The role of cybersecurity in women's involvement in online sexual violence and its response strategies

Yixuan Li

QSI International School of Shenzhen,Shenzhen,515100, China

Abstract:

With the rapid development of information technology, cyberspace has become an indispensable part of people's daily lives. However, cyberspace is not a pure land, especially with the increasingly prominent issue of online sexual violence against women. This article explores the role of cybersecurity in women's involvement in online sexual violence and its response strategies. The article first analyzes how cyberspace has become an important platform for people's lives and work in the background of the popularization of the Internet and social media. Still, it also brings about network security problems, especially the increasingly serious phenomenon of online sexual violence against women. These behaviors seriously violate women's privacy and reputation rights and cause significant harm to their mental health. The article demonstrates the widespread and severe nature of online sexual violence through specific cases and statistical data. At the same time, the article also analyzed the causes of online sexual violence, including insufficient regulation of social media platforms, information overload of personalized algorithm recommendations, and the impact of user emotional intelligence on online behavior. Regarding response strategies, the article proposes various suggestions, such as improving network security regulations and protection systems, enhancing public awareness and education, and promoting social cooperation. In particular, it emphasizes the importance of formulating and improving laws and regulations against online sexual violence, strengthening cross-departmental collaboration, enhancing digital literacy programs, and promoting gender equality through school education and media publicity to raise awareness and respect for women's rights.

Keywords: Network security; Female sex; Online sexual violence; Social media; Protective measures.

1. Introduction

With the popularity of the Internet and the rise of social media, cyberspace has become an important platform for people's daily lives, social interaction, learning, and work. It has greatly changed how people communicate, access information, and interact socially. However, cyberspace is not completely secure, and the anonymity and remote nature also provide criminals convenience. Due to gender inequality and deep-rooted gender stereotypes, women are more likely to be targets of online sexual violence in cyberspace. Online sexual violence, as a special form of online violence, mainly includes online sexual harassment, online defamation, online sexual assault, and involuntary dissemination of private photos or videos. These behaviors not only violate women's privacy and reputation rights but also cause serious harm to their mental health. According to multiple studies, the phenomenon of women experiencing sexual violence in cyberspace is widespread and on the rise[1]. This article provides theoretical support for the development of more effective protection measures by studying the importance of cybersecurity in the role of women in online sexual violence. Meanwhile, improving cybersecurity protection measures is significant for safeguarding women's rights and promoting gender equality in cyberspace.

2. Current situation analysis

2.1 The situation of women in online sexual violence

A 2020 survey report by Plan International showed that over 58% of young women on social media face harassment and abuse. In addition, according to data from the National Crime Records Board (NCRB) of India, cybercrime against women in India has also surged from 2018 to 2020, with a 110% increase in cases filed for posting pornographic content[2].In addition, India's cybersecurity protection for children is also seriously inadequate. According to a public opinion survey in India, over 85% of children have experienced cyberbullying. Meanwhile, a survey on cybersecurity in multiple countries shows that

India accounts for 30% of children who report experiencing online sexual harassment, and its frequency of experiencing cyberbullying is twice the global average, significantly higher than the second-ranked United States (19%). Among these children, girls are more susceptible to online violence. According to data from the International Criminal Police Organization, from 2017 to 2020, 80% of the 2.4 million reported cases of online child sexual abuse in India were girls under the age of 14[3].

The Spanish society, which is greatly affected by sexual harassment, has a lower distribution of women in the workforce. Through an international research project on Spanish girls, the Internet has intensified sexual harassment of girls and young women. From 12-16, I began to experience online harassment. Research shows that 77% of the girls interviewed said that they were often exposed to offensive and insulting language on the Internet, which led many women to give up social media to deal with possible frequent online harassment. Only 0.5% of girls want to work in information, communication, and technology (ICT), aggravating inequality in Internet-related industries.

Social media platforms provide more dangerous possibilities for gender-based online harassment, including abusive language toward women. Researchers have found that 71% of female journalists have experienced cyberbullying, and one-third of women have reported experiencing physical attacks. Women who share comments and moments on social media platforms may refuse to avoid the danger and harm of potential attacks and harassment, such as The Washington Post, which was targeted and criticized by Fox News host Tucker Carlson and Taylor calling for an end to online harassment. In real life, there has been a sharp increase in violent and threatening tweets targeting Lorenz and some strangers around him, which violates life and privacy.

2.2 Analysis of the Causes of Online Sexual Violence

The causes of online sexual violence are complex and diverse, mainly including the following aspects:

Social cognitive bias: The gender stereotypes and biases that exist in cyberspace, where women are seen as weak and vulnerable objects, have become the main targets of online violence, making women more susceptible to stigmatization and accountability in incidents of online sexual violence. This social cognitive bias not only exacerbates the degree of female victimization but also hinders effective social responses to online sexual violence.

In addition, among male netizens, information overload has no impact on online violence; only the information gap affects online violence. Among female netizens, both information overload and information gap affect online violence. This indicates that male netizens are not sensitive to the amount of information, while females are more sensitive. According to the results of brain research, men tend to have gray matter thinking (i.e., information processing ability), while women tend to have white matter thinking (i.e., communication ability)[4]. The information gap can lead to empathy among female netizens and directly trigger cyberbullying behavior. When female netizens receive too much complex and redundant information, it can affect their emotional control and management abilities, leading to empathy and the emergence of online violence. Previous studies have shown that emotional processing has gender differences, and women have stronger negative emotional infectivity[5-6].

Insufficient privacy protection: Currently, the privacy protection mechanism in cyberspace is still not perfect, especially in terms of protecting the privacy of female users, which is more fragile. The anonymity of online users makes it extremely difficult to identify and track infringement behavior. In cyberspace, users can use diverse methods to conceal their true identity, making collecting evidence for infringement more complex. Although real name registration and login have become the norm for most online applications, exploiting system vulnerabilities and identity forgery are still common, which brings great uncertainty to accountability[7]. Some individuals and organizations use electronic devices and tools to commit cybercrime against women, and the situation is worrying. The act of involuntarily disseminating private photos or videos seriously violates women's privacy rights, and existing cybersecurity regulations and technological means have limited effectiveness in curbing such behavior.

The popularity of social media: The popularity of social media has provided convenient conditions for the spread of online sexual violence in addition to Twitter In addition to common online platforms such as Twitter or Facebook, various forms of online violence and harassment through email, online comments, text messages, images, streaming videos, etc. make it difficult for ordinary people to prevent. According to India Today, the Central Bureau of Investigation (CBI) in India has cracked down on over 50 groups of instant messaging apps and social media platforms, with more than 5000 offenders involved in online child sexual abuse cases, resulting in over 116000 daily searches on internet engines related to child pornography. The participants of this online violence against children are spread across more than 100 countries and regions worldwide, suspected of spreading, storing, watching, buying, and selling child sexual exploitation resources (CSEM), with an astonishing number of participants[3].

Log in legal regulation: Compared to the rapid develop-

ment of network technology, legal regulation often lags. The existing laws and regulations make it difficult to effectively address new forms of online sexual violence, resulting in perpetrators not receiving the appropriate punishment. Secondly, the dynamism and updating of online information pose serious challenges to the effectiveness of evidence. Even if the victim obtains preliminary evidence through webpage backups, chat screenshots, and other means, these pieces of evidence are likely to be quickly lost due to the rapidly changing nature of online information. More importantly, without the recognition of the infringer, the legal validity of these pieces of evidence will be greatly limited. In judicial practice, determining the legality and validity of this evidence has become an urgent problem that needs to be solved.

Lag in legal regulation: Compared to the rapid development of network technology, legal regulation often lags. From the perspective of social networking sites, Facebook and Twitter have issued more detailed requirements and terms on Posting content[8], prohibiting users from spreading information containing violence, abusive and threatening content, and taking measures to quickly remove offending information or suspend accounts, but from the current situation, the effect of such measures is not obvious[9].The existing laws and regulations make it difficult to effectively address new forms of online sexual violence, resulting in perpetrators not receiving the appropriate punishment.

3. Network support system and network women's rights protection

On the Internet, Invisible cybersecurity, namely public opinion on social media, is playing its role in encouraging girls and women who have been sexually assaulted and raped to have a bright future.

First, the Internet provides a comfortable place for women to explore their identity and gain energy. A young girl who was violently raped and repeatedly abused in 11th grade. Her teacher sexually assaulted her at the time, and for the next two years, she was filled with pain. However, she discovered Pandy, an 'online family'; She felt accepted and gained a deeper understanding of the consequences of sexual abuse. She spent several hours on the computer, relaxing and excited, and this incredible community taught her many valuable experiences. It brought her strength and courage and helped her a lot on her recovery journey. It also affected her spirit, broadened her horizons, gave her a sense of stability, and allowed her to lend a helping hand in similar situations. This online family 'gathers survivors of various types of sexual violence, builds a bridge between them, and provides a space for them to encour-

age and support each other during treatment. This case demonstrates that cyberspace can become an important channel for women to seek help and support. By establishing similar online communities or platforms, psychological support and legal assistance can be provided to more women who suffer from online sexual violence.

In addition, social media has increased people's awareness of crime so that women can take action against it. Alyssa Milano claims to have been sexually assaulted during the filming process. A man 17 years older than her reached into my underwear and attempted to insert his fingers into my body, violating her privacy and reputation in this field. Then, in October 2017, she posted "# MeToo" on the social media platform Twitter, which gained popularity for encouraging many survivors to share their stories, leading to the rise of the famous # MeToo movement. It helps Milano stand out in various aspects of life, not only in the film industry but also in raising awareness on social media about justice for women. After the exercise, 81% of women and 43% of men reported experiencing sexual harassment. 34% of Americans support the # MeToo campaign for gender equality and respect, and 14% support the campaign to hold perpetrators accountable. Another 42% of people insist on victims of sexual assault and harassment, personal experiences, and involvement. In addition, this movement has attracted global attention in various forms and wide-ranging impacts. Overall, it has had a significant impact on society, raising awareness of the # MeToo movement and allowing more survivors of sexual assault and harassment to share their stories online, seeking plea and justice. Through similar social movements, we can further promote social attention and resolution to the issue of online sexual violence and facilitate the improvement and enforcement of relevant laws and regulations.

4. Response strategies and suggestions

Firstly, network security laws and regulations and protection systems should be improved. Formulate and improve laws and regulations on online sexual violence. Clearly define the scope of online sexual violence. Strengthen the supervision of online users' real-name system. Improve system security. Reduce the possibility of exploitation of loopholes and identity forgery. Increase the fight against online sexual violence. At the same time, a complete mechanism for collecting, preserving, and identifying online evidence should be established to ensure the effectiveness and authority of online evidence in judicial practice, strengthen the investigation and crackdown on online sexual violence cases, and ensure that female victims can obtain legal aid and protection in time.

Secondly, it enhances public awareness and education.

Emphasize the importance of digital literacy programs and improve public awareness and prevention capabilities of online sexual violence. By organizing cybersecurity lectures and distributing promotional materials, we aim to popularize cybersecurity knowledge and enhance women's self-protection abilities[1]. Strengthen education and publicity on gender equality, and break the shackles of gender stereotypes on women. Popularize gender equality knowledge through various channels such as school education and media promotion, and raise awareness and respect for women's rights. At the same time, it encourages women to actively participate in the construction and management of cyberspace and play a positive role in network governance.

Thirdly, Strengthen platform supervision and responsibility. Strengthen technical protection, develop and apply advanced network security technologies, such as privacy protection software, data encryption technology, etc., to provide a safer network environment for female users. At the same time, it strengthens the supervision of online platforms and requires them to fulfil their responsibilities of content review and user protection. It is recommended that social media platforms enhance content review and adopt a zero-tolerance policy towards sexual harassment. Suggest developing more network security tools and services specifically designed for female users.

Lastly, it promotes social cooperation. The governance of online sexual violence requires the joint efforts of the government, enterprises, social organizations, and the general public. Establish service platforms such as psychological counselling hotlines and legal aid institutions through strengthening cross-departmental collaboration, establishing information-sharing mechanisms, and conducting public welfare propaganda; Strengthen cooperation with social organizations, volunteers, and other forces; Promote the formation of a good atmosphere of common concern and participation among the whole society.

5. conclusion

The role of cybersecurity in women's involvement in online sexual violence cannot be ignored, and effective response strategies are urgently needed to address it. Factors such as technological inequality, insufficient privacy protection, and social cognitive biases exacerbate the risk of victimization for women in cyberspace. To effectively address the issue of online sexual violence, comprehensive measures need to be taken, including strengthening cybersecurity education, improving laws and regulations, enhancing technical protection, and promoting social governance. Through these efforts, we can create a safer and healthier online space for women.

References

[1]. Zhu Li. Analysis of the Characteristics and Causes of Online Violence Public Opinion [J]. News Industry, 2010 (06): 36-37

[2]. Zhou Yunqian, Guo Shuaifeng, and Zhang Dan (2024). Comparative analysis of gender based online violence behavior groups - structural equation model testing and analysis. Media Forum (14), 27-34

[3]. He Hui&Yang Qianqian (2023). The Current Situation and Challenges of Anti Cyberviolence in India. Modern World Police (07), 60-65

[4]. Zou Lijuan, Zhang Wei, Shu Hua. Research on Gender Differences in Developmental Reading Disorder and Its Implications for Education: Evidence from Behavioral, Brain Functional Imaging, and Structural Imaging [J]. Journal of Beijing Normal University (Natural Science Edition), 2011, 47 (05): 537-541

[5]. Yuan Jiajin, Wang Yu, Ju Enxia, et al. Gender differences and neural mechanisms in emotional processing [J]. Advances in Psychological Science, 2010, 18 (12): 1899-1908

[6]. YUAN J, LUO Y, YAN J H, et al. Neural correlates of the females' susceptibility to negative emotions: An insight into gender-related prevalence of affective disturbances [J]. Human Brain Mapping,2009, 30(11): 3676-3686.

[7]. Ye Xiaoyuan and Wang Weixian (2024). Research on User Data Security and Privacy Protection in the Cyberspace Governance System. Social Sciences in Chinese Universities (05), 147-155+159

[8]. Please refer to the relevant terms of the Facebook website for details https://www.facebook.com/legal/terms , https://www.facebook.com/communitystandards ; The relevant terms of Twitter website regarding content can be found in: http://support.twitter.com/articles/18311-the-twitter-rules.

[9]. Huang Yalan&Chen Changfeng (2013). The Dilemma of Freedom: Social Media and Gender Violence. Press (24), 58-61. doi: 10.15897/j.cnki.cn51-1046/g2.2013.24.013