strongly disagree" to "strongly agree" were given according to "1-7".

According to the available data, we firstly used the structural equation model to test all the hypotheses and then modify the research model. Subsequently, we used regression analysis to test the moderating effects of each variable on three different types of collaborative participation behaviors.

5.2 Data collection

In order to ensure the scientificity and credibility of the questionnaire, experts in this field firstly evaluated the questionnaire. After the normative modification of the questionnaire, 40 questionnaires were randomly distributed for pre-investigation. According to the answers of the 31 valid questionnaires collected, the questionnaire was formed after adjustment in terms of item setting and question expression. In this study, a total of 415 questionnaires were randomly distributed from February 17 to 25, 2021, and 306 were effectively received with an effective recovery of 73.7%.

6. RESULTS

6.1 Reliability and validity test

After data cleaning of the samples and standardization of the reverse items, reliability test was carried out first. The test results showed that the Cronbach's alpha coefficient value of the overall scale was 0.92, which of each variable was above the lowest acceptable level of 0.7. It indicated that the questionnaire had good internal consistency (Hair *et al.*, 1992).

In this study, exploratory factor analysis and confirmatory factor analysis were used to test the structure validity, convergence validity and discriminant validity of the scale respectively. The results showed that the variables in this study were very suitable for factor analysis and had good convergence validity.

6.2 Hypothesis testing and model modification

In this study, AMOS26.0 was used to test the fitting degree between the initial

model and data. The goodness-of-fit index and comparative fit index of our model were slightly lower than the fitting indexes, but still within the acceptable range. The other indexes all met the standard, and the model fitting degree results were accepted.

The path coefficient calculation and hypothesis test were carried out for the variable relationship in the revised model. Table 1 shows the standardized coefficients and test results of each group of paths. In this model, behavioral attitude, subjective norm, perceived behavioral control, public trust and participation resource variables all had positive and significant impacts on the public's behavioral intention to use the GH to participate in collaborative governance, that was, hypothesis H1, H2a, H3a, H5a and H6b were verified. Perceived behavioral control was positively correlated with behavioral attitude (H3c) and participation resource (H6a). Subjective norm had a positive impact on behavioral attitude (H2b), and as the public trust increased, so did the attitude (H5b). The actual behavior of the public to use the GH for collaboration was positively and significantly affected by the behavioral intention (H4).

In addition, three sets of hypotheses failed to pass the test, that was, the perceived behavioral control (H3b) and participation resource (H6c) did not influence the actual behavior, and the perceived behavioral control was not affected by subjective norm (H3d).

Table 1 Model path coefficient and hypothesis testing

Path	Standard Coefficient	S.E.	T	Significant	Hypotheses	Test Results
Attitude → Behavioral intention	0.588	0.137	4.304	***	H1	Pass
Subjective norm → Behavioral intention	0.263	0.101	2.603	**	H2a	Pass
Subjective norm → Attitude	0.483	0.057	8.517	***	H2b	Pass
Perceived behavioral control → Behavioral intention	0.376	0.119	3.171	**	H3a	Pass
Perceived behavior control → Actual behavior	-	-	-	-	H3b	Reject
Attitude → Perceived behavior control	0.322	0.1	3.235	***	H3c	Pass
Subjective norm → Perceived behavior control	-	-	-	-	H3d	Reject
Behavioral intention → Actual behavior	0.551	0.116	4.758	***	H4	Pass
Public trust → Behavioral intention	0.390	0.128	3.036	**	H5a	Pass
Public trust → Attitude	0.467	0.075	6.238	***	H5b	Pass
Participation resource → Perceived behavior control	0.164	0.058	2.816	**	H6a	Pass
Participation resource → Behavioral intention	0.554	0.082	6.757	***	H6b	Pass
Participation resource → Actual behavior	-	-	-	-	H6c	Reject

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

The influencing factor model of the public's participation in collaborative governance by using the GH was finally obtained (see Fig. 2).

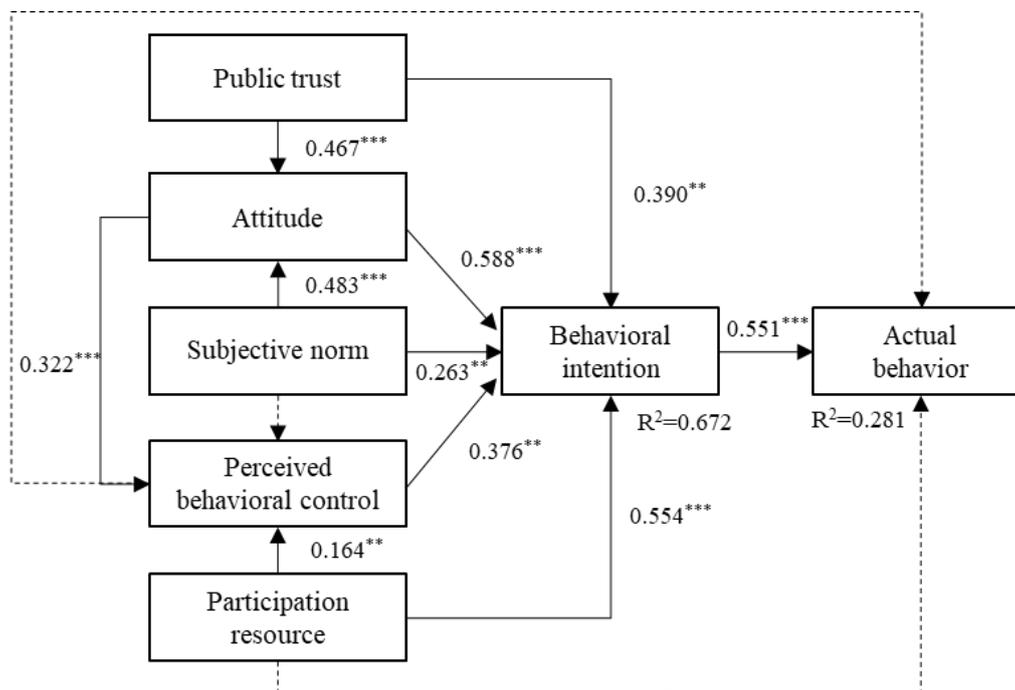


Figure 2. Modified research model

7. DISCUSSION

7.1 The influence path of the public to use the GH to participate in collaborative governance

According to the results of path analysis, attitude, subjective norm and perceived behavioral control had positive impacts on the public's intention, while participation intention positively led to actual behavior. The above variable relationships have been verified by relevant studies in the fields of public e-participation and e-government adoption (Xia *et al.*, 2020; Jugert *et al.*, 2013).

The public's trust in the GH was one of the influencing factors of behavioral intention. For the public, as an information channel to interact with the public sector, the GH should meet their needs for collaborative governance such as decision-making advice, complaint feedback and cooperative production. In the process of use, service effectiveness first determines the perceived usefulness to the public (O'Brien, 2016). At the same time, the users' privacy protection is also directly related to the public trust, and affects the public's repeated use or recommendation willingness.

The intention of the public to use the hotline to participate in collaborative governance was also significantly affected by the participation resources. First of all, when individuals have the basic e-participation skills, or experience in e-participation, we can believe the public has a certain technology involved in resources (Kusumarani & Zo, 2019). Secondly, in addition to telephone hotline, common e-participation

channels include government WeChat, Weibo, public service website and so on. Due to the advantages of low technical threshold, high social visibility, flexible interaction, the GH as a collaborative governance channel has a relatively low substitutivity.

In terms of the public's attitude, both subjective norms and the public trust had a significant positive impact on it. As a group to its influential ever call the hotline in order to realize the feedback submission, complaints, cooperative production, etc., or the mainstream media publicizes the collaborative governance function of the hotline, the public will be affected by the social pressure, causing positive attitude towards the participation behavior. At the same time, the behavioral attitude has an influence on the perceived behavior control of the public in the process of using the hotline.

The results showed that three influence paths failed the significance test. First of all, the subjective norm of the public had no significant effect on the perceived behavioral control. In the process of using the hotline to interact with the public sector, the public mainly use the hotline's personal experience and e-participation skills as reference to predict the difficulty level of this behavior; However, the publicity and guidance of others and media belong to external pressure. Compared with the self-perception gained by the public through practice, the former has relatively insufficient influence on the control of perceived behavior.

Secondly, perceived behavioral control and participation resource did not constitute a significant effect on actual behavior, the reason might have the following two points: first of all, only when the public has a demand for collaborative governance (for example to present policy suggestions or dissatisfaction with public services, to seek cooperation opportunities, etc.), they are more likely to regard using hotline to interact with the government as a necessary behavior, thus having intention to collaborative behavior.

Besides, in this study, several collaborative governance behaviors were combined into the variable of "actual behavior". The comprehensiveness of this variable might cause insufficient discussion on the path relationship between behavior and other influencing factors, thus leading to insignificant results (Tang *et al.*, 2020).

7.2 Suggestions on promoting the use of GH by the public to participate in collaborative governance

In order to improve the social awareness and recognition of the GH and its public participation function, the public sector should adopt multi-channel integrated publicity and targeted community promotion. The traditional telephone hotline can be linked with new media channels such as government websites, WeChat, Weibo and official short video platforms to expand the scope of publicity. At the same time, taking the social affairs in one's own community as a publicity case, the public can be more motivated to use the GH to participate in collaborative governance (O'Brien, 2016). Moreover, local government can protect users' privacy while optimizing the service quality of the hotline, and improve the convenience of the public to use the hotline to participate in governance by collaboration of multi-department.

To promote the e-participation function and basic use process of the GH, the combination of online and offline publicity and guidance can be carried out in the form of easy-to-understand pictures, videos and other forms (Faulkner *et al.*, 2019). Among various public e-participation channels, the GH system has a relatively low technical threshold, a wide range of audiences, and more potential for promotion. In the future, it can be upgraded from non-emergency hotline to emergency hotline. On the other hand, the GH can serve as an intermediary between traditional offline services and new intelligent services. According to the big data, the government can incorporate the common service demands of the elderly into the GH system, with encouraging and guiding the elderly to put forward suggestions and obtain services by using the hotline.

From the perspective of development orientation, the future construction of government service hotline should pay more attention to the demand side. To be specific, it gradually changes from the one-way consultation of citizens to the two-way interaction between the government and citizens, and constantly improves the level and awareness of citizens using the hotline to participate in urban governance. The government should optimize internal management processes and improve service and governance based on public demands. As for citizens, they are the masters of the city and should actively participate in urban governance, from passively receiving services to actively participating in governance, finding and raising problems at any time. In addition, the construction of hotline system should be shifted from the perspective of departments to the perspective of users, with the convenience of users as the starting point, people-oriented optimization of service delivery, and practical improvement of service quality.

In order to improve the capacity of demand-side participation, the future government should also include multiple subjects in the utilization of hotline data through whole-process management. Through the analysis of hotline data, we can detect the small changes of cities, and provide data support for the government to formulate urban governance policies and distinguish policy priorities. NYC 311 has extensive experience in data utilization. For example, the 311 system has linked its hotline data to NYC Open Data, which opens the data to the public for data exploitation subjects to analyze and utilize hotline data. For China, a considerable number of cities have launched government data open platform. In the future practice, hotline data should be gradually included in the scope of government data opening, so as to facilitate data utilization subjects to analyze urban pain points and put forward feasible solutions.

7.3 The role of GH in the prevention and control of the coronavirus disease (COVID-19)

Since the outbreak of COVID-19, as an important information channel between the public and the government, the GH becomes one of the key tools for disseminating and collecting epidemic information (Song, Choi & Ko, 2020). Public health crises often bring about a large number of social governance problems, and the frequency and intention of the public to use the hotline will also increase at any time (Arendt, Markiewitz, Mestas & Scherr, 2020). Take the 12345 system in Guangzhou, China as an example, the number of manual calls connected to the hotline from January to June 2020 increased by 13% compared to the same period last year. During this period, the Internet channel service volume of the hotline system in Guangzhou reached 2.95 million times, up 461% year on year (Ma & Li, 2020). It should be noted that the questionnaire survey in this study was conducted in February 2021, so the questionnaire data and test results reflected the public's intention to use the GH for collaborative governance in the context of COVID-19. Compared with the normal situation, the public's intention and actual frequency of using the GH in this research period might be higher.

During the COVID-19 period, the GH has also added the function of discovering clues of the epidemic so that citizens can independently report information through this channel. The big data analysis department can make in-depth analysis of the public's needs by using the work orders of the hotline, providing an important basis for the government's response to the epidemic. For example, the 12345 team in Hangzhou successfully found pain points in the practice of the health code through the analysis of hotline data. By February 2021, it had submitted 12 suggestions for improvement to the research and development team, promoting the smooth solution of agent, login and other problems of the health code (Ma, Zheng & Zhang, 2021).

In the future, the accuracy requirements for normal epidemic prevention and control will continue to increase, and the big data analysis framework based on the hotline needs to be established. It gives chance to optimize the level of information governance and make effective use of social resources. How to use big data and intelligent technology to realize high-frequency work order processing and create diversified application scenarios will be the development direction of improving the ability of the GH system.

8. CONCLUSION

This study explored the influencing factors of the public's use of GH to participate in collaborative governance. At the theoretical level, based on the theory of planned behavior, we constructed the influencing factor model of the public participation through the hotline, which provided a theoretical framework for the

follow-up research on the public's e-government adoption and e-participation behavior. When it came to practice, this study provided some targeted optimization directions for the government to improve the construction of the hotline system and enhance public's e-participation, which would promote the GH system to play a greater practical value in the field of public service and collaborative governance.

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