The Relationship Between WeChat False Information Exposure and the Behavior and Cognitive Level of Chinese College Students

--From the Perspective of Social Cognitive Theory

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Abstract: In the current era of increasingly complex information, the rampant spread of false information is constantly endangering people's physical and mental health. Exploring the impact of exposure to false information on people's behavior and cognitive level is of positive significance for people to consciously resist and govern online false information. This study is based on social cognitive theory, with Chinese college students as the research object, WeChat as the research platform, and conducted through questionnaire surveys and SPSS software. The data results indicate that WeChat false information exposure has a positive impact on Chinese college students' trust in information, their approval of using informational deception, and their dissemination behavior of false information, but the differences between genders and grades are not significant. College students should be aware of the harm of false information, strive to overcome the risks of false information caused by overconfidence and insufficient social experience, reduce the harm of false information to themselves, and work together with the school and society to suppress the spread of false information.

Keywords: false information, WeChat, social cognitive theory, Chinese college students

1. Introduction

False information runs through the long river of time, and everyone has been exposed to it to some extent. With the continuous progress of technology, on the one hand, the development of the Internet has enabled people to receive more information, and at the same time, the difficulty of selecting useful information from numerous sources has also increased, so false information has a broader space for dissemination, and social media platforms have been proven to be the hosts of digital false information dissemination. Research has shown that the speed of forwarding fake information on social media is at least three times that of spreading real information [1].

WeChat is one of the important communication tools for college students. According to recent data, the Chinese social networking platform WeChat had nearly 1.29 billion users in the first quarter of 2022. Among these 1.29 billion users, the 18-24 age group accounts for about 14%. These users are typically college students or young professionals who use WeChat to communicate with peers and share their learning, life, and work experiences. According to statistics, an average person spends at least 82 minutes on WeChat each day. WeChat has over 410 million video and audio calls and more than 45 billion messages exchanged daily [2]. WeChat itself has a certain degree of closure, which makes false information widely spread. There are all friends around in everyone's circle of friends. A large number of people, especially college students, are more likely to trust those they are close to, which leads to no one standing up to question, criticize, or even report incorrect information, and even everyone feels "right and reasonable". Once someone reposts certain rumors or harmful information, many friends immediately share these highly motivating and attractive articles in their circle of friends, bringing more or less impression and influence to everyone around them [3]. Psychologists have also found that when people face a piece of information, their first reaction is often not to seek confirmation, but to put it in their own memory. With a preliminary impression, they have a memory. The spread of false information on WeChat has multiple negative impacts on college students.

College students are an important force in social development, and at the same time, the total number of college students in China exceeds 40 million, ranking first in the world. Their information security is closely related to the progress of the country. Due to the mentality of college students eager to find jobs, lack of social experience, and poor awareness of prevention, they have become the main victims of false information such as "part-time job" and "investment loans" on major online information platforms. The dissemination of false information has multiple negative impacts on college students.

The social cognitive theory was proposed by Bandura in the 1980s and is a well-known theory in psychology that explores the relationship between individuals' thoughts, behaviors, and society. The core theoretical foundation of this theory is that the individual, behavior, and environment are interdependent and mutually influential [4].

This study is based on the perspective of social cognitive theory and analyzes the relationship between WeChat false information exposure and Chinese college students' trust in information, approval of deceptive behavior, and dissemination of false information based on the survey results of Sojump. This study focuses on WeChat, a social software that has important theoretical and practical significance for educating college students on information security awareness.

2. Literature Review

With the popularity of new media, WeChat is playing an increasingly important role in people's work and life. While WeChat brings convenience, it also provides a fertile ground for the spread of false information [5]. Many scholars have conducted research on WeChat and its users. Fu Yidong's research shows that college students are highly dependent on WeChat, and on average, out of 100 college students, 76 have fallen victim to online scams caused by false information. These deceptive behaviors severely harm the physical and mental health of college students, and some even resort to suicide or self-harm due to being deceived out of their living expenses, making the management of college students' education more complex and difficult [6].

Li Wenwen, Lv Hairuo, and Wang Shiyu's research indicates that college students have poor discernment ability when it comes to false information. They suggest focusing on media and information literacy to optimize college students' ability to discern information [7]. Liu Yini and Zhang Zhihui's investigation found that some college students lack the ability to correctly understand and judge the meaning behind the information they encounter in WeChat Moments. Their information

discernment ability is low, indicating the need for college students to improve their cognitive level and online skills to enhance their information processing ability and avoid the harm of false information [8].

In recent years, research on false information has also become a hot topic internationally. According to Web of Science, there have been over 3,000 relevant articles on the study of false information over the years, with over 300 articles per year since 2019 [9]. China has also increasingly paid attention to the study of false information. Using the keyword false information on the CNKI China Knowledge Network, the authors found 4,168 related articles. Since 2012, China's research on online false information has entered a stage of rapid development. The research content in this stage is more diverse than before, and the research methods have shifted from qualitative to a combination of qualitative and quantitative. Various research methods such as grounded theory, social burning theory, technology acceptance model, and information simulation have been introduced [5].

False information can have a negative psychological impact on college students, causing cognitive dissonance and severely affecting their mental health. Being exposed to too much false information can lead to incorrect behavioral guidance and wrong behavioral demonstrations for college students. Excessive false information can also disappoint college students' trust in the media, pollute their learning and living environment, and disrupt their academic order.

Although there are many scholars studying this field, there are few detailed studies targeting Chinese college students and targeting false information exposure on a certain social platform. This study aims to contribute to the governance of false information and promote the physical and mental health development of Chinese college students.

Currently, both domestic and foreign scholars have not yet produced an authoritative definition of false information exposure. In this article, false information exposure refers to the exposure to harmful and proven erroneous information. When users frequently encounter unverified false information on WeChat, their risk perception decreases, thereby increasing their level of trust in the information they receive [10]. Cultural influences affect the acceptability of information deception, which can be seen as an indirect strategy that influences others [11]. False information on the Internet is an important part of contemporary online culture. Therefore, exposure to false information on WeChat can affect users' perception of the acceptability of information deception. The stimulation from the media environment can influence users' information behavior [12]. When users encounter more false information on social media platforms like WeChat, they often have difficulty distinguishing between true and false information due to interference from the media and friends, which also affects their dissemination of false information.

Therefore, this study proposes the following hypotheses:

H1: WeChat false information exposure is positively related to Chinese college students' trust in information.

H2: WeChat false information exposure will affect Chinese college students' approval of using informational deception.

H3: WeChat false information exposure will affect Chinese college students' dissemination behavior of false information.

Based on the research hypothesis proposed earlier, this article aims to apply social cognitive theory to study the relationship between WeChat false information exposure and the behavior and cognition of Chinese college students, and explore how to reduce the negative impact of false information exposure on people.

3. Methodology

Proposed in the previous text, this study is based on the interaction determination theory of environment, individual cognition, and individual behavior in social cognitive theory. WeChat false

information exposure is used as the independent variable, and Chinese college students' trust in information, approval of using informational deception, and dissemination behavior of false information are used as the dependent variables, gender and grade are used as the control variables for quantitative research.

This study adopts a questionnaire survey method for data collection. Some measurement variables and questionnaires used in this study refer to the research results of relevant scholars at home and abroad. First, a small sample pilot survey was conducted to revise the questionnaire. Finally, questionnaires were issued and collected on WeChat platform through Sojump.

The relevant variables in this study belong to potential variables that cannot be directly observed, which need to be obtained from observable variables. The questionnaire is composed of two parts. The first part is information collection, including the respondents' grade and gender. The second part uses matured Likert 5-point scales to obtain the respondents' behavior and cognitive level affected by WeChat false information exposure. This part includes 16 questions, with scores from "very disapprove" to "very approve" in ascending order of 1 to 5.

The distribution cycle of this questionnaire survey is one week, and a total of 68 questionnaires were collected. After collection, 2 invalid questionnaires with obvious regularity were excluded, and a total of 66 valid questionnaires were obtained, with an effective recovery rate of 97.06%.

4. Result

The gender and grade distribution of the respondents in this survey is relatively even. Males account for 45.5%, females account for 55.5%, and in the distribution of grades, freshmen account for 27.3%, sophomores account for 24.2%, juniors account for 22.7%, and seniors account for 25.8%

The overall Cranach's α coefficient of the questionnaire is 0.925>0.8, which shows good reliability, and the KMO value is 0.888, which shows high data reliability and can be used for validity analysis. The factor loading value of each question is 0.528-0841, and the validity is good.

In the analysis results, gender and grade in the three regression models have a significant p-value > 0.05, which is not significant.

When asked questions such as "I often browse false information on WeChat" and "I am easily influenced by information on WeChat", WeChat false information exposure to WeChat false information exposure (X) was tested as a latent variable.

1. In the first group of models, Chinese college students' trust in information (Y1) was tested as a latent variable.

The analysis results show that the R square value is equal to 0.659, and the fitting degree is good, that is, 65.9% of Y1 is caused by X.

The regression equation is Y1=0.611+0.814*X

The significance p value of Y1 and X is <0.01, and the difference is extremely significant. Since the regression coefficient β>0, WeChat false information exposure is positively related to Chinese college students' trust in information.

2. In the second group of models, when asked about "in order to strengthen my argument or position, provide false information to the opponent" "in order to protect the achievements of the negotiation, deliberately conceal some truth from my company", Chinese college students ' approval of using informational deception (Y2) was tested as a latent variable.

The analysis results show that the R square value is equal to 0.623, and the fitting degree is good, that is, 62.3% of Y2 is caused by X.

The regression equation is Y2=0.523+0.789*X

The significance p value of Y2 and X is <0.01, and the difference is extremely significant. Since the regression coefficient β>0, WeChat false information exposure is positively related to Chinese college students' approval of using informational deception.

3. In the third group of models, when asked "I have sent false information" "I found that some of the information I forwarded, shared, and commented on was false", Chinese college students' dissemination behavior of false information (Y3) was tested as a latent variable.

The analysis results show that the R square value is equal to 0.626, and the fitting degree is good, that is, 62.6% of Y3 is caused by X.

The regression equation is Y3=0.812+0.695*X

The significance p value of d and a is <0.01, the difference is extremely significant. Since the regression coefficient β>0, WeChat false information exposure is positively related to Chinese college students' dissemination behavior of false information.

5. Discussion

The information dissemination in the era of big data has made significant breakthroughs, and the development of self-media has also led to the proliferation of false information in the process of information production and dissemination, resulting in adverse negative social impacts. The main body that produces and disseminates false information also has the characteristics of privacy, immediacy, and strong relationships, which are also the characteristics of WeChat. Since Tencent launched WeChat in 2011, it has gradually replaced QQ as the main social platform for college students. Currently, the penetration rate of WeChat in Chinese universities is close to 100%. While the popularity of WeChat has facilitated students in accessing information and communication, it also brings along a plethora of information, including false information, which can have a certain cognitive and behavioral impact on students [8]. Compared to other self-media platforms, WeChat is more in line with the survival conditions of false information. Therefore, combating the production and dissemination of false information is an urgent task that requires everyone to pay attention to, achieve precise dissemination, and seek reasonable ways to regulate information dissemination.

WeChat false information exposure is positively related to Chinese college students' trust in information. First, exposure to information provides an opportunity for false information. As long as one is willing to access it, there is a certain probability of believing false information.

Second, false information has a certain degree of deception, college students are exposed to a lot of information every day, and the massive amount of information numbs their nerves, causing them to misjudge the authenticity of the information.

Third, higher educated college students have excessive confidence in successfully resisting false information, they may easily believe that they understand the essence of information, but they are falling into the trap of false information.

WeChat false information exposure will affect Chinese college students' approval of using informational deception. To start with, college students have limited social experience and exposure, as they have just come of age. Therefore, they may adopt a positive attitude towards information based deceptive behavior due to being deceived for a while. The more they approve, the more they enjoy the exposure, and the more they are exposed, the more they approve. Then, some college students have weak legal awareness, and there is insufficient popular legal education. This leads to a greater degree of approval among college students for deceptive behaviors. Consequently, the more approval there is, the more exposure there will be. Moreover, given the virtual and diverse nature of online false scams, college students' dependence and obsession with the internet provide an opportunity for unscrupulous individuals, seriously impacting the daily learning and lives of college students.

WeChat false information exposure will affect Chinese college students' dissemination behavior of false information. One reason is complacency and a low awareness of preventing false or fraudulent information. Without vigilance, false information can be inadvertently spread, resulting in increased exposure to WeChat information. Another reason is overconfidence, where individuals believe they

can distinguish false information, and therefore unknowingly spread false information, leading to increased exposure to false information among college students. Next, College students have a strong sense of curiosity. When college students see an event, they are accustomed to sharing it with friends and analyzing it together, invisibly completing the dissemination of false information. Finally, there is a psychological inclination to blindly follow others, especially when the information is shared by relatives or friends. This blind following also contributes to increased exposure to false information among college students.

As for the impact of gender and grade on the results, it is not significant. This may be because both men and women have their own types of false information that are easily recruited, and their likelihood of being harmed by false information is similar. Moreover, college students from freshman to senior year have already passed a critical period of mental development, and their ability to discern information is also relatively close, with no significant difference

The prevalence of online false information is a new and emerging issue, and college students, who have not yet formed a well-rounded worldview, values, and life philosophy, are particularly vulnerable to the invasion of falsehoods in the process of receiving and disseminating online information. This can have negative impacts on their thoughts, psychology, cognition, and behavior. Some individuals may even violate the law by forwarding or spreading false information. Therefore, there is an urgent need to enhance college students' ability to discern false information and curb its proliferation [13]. Specific measures can be taken in the following areas: 1, Enhancing college students' ability to discriminate and handle online information: College students should learn to identify and handle the information they receive. They should refrain from spreading unverified information and avoid blindly following hot topics or expressing opinions for popularity's sake. 2, Strengthening the quality education and legal education of college students, encourage them to improve their media judgment ability, strengthen information screening ability, and actively obtain useful information. 3, Establishing a three-way collaboration between schools, society, and college students: This collaboration would create a mechanism for social supervision, school propaganda and education, and proactive learning among college students, actively identifying false information, avoiding blind following, and refraining from disseminating it. The goal is to create a scientific, positive, and law-based online information environment.

6. Conclusion

This article starts from the perspective of social cognitive theory, based on relevant research at home and abroad, explores the impact of WeChat false information exposure on the behavior and cognitive level of Chinese college students from three dimensions. The data results indicate that WeChat false information exposure has a positive impact on Chinese college students' trust in information, their approval of using informational deception, and their dissemination behavior of false information, gender and grade have no significant impact on outcomes. The research in this article supplements the detailed study of false information, thereby helping people to correctly understand the harm of false information and the deceptive nature of false information, and ultimately suppress the spread of false information. Due to the excessive confidence, lack of social experience, low anti-fraud awareness, and prevalence of conformity and blind obedience among college students due to their previous higher education, false information can easily harm their physical and mental health. Therefore, people should start from three aspects: individuals, schools, and society: college students should learn to calmly distinguish and process information, schools should strengthen anti-fraud education and legal education, society should play a supervisory role, and strengthen the crackdown on false information. The authors believe that in the near future, with the joint efforts of each party, the spread of false information can be greatly curbed.

Authors Contribution

All the authors contributed equally and their names were listed in alphabetical order.

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