Addressing the Generation of False Information and Fake News by GPT Technology

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Abstract: With the rapid development of artificial intelligence technology, GPT (Generative Pre-Training) technology is being used more widely to coherently generate the text of articles, emails, and chat logs, which can have a profound impact on the news media, advertising, and content production industries. but poses the risk of spreading fake news and bad information at the same time. This paper explores strategies to deal with disinformation and fake news from four aspects: datasets, regulation, anti-fake information technology, and advocacy for proper use. More accurate datasets can be obtained for GPT by optimizing data sources, data cleansing, manual labeling, data sharing, and web crawler technology. By formulating laws, regulations, and industry standards, strengthening technical review and certification, establishing regulatory agencies, strengthening user education, anti-fake news technology, and advocating correct use, we can effectively deal with the problems of fake news and bad information dissemination brought by GPT technology. Therefore, strengthening the regulation and correct use of GPT technology is of great significance to maintain the information ecosystem.

Keywords: ChatGPT; False Information; Fake News; Technological Regulation; Accurate Datasets

1. Overview of GPT's Approach to False Information and Fake News

GPT technology, capable of generating natural language texts including articles, comments, and chat records, learns autonomously in its training phase without human supervision, which complicates substantial filtering of the information it acquires. This capability harbors the potential risk of generating false information and fake news. To navigate the contradictions between technological innovation and regulatory risks, it is necessary to take measures against these risks [1]. Broadly speaking, GPT's approach to combating false information and fake news can be summarized into four points: (1) More accurate datasets—GPT technology requires extensive data to train models. By utilizing better datasets, the model can more accurately understand language and context, thereby reducing the risks of misunderstandings and ambiguities. (2) Effective regulation—strengthening the regulation of GPT technology to ensure it is not used to generate false information and fake news. This requires the joint efforts of governments, social organizations, and technology companies to conduct regulatory, legal, and self-regulatory work. (3) Anti-false information technology—Investing more resources in developing technologies to counter false information, which involves analyzing real and false information and identifying and filtering false information and fake news based on text classification and sentiment analysis technologies. (4) Advocacy for correct usage—enhancing public education and advocacy to increase their awareness and vigilance against false information and fake news. Additionally, technology companies should also take social responsibility by providing users with better information sources and marking tools to help them use information correctly and eliminate misunderstandings [2].

2. How to Obtain More Accurate Datasets for GPT

2.1 Optimizing Data Sources

GPT technology requires large amounts of data to train models, and better datasets can enable the model to more accurately understand language and context. Firstly, expanding the coverage of data can help improve the quality and quantity of datasets. In addition to traditional data sources such as news and books, social media, web pages, blogs, and chat records can be utilized to increase data sources. These data can better reflect current language usage, including the linguistic habits and characteristics of different regions, cultures, and groups. At the same time, building multilingual datasets is essential as different languages have unique grammatical and linguistic features, and GPT models also need to be trained for different languages. For example, large multilingual Wikipedia datasets can provide a substantial corpus for multilingual GPT model training. Moreover, developing data augmentation techniques can expand the range of data by generating new samples through translation, synthesis, replacement, etc. For instance, machine translation technology can be used to translate data from one language to another, or synonym replacement technology can generate new corpora. Finally, integrating different sources and types of datasets can better support model training. For example, integrating different news datasets, book datasets, and social media datasets can form a larger and richer dataset.

2.2 Data Cleaning

Data cleaning is a crucial step in preventing the emergence of fake news. Before using data, cleaning helps eliminate noise and errors within the data, thereby enhancing the quality of the dataset. During the cleaning process, various automated techniques such as text tagging, deduplication, and error correction can be employed. Duplicate data can affect the training effectiveness of models, thus necessitating deduplication. Automated tools can be used to detect and remove duplicate data [3]. Additionally, a significant amount of incorrect data exists online, including spelling mistakes, grammatical errors, and translation errors, which can negatively impact model training. Automated tools such as spell checkers, grammar checkers, and translation error correctors can be used to remove incorrect data. Moreover, the internet is rife with fake news and false information, which can mislead the training of models. Automated tools and manual reviews can be utilized to eliminate fake news and false information. An AI-driven defense and filtering system should be established to prevent their spread [4]. At the same time, GPT must filter and remove personal privacy data. Some data might contain personal information such as names, addresses, and phone numbers, requiring measures to protect the privacy of these data. Similarly, GPT needs to remove copyright-restricted data. For data protected by copyright, measures must be taken to avoid infringement.

2.3 Manual Annotation

Manual annotation can help enhance the quality and accuracy of datasets but also requires considerable time and resources. When conducting manual annotation, it is necessary to select high-quality, efficient annotation tools and to train and manage the quality of annotators. The general process of GPT conducting manual annotation to improve data quality and accuracy includes: (1) defining the annotation task: First, it is necessary to determine the type of annotation task and the annotation requirements, such as text classification, entity recognition, relation extraction, etc. It is also essential to clarify the target label system for the annotated data. (2) Recruiting annotators: A certain number of annotators should be recruited for the task. Annotators need to possess relevant domain knowledge and skills to accurately understand the annotation requirements and accurately annotate the data. Training and quality control for annotators are also necessary. (3) Annotating data: Annotators annotate the data according to the requirements. Generally, the same data should be annotated multiple times to obtain more accurate and reliable results. Quality control and review of the annotated data are needed to ensure the accuracy and consistency of the data. (4) Merging annotation results: The annotation results from multiple annotators are merged, generally using voting or weighted averaging methods to obtain the final annotation results. (5) Adjusting annotation rules: If some problems are found in the annotation results, it is necessary to adjust the annotation rules and requirements promptly to improve the quality of the annotated data. (6) Updating model training:

The dataset, after manual annotation, is used for model training to enhance the model's performance and accuracy. In summary, manual annotation is an effective method to improve the quality and accuracy of datasets but requires significant human and time costs, especially when the dataset is large, making the annotation cost high. Therefore, besides manual annotation, semi-automated or automated methods can be used for data annotation to reduce costs and improve efficiency. For example, rule-based or machine learning methods can be used for preliminary data annotation, followed by annotators reviewing and correcting the results.

2.4 Data Sharing

Data sharing can help reduce redundant work and improve the quality of datasets. When sharing data, it is necessary to ensure the privacy and copyright of the data and to take measures to protect data security. Additionally, data sharing is a common method to enhance model performance. GPT can better understand language and context through data sharing. The general process involves establishing a data sharing platform where researchers, developers, and data providers can upload, share, and download datasets. This platform must ensure the security and privacy of data and establish clear data usage rules and contracts to ensure legal use and prevent data misuse. The uploaded data must then be cleaned and preprocessed to ensure data quality and consistency [5].Such as removing noise, standardizing data formats, and standardizing language expressions. The data is then annotated to enhance semantic information, thereby improving the model's understanding of language and context. Manual or semi-automated annotation methods discussed previously can be employed to obtain high-quality annotated data. Subsequently, these datasets are used to train the model to improve its performance and accuracy. Techniques such as self-supervised learning or transfer learning can be employed to better utilize the information in the datasets. The trained model must be evaluated to assess its performance and effectiveness. If issues are discovered, the model's structure can be modified, or training parameters adjusted to enhance performance. Through data sharing, a broader range of data can be accessed, thereby improving model performance and accuracy, and promoting scientific and technological development. However, data sharing also faces challenges such as data privacy, data security, and data usage regulations, requiring the establishment of corresponding mechanisms and systems to address these issues.

2.5 Web Crawling Technology

Web crawling technology can help gather a vast corpus of data, including news, comments, social media posts, forum discussions, and other information related to fake news. It is important to ensure that data collected via web crawling comes from reliable sources to avoid illegal data and malicious content entering the dataset. After acquiring the data, it needs to be filtered and cleaned. Filtering can be based on reliability, authority, and credibility of sources. Cleaning involves removing irrelevant information, noise, duplicate content, etc. Natural language processing technology can also be used to classify and filter textual content to remove fake news. To enhance the model's accuracy and performance, the data needs to be annotated. Annotation can be based on news type, content theme, and authenticity, facilitating the model's ability to distinguish and assess different types of news. High-quality annotated data can be obtained through manual and semi-automated annotation methods. These datasets are then used to train the model, improving its performance and accuracy. Training should consider various news types and sources, as well as the characteristics and manifestations of fake news. After training, the model needs to be evaluated to determine its performance and effectiveness. Legitimate web crawling techniques and data processing methods can obtain high-quality datasets, thereby enhancing the performance and accuracy of the GPT model. This also helps prevent the occurrence of fake news, protecting users' right to information and information security. However, it is important to comply with legal regulations when using web crawling technology to ensure network security and user privacy.

Overall, acquiring better datasets requires significant time and resources, and certain technical and managerial measures need to be implemented. By expanding data sources, cleaning data, manual annotation, and data sharing, the quality and quantity of datasets

can be improved, thus providing better data support for GPT technology.

3. How to Regulate GPT Technology

3.1 Formulating Laws and Regulations

Governments can formulate relevant laws and regulations to standardize the development and application of GPT technology, such as protecting user privacy, prohibiting discrimination, and combating fake news. These laws and regulations should clearly define responsibilities and penalties for violations to ensure the safety and reliability of the technology. Firstly, laws and regulations should be established to protect user data privacy. These laws should clearly define the principles for the collection, storage, use, and sharing of user data, and prohibit the misuse or unauthorized access and use of user data. Additionally, laws and regulations should be formulated to prohibit discriminatory practices by GPT technology. These laws should explicitly forbid discrimination based on race, gender, age, sexual orientation, etc., ensuring equal rights and opportunities for everyone. Furthermore, concerning fake news, laws should be established to combat the dissemination of false, inaccurate, or misleading information by GPT technology, protecting public interest and social safety [6]. imultaneously, safety and transparency are particularly important; it is advisable to enact laws and regulations to ensure the safety and transparency of GPT technology. These laws should clarify the transparency of algorithms, models, and data of GPT technology, standardize safety testing and validation of the technology to ensure its reliability and safety. Lastly, accountability is essential; it is recommended to formulate laws and regulations to clarify the responsibilities and accountability mechanisms of technology developers and users [7]. These laws should specify penalties for violations, strengthening the responsibility and accountability of technology developers and users, promoting sustainable development of technology, and protecting the interests of users. The application and development of GPT technology require relevant laws and regulations to standardize and restrain it, ensuring the technology's reliability, safety, and fairness, and promoting sustainable

development and societal prosperity.

3.2 Establishing Industry Standards

Relevant industry organizations can establish standards and norms to guide the development and use of GPT technology. These standards should include aspects of data privacy, information security, and data quality, to ensure sustainable development of the technology and protect the interests of users. Firstly, data privacy and security standards are crucial as GPT technology requires substantial data support, which may contain sensitive information. Therefore, it is necessary to establish relevant data privacy and security standards to ensure the security and confidentiality of data and prevent data breaches and misuse. Secondly, transparency and explainability standards: GPT technology must provide clear documentation and explanations to enable users and developers to understand its workings and output results. Therefore, it is necessary to establish relevant transparency and explainability standards to ensure that the output results of GPT technology can be interpreted and understood. Furthermore, ethical and moral standards are needed as GPT technology could potentially be used for malicious purposes, such as writing fake news or creating deep fake videos. Thus, it is important to establish relevant ethical and moral standards to guide the legal and reasonable use of GPT technology and prevent improper use. Additionally, fairness standards should be considered; the output results of GPT technology might be influenced by biases and discrimination in the input data. Therefore, it is essential to establish relevant fairness standards to ensure that the output results of GPT technology are fair to everyone. On a technical level, standards are also involved in machine learning model evaluation, as GPT technology is based on machine learning models. It is necessary to establish corresponding model evaluation standards to ensure the accuracy, robustness, and robustness of the models; model explainability standards, as GPT technology is based on deep learning models, it is essential to establish related model explainability standards to ensure that the model's output results can be explained and understood, enhancing the model's transparency and explainability. Finally, standards for data sharing and

openness are also needed, as GPT technology requires substantial data support. Therefore, it is necessary to establish related data sharing and openness standards to allow more researchers and practitioners to share data and models, promoting the development and application of GPT technology. In summary, establishing corresponding standards and norms is crucial in guiding the development and use of GPT technology, ensuring its legality, transparency, explainability, and safety, while promoting the expansion and development of its applications.

Establishing relevant industry organizations will involve five areas: (1)Organizations in the Field of Natural Language Processing (NLP): This includes standards and norms covering natural language processing, speech recognition, machine translation, text generation, and more. For instance, the Association for Computational Linguistics (ACL) could develop standards and norms related to NLP. (2)Artificial Intelligence Industry Organizations: These organizations could encompass various aspects of artificial intelligence such as machine learning, data privacy, and model explainability. For example, the Institute of Electrical and Electronics Engineers (IEEE) could establish standards and norms related to artificial intelligence. (3)News and Media Industry Organizations: Covering standards and norms in the news and media sectors, including the authenticity of news and fairness in news recommendation algorithms. The Society of Professional Journalists (SPJ) could establish standards and norms relevant to the news industry. (4)Data Privacy and Security Organizations: Addressing standards and norms in data privacy and security, such as data protection, data sharing, and data usage. The Center for Democracy and Technology (CDPR) could develop relevant standards and norms. (5)Cybersecurity Organizations: Covering standards and norms related to cybersecurity, including defense against cyber-attacks, vulnerability remediation, and security testing. An organization such as SANS (SysAdmin, Audit, Network, Security) could establish related standards and norms.

3.3 Strengthening Technical Review and Certification
Implementing fact-checking mechanisms and awareness campaigns are essential to mitigate the spread of fake news. This strategy can help educate the public about recognizing unreliable sources and verifying information [8]. These reviews should cover data collection, algorithm design, model training, and application scenarios to ensure the legality, transparency, explainability, and security of GPT technology while increasing public trust. It is recommended to establish a professional review team composed of experts with relevant backgrounds and experience, responsible for reviewing and certifying the development and use of GPT technology [9]. Furthermore, review standards and processes should be established, including assessments and reviews of GPT technology in terms of data privacy, transparency, explainability, security, ethics, and morality. Review and certification services should be provided to developers and users; upon passing the review, a certification should be issued to certify the legal and safe use of GPT technology. It is crucial that the review institutions maintain independence and impartiality, operating independently from the developers and users of GPT technology to ensure the fairness and objectivity of the review results [10]. The results of the reviews must be publicly transparent, disclosing the development and usage of GPT technology to the public to enhance their awareness and trust in GPT technology. The periodicity and frequency of reviews also need to be standardized, establishing appropriate review cycles and frequencies for regular reviews and updates of GPT technology. Overall, establishing a review mechanism can enhance the legality, transparency, explainability, and security of GPT technology, promoting its application and development and fostering the positive growth of GPT technology.

3.4 Establishing Regulatory Bodies
Establishing regulatory bodies to manage the spread of fake news generated by GPT technology is crucial to address the adverse effects on social, psychological, and legal realms, as well as on free speech and expression, needing a standard framework to monitor and verify news credibility on social media platforms [11]. Governments should create specialized regulatory agencies responsible for overseeing and managing the development and use of GPT technology.

These agencies should have the authority to perform technical reviews, data regulation, and privacy protection to ensure the sustainable development of the technology and protect user interests [12]. These agencies need to have a professional technical background and experience, as well as sufficient legal, policy, and management knowledge. The functions and tasks of the regulatory bodies should include (1) formulating relevant policies and regulations to standardize the development and use of GPT technology, ensuring public and information security; (2) reviewing and certifying the development and use of GPT technology, establishing appropriate certification standards and processes to ensure its legality and safety; (3) supervising and managing the development and use of GPT technology, penalizing and prohibiting GPT technology that does not meet standards to protect public interest and information security; (4) promoting the development and application of GPT technology, advancing its application across various sectors, enhancing national technological competitiveness and economic strength; (5) establishing international cooperation mechanisms, strengthening technological exchange and cooperation internationally, and collectively promoting the development and application of GPT technology.

3.5 Strengthening User Education and Awareness

Research indicates that user behavior and interactions, such as trust levels and the ability to recognize fake news, can serve as auxiliary information to enhance the detection of fake news generated by GPT technology [13].Governments and businesses can enhance user education and awareness to improve understanding and awareness of GPT technology. This can be achieved through training, education, and public awareness campaigns to enhance users' understanding and awareness of the technology, thus protecting their rights and privacy. First, to improve user knowledge and understanding of GPT technology, detailed information should be provided to users, including definitions, principles, application scenarios, advantages, and limitations of GPT technology. Educational and promotional activities should be carried out to introduce the public to the basic knowledge and application scenarios of GPT technology, thereby enhancing public understanding and awareness. Second, to enhance user skills, necessary training should be provided to enable users to better understand and utilize GPT technology. During the use of GPT technology, warning and cautionary information should be provided to inform users of the technology's limitations and shortcomings, as well as to advice on usage restrictions and regulations. Furthermore, it is crucial to strengthen users' security awareness, reminding them to protect personal information and privacy, avoid disclosing sensitive data, and enhance awareness of data security and protection [14]. Additionally, establishing a user feedback mechanism is essential, allowing users to report issues and suggestions to regulatory bodies or relevant departments, providing references and support for technological improvements and development. Through these measures, user education and awareness can be strengthened, enhancing understanding of GPT technology and promoting its healthy development and application.

In summary, it is necessary to strengthen the regulation of GPT technology, requiring collaboration and effort from governments, businesses, and all societal sectors. Through appropriate regulation and management, the safety and reliability of the technology can be ensured, promoting sustainable development of the technology and societal prosperity.

4. Anti-fake News Technologies

Currently, GPT technology does not specifically target fake news, but it can be countered through several methods:(1)Building Fake News Detection Systems Using AI: AI can be utilized to analyze and filter posts, comments, and news on social media, thus reducing the spread of fake news. Implementing fact-checking mechanisms and awareness campaigns are essential to mitigate the spread of fake news. This strategy can help educate the public about recognizing unreliable sources and verifying information [15]. (2)Verification Against Official Sources: The authenticity of news and other information can be verified by comparing it with information from official channels. Natural language processing technologies can be used to analyze the vocabulary, grammar, and logic in news

articles, thus assessing their truthfulness and credibility.(3)Establishing User Feedback Mechanisms: Allowing users to report fake news and issues to regulatory bodies or relevant departments, with human moderators assessing and removing false information. (4)Enhancing User Education and Awareness: Strengthening user education to better differentiate between true and false information, enhancing their ability to recognize fake news, and reducing its spread. In summary, by using GPT technology and other related technologies to establish fake news detection systems, utilizing natural language processing for information verification, setting up user feedback mechanisms, and enhancing user education and awareness, effective countermeasures against fake news can be implemented. Additionally, a combined effort from governments, media, and various societal sectors is required to strengthen regulation and combat the spread of fake news, maintaining the integrity and credibility of information.

5. Advocating Correct Usage

Although GPT technology is powerful, it also has certain limitations and risks, such as potential model biases and privacy leaks. It is important for users to understand these risks to avoid over-reliance on and misuse of GPT technology. Advocating for the correct use of GPT technology can help mitigate the psychological effects and negative impact of fake news dissemination on vulnerable individuals in society [16]. First, correct usage of GPT can help us avoid fake news and inaccurate data, which can have a negative impact on our lives; thus, it is crucial to ensure that the information we use is accurate and reliable. Using GPT technology correctly can help us avoid being influenced by false information, ensuring that our decisions are accurate and reliable. Secondly, correct usage of GPT can protect personal privacy. GPT technology requires large amounts of data to function optimally, but this could also lead to privacy breaches. Using GPT technology correctly ensures that we protect our personal privacy while using the technology, preventing data leaks and privacy violations. Lastly, correct usage of GPT can promote effective information dissemination and communication. If we use text generated by GPT correctly, we

can ensure that information transmission and communication are accurate and clear, avoiding confusion or misunderstandings. This helps improve the efficiency and accuracy of information delivery, fostering better communication and understanding.

Therefore, the correct use of GPT technology is extremely important for both our daily lives and work. We should always use this technology cautiously and understand its limitations and potential risks to ensure we derive the maximum benefit from it. In the process, it is also necessary to educate the public, including: (1) Pay Attention to the Source of Texts: Before using text generated by GPT, it is crucial to consider the source of the text. Ensure the source is reliable to avoid being influenced by false information. (2) Understand the Limitations of GPT: Although GPT excels in generating text, it still has limitations. Users should be aware of these limitations to avoid having unrealistic expectations. (3) Do Not Treat GPT-Generated Texts as Fact: While texts generated by GPT may seem very realistic, they are not necessarily factual. Users should treat texts generated by GPT as references, not definitive answers. (4) Verify the Accuracy of Texts: After using text generated by GPT, users should carefully check its accuracy. Any errors or inaccuracies found should be corrected. (5) Enhance Awareness of Data Privacy: Before using text generated by GPT, users should enhance their awareness of data privacy to ensure that personal sensitive information is not disclosed.(6) Improve Recognition of False Information: Users should improve their ability to recognize false information by learning about and understanding common forms of misinformation. This way, even if GPT generates false information, users can quickly identify and avoid being influenced by it. (7) Establish Responsible Usage Habits: Finally, users should develop responsible usage habits. This means treating text generated by GPT cautiously and responsibly, always prioritizing facts and accuracy.

6. Summary

Overall, the emergence of GPT technology has made the risks associated with fake news and false information more apparent, but it also provides us with better technological means to address this issue. We need to be more vigilant

and make concerted efforts through continuous innovation and improvement to establish a healthier, fairer, and more reliable information environment. The advent of GPT technology brings significant opportunities and challenges to humanity. While fully leveraging its advantages, we must also be vigilant about its potential risks to ensure that we maximize its potential while avoiding its potential negative impacts.

References

[1] Y.W. Chen. Beyond ChatGPT: Opportunities, Risks and Challenges of Generative AI. Journal of Shandong University Philosophy and Social Science Edition. 2023; (03):127-143.

[2] Danhe Liu, Jiayue Sun. "Risks and Governance of Artificial Intelligence Regulation Policy Making". Humanities Magazine. 2023; 322(02): 121-128.

[3] Zhimao Guo, Aoying Zhou. "A Survey of Data Quality and Data Cleaning". Journal of Software. 2002; (11): 2076-2082.

[4] Bilu Guan, Liping Gu. "Value Conflicts and Governance Solutions: Research on Artificial Intelligence Technology in the Governance of False Information" Journalism University. 2022; No. 191(03): 61-75+119.

[5] Xia Ying Mei. "Between Sharing and Control: Private Law Limitations and the Construction of Public Order in Data Protection". Journal of Comparative Law. 2019; 31(04): 845-870.

[6] Yanhong Liu. "Research on the Explainability of Artificial Intelligence and AI Legal Liability Issues". Law and Social Development. 2022; 28(01): 78-91.

[7] Mingxuan Gao, Hong Wang. "Criminal Risks and Crime Typology Analysis in the New Era of Internet + Artificial Intelligence". Jinan University Journal (Philosophy & Social Science Edition). 2018; 40(09): 1-16.

[8] Anderson Cordeiro, Jonice Sampaio, and Lívia Ruback. FakeSpread: A Framework for the Analysis of Fake News Propagation on the Web. In Proceedings of the XI Workshop on Aspects of Human-Computer Interaction for the Social Web, October 26, Online, Brazil. SBC, Porto Alegre, Brazil, 2020; 9-16.

[9] Fuyang Yu. "Adjustment of Invention Patent Authorization Conditions in the Age of Artificial Intelligence". China Invention and Patent. 2022; 19(05): 46-56.

[10] Ziying Zeng Yu Huang, Yin Zhang, et al. "Design Ideas of Information Diagnosis Systems: The Triad of Human Verification, Public Participation, and Artificial Intelligence". Global Media Journal. 2021; 8(01): 35-62.

[11] Sanghun Lee. "A Consideration of Legal Regulation of Fake News." Journal of Law Theory and Practice, 2020; 8(1), 95-137.

[12] Zhihua Zhang, Kai Ji. "Reflections and Responses to Artificial Intelligence Education from the Perspective of Applied Ethics" Journal of Nanjing University of Posts and Telecommunications (Social Science Edition). 2021; 23(05): 1-10.

[13] K. Shu, S. Wang and H. Liu, "Understanding User Profiles on Social Media for Fake News Detection," 2018 IEEE Conference on Multimedia Information Processing and Retrieval (MIPR), Miami, FL, USA, 2018, pp. 430-435.

[14] Zhifeng Zheng. "Privacy Protection in the Age of Artificial Intelligence" Legal Science (Journal of Northwest University of Political Science and Law). 2019; 37(02): 51-60.

[15] Noah Giansiracusa, "How Algorithms Create and Prevent Fake News: Exploring the Impacts of Social Media, Deepfakes, GPT-3, and More," 2020.

[16] Claudia M E. Psychological effects of fake news-literature review. Journal of Educational Sciences & Psychology. 2022, 12(2):95-103.