



Research on the Innovation of Judicial Assistance for Minors Promoted by Digital Technology in China

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Abstract. The Chinese government places significant emphasis on juvenile judicial assistance. In recent years, multiple central government departments have jointly issued a series of policy documents to improve the juvenile judicial assistance network. However, this area continues to face challenges, such as a large volume of assistance needs, inefficient interdepartmental collaboration and underdeveloped post-assistance monitoring and evaluation mechanisms. Based on a comparative analysis of cases from different regions, this study proposes a pathway for optimizing assistance processes through big data and digital technologies. It suggests that breaking down data silos between departments and enhancing interdepartmental collaboration can help build a diversified and integrated juvenile judicial assistance system. Specific applications of these technologies in early-stage data analysis, mid-stage collaborative assistance, and post-assistance supervision are recommended to improve accuracy and effectiveness, providing a reference framework for the future development of juvenile judicial assistance.

Keywords: Juvenile Judicial Assistance, Big Data and Digital Technologies, Interdepartmental Collaboration.

1 Introduction

Juvenile judicial assistance has become a trend in modern rule-of-law development and a key element in protecting minors' rights. In recent years, China has continuously refined the juvenile judicial assistance system to promote social harmony and justice. In 2014, President Xi emphasized the need to expand the coverage and enhance the quality of legal aid. To achieve this goal, China enacted the Legal Aid Law in 2021, progressively increasing the legal aid budget to support the provision of free legal services for economically disadvantaged groups. This law clearly established a financial support system, incorporating the legal aid budget into government budgets at all

levels and requiring dynamic adjustments to funding, which has significantly advanced the improvement of the legal aid system (Fig. 1).

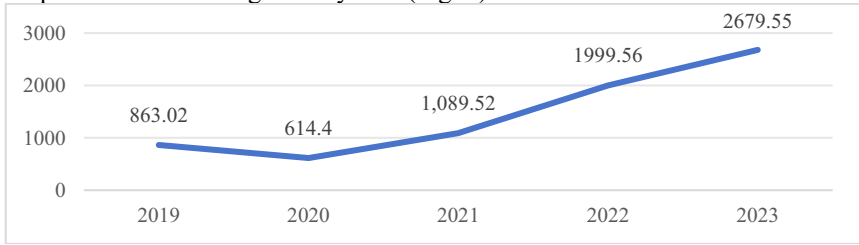


Fig. 1. Financial Budget of the Legal Aid of the Ministry of Justice of China for 2019-2023.

In 2018, the Supreme People's Procuratorate (SPP) issued the *Opinions on Comprehensively Strengthening National Judicial Assistance for Minors*, aiming to improve the physical and mental health of minors and the social environment, and to safeguard the legitimate rights of minors. However, juvenile judicial assistance still faces various challenges in practice. The demands of the information age compel us to explore new methods and tools. By leveraging digital technology (DT), it is possible to enhance the accuracy and standardization of assistance, advancing China's judicial assistance work to a new level [1].

2 Current Situation of Judicial Assistance for Minors in China

In 2015, the Supreme People's Court (SPC) established core principles for China's judicial assistance system, providing a foundational framework, though initially lacking provisions specific to minors. In 2016, the SPP standardized assistance procedures but did not specifically address juvenile cases, leaving some minors' rights underprotected (Fig 2). By 2018, the SPP introduced detailed guidelines for juvenile assistance, focusing on personalized and targeted support.

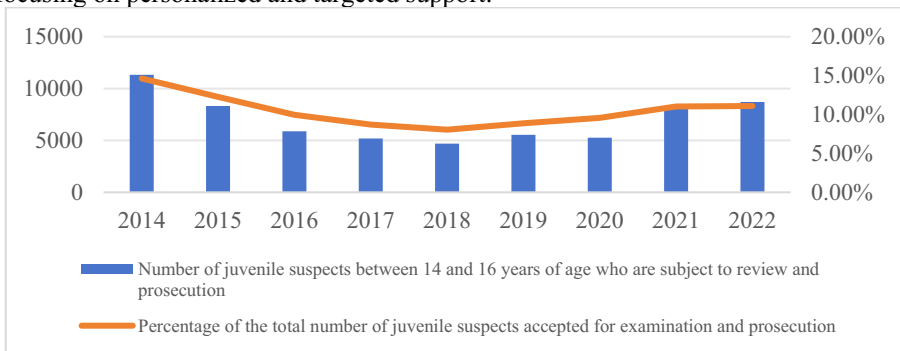


Fig. 2. Minor suspects aged 14-16, 2014-2022.

China has continuously refined its judicial assistance system for minors (Fig 3); however, several challenges remain in its implementation. Firstly, the legal basis for judicial assistance is inadequate, and there is a lack of interdepartmental coordination mechanisms. The laws in the field of judicial assistance are scattered across various administrative regulations, failing to achieve coordination [2]. Although the Law on the Protection of Minors emphasizes the principle of shared responsibility for protecting minors, it lacks a primary responsible department and coordination mechanism. Despite the fact that the Central Political and Law Commission has repeatedly proposed to improve the national judicial assistance system, since judicial assistance for minors often involves a number of departments, and there is a lack of institutional means at higher levels to coordinate the assistance provided by the various departments, it has been difficult to form a multisectoral support system.

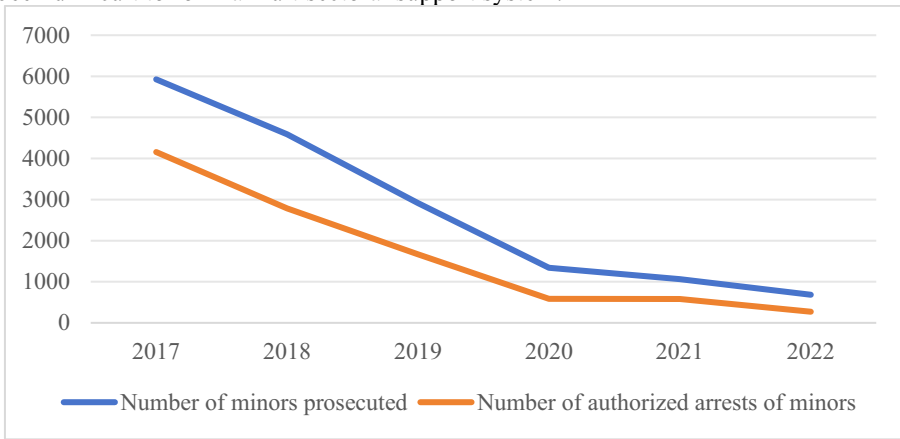


Fig. 3. Situation of campus bullying and violent crimes among minors.

Secondly, passive assistance remains dominant. Due to developmental limitations, minors struggle to seek judicial assistance or participate in legal proceedings, especially when conflicts with guardians arise. In some regions, procuratorates handle few minor assistance cases, and certain areas haven't processed any for years [3].

Lastly, the assistance pathways are not clear enough, and post-assistance follow-up urgently needs improvement (Fig 4). *The Opinions on Assistance for Minors* advocates for an assistance system led by party committees and supported by the government, but in practice, regional differences in economic development and conditions lead to varying standards of assistance, with some areas experiencing delays due to financial constraints. Furthermore, follow-up services are often lacking, especially in minor assistance cases where psychological support and counseling are crucial. Strengthening follow-up monitoring is also essential to prevent minors from facing similar challenges again. However, there are currently no unified regulations regarding the need for follow-up visits, nor on how to identify the recipients and frequency of these follow-ups, which remain issues to be addressed in practice [4].

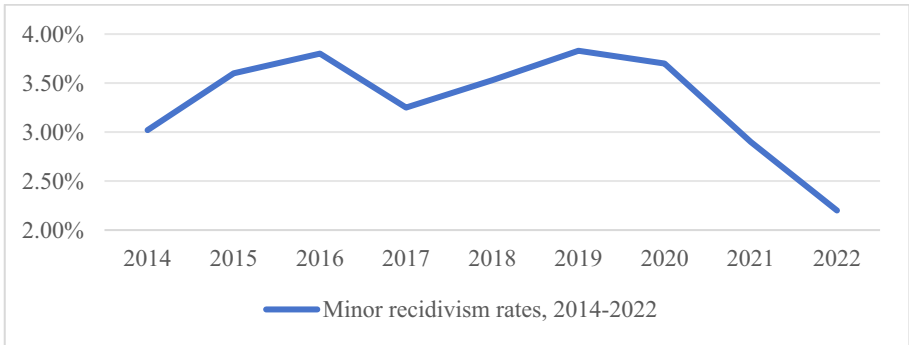


Fig. 4. The recidivism rate for minors has been on the decline in recent years.

Currently, there is no uniformity among the regions as to whether follow-up visits are still required, leading to a possible resurgence in the recidivism rate.

In summary, judicial assistance for minors still faces many challenges, such as a large base of beneficiaries, difficulties in identifying cases, imbalanced standards, insufficient integration of support, and inadequate supervision and evaluation mechanisms. There are practical challenges in stages like application acceptance and verification, as well as numerous difficulties related to assistance methods and funding oversight. Judicial assistance system is insufficient to fully address the various social issues faced by minors. Protecting minors requires comprehensive coverage of their rights, as well as a detailed focus on specific operational details [5].

3 Methodology

The SPP has released the first set of typical cases of judicial assistance empowered by big data. By analyzing these cases, we conduct a horizontal comparison of juvenile judicial assistance mechanisms across different regions, summarize the experiences and practices of grassroots procuratorates in building big data models for judicial assistance, and analyze the key features of judicial assistance for minors.

4 Typical Cases of Judicial Assistance for Minors Based on DT

4.1 'One-Stop Online Services' Based on Big Data Platforms

The Changshu Procuratorate pioneered the National Judicial Assistance Smart Platform, which enables one-stop online applications and real-time progress tracking, significantly reducing case processing times. This platform consolidates applicant information into a big data system, where it undergoes intelligent analysis and screening, enhancing the efficiency of judicial assistance and increasing transparency throughout the application process. Since its rollout in 2020, the system has been widely adopted across the province, setting a benchmark for digitalized assistance.

4.2 Data Integration to Break Departmental Barriers and Establish a Multi-faceted Assistance Mechanism

Procuratorial agencies across regions have increasingly adopted cross-departmental data integration, progressively dismantling 'information silos' and facilitating the efficient allocation of assistance resources. For instance, the Yueqing Procuratorate employs a '1+1+N' model, which consolidates data from judicial, social assistance, and grassroots governance systems to precisely filter assistance clues for minors using big data. This integration not only provides a entire profile of beneficiaries but also strengthens collaboration between judicial and social services. In addition, the Liuzhi Procuratorate has developed a assistance platform through a WeChat mini-program, allowing for online tracking and feedback throughout the assistance process.

4.3 Big Data Enhancing the Development of a Smart Supervision and Management System

The introduction of a digital monitoring platform has made access to justice more efficient and transparent. Guilin City, in cooperation with the Women's Federation, launched a mobile-based platform for the transfer of judicial assistance clues to achieve seamless connection of assistance cases. Shanghai has also established a early warning platform, which focuses on key gathering places for minors, utilizes big data analysis to push timely supervision clues, promotes real-time inter-departmental linkages, and enhances the effectiveness of the work of protecting minors.

5 Key Features of Conducting Judicial Assistance for Minors Based on Digital Technology

Based on the case, it is clear that technologies such as big data, artificial intelligence, and blockchain have been gradually introduced into the judicial relief system for minors to solve the problems of information asymmetry, policy fragmentation, and lack of timeliness in the assistance process [6].

5.1 Multi-source Clue Analysis Based on Big Data

Big data technology aids in the rapid identification and filtering of potential assistance cases. By screening criminal and civil documents, judicial departments can quickly identify minors who have suffered harm without compensation or are living in difficult conditions, thereby improving the precision of assistance efforts. A big data analysis platform enables the effective integration of government data from institutions like the Red Cross, and social security departments, facilitating intelligent matching and timely sharing of assistance clues.

5.2 Cross-departmental Collaboration for Multi-faceted Assistance

Cross-departmental data sharing and collaboration are critical mechanisms for juvenile judicial assistance. The 12309 Procuratorial Service Center, launched by the SPP, serves as a vital platform through which procuratorial agencies at all levels provide one-stop services and bridge data gaps across departments such as social security, education, and community services. Through technologies like privacy-preserving computation, procuratorial agencies can accurately verify minors' victimization situations while protecting personal information and coordinate various forms of assistance, including financial aid and psychological support based on need.

5.3 Big Data Empowering the Supervision of Judicial Assistance

With the development of the digital economy, big data has brought new opportunities for the supervision and management of judicial assistance. Big data-based supervision enables visual monitoring of the assistance process through data collection, allowing for real-time oversight of fund approval progress and case processing efficiency, thus reducing delays and inefficiencies [7]. Indicators such as the amount of assistance and processing times can enhance resource utilization and monitor departmental performance, ensuring that assistance resources are effectively allocated.

6 Proposals for Empowering Juvenile Judicial Assistance through DT

6.1 Establishing an 'Integrated' Assistance Platform

The specificity of access to justice for minors lies in the fact that the potential impact of the victimization of minors is particularly critical. Therefore, the government should focus on their comprehensive growth, not only in law, but also in psychological counseling and other areas of life. Some regions, such as Jiangsu Province, have developed provincial-level unified big data platforms that integrate information from justice, education, and social security departments to provide one-stop assistance services for minors [8].

6.2 Breaking Down Data Barriers to Enable Multi-department Collaboration

Juvenile judicial assistance often involves complex cases that a single department cannot fully address. Therefore, it is recommended that a diversified data model be adopted to connect judicial data with various social assistance platforms, enabling intelligent filtering of assistance information. In cases involving subsistence allowances, disability, or children who have lost parents, big data technology aids in identifying potential beneficiaries and accelerating the initiation of assistance [9].

6.3 Utilizing Big Data to Strengthen Supervision and Management

DT can also enhance transparency and oversight in judicial assistance. For instance, building a case management visualization platform enables real-time monitoring of the judicial assistance process, with key steps, such as case acceptance, review, and fund disbursement. Such systems can set various quantitative standards based on assistance amounts and case types to ensure fair distribution of resources [10].

6.4 Developing Multi-disciplinary Digital Talent

Judicial authorities urgently need personnel with cross-disciplinary digital skills. The SPP has outlined strategies for enhancing digital prosecutorial capabilities, including building digital complaint and appeal models and data mining and analysis mechanisms to extract patterns from individual cases and identify governance trends, thus supporting a more proactive approach to judicial assistance[11].

7 Conclusion

As juvenile judicial assistance efforts deepen, leveraging big data and artificial intelligence to address long-standing challenges such as resource fragmentation and inconsistent standards is essential. The integration of digital tools can significantly enhance the overall efficiency of the judicial system, establishing a unified and responsive support system for minors, which not only improves the accuracy of identifying assistance needs but also facilitates the expansion of support services from legal aid to include comprehensive services such as psychological, educational, and social support. However, the successful use of DT depends on multiple factors, such as enhanced cross-sectoral cooperation and increased digital literacy.

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