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Comparative Analysis of Domestic and International Public Library Services for Individuals with Dyslexia: Postprint

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Abstract

[目的/意义] By investigating the current state of services for individuals with dyslexia in public libraries both domestically and internationally, this study analyzes the existing problems in Chinese public libraries' services for this population, aiming to provide feasible recommendations for service improvement.

[方法/过程] Employing literature review, interview, and web-based survey methods, this research examines the current state of services for individuals with dyslexia offered by public libraries in European, American, and select Asian countries, as well as in China's provinces, autonomous regions, and municipalities directly under the central government.

[结果/结论] The findings indicate that services for individuals with dyslexia in China's provincial public libraries remain underdeveloped, with a significant gap compared to foreign counterparts. Awareness of and emphasis on serving this population urgently require enhancement. Libraries should strengthen their attention to individuals with dyslexia from multiple perspectives, improve services, and provide assistance to this group.

Full Text

A Comparative Analysis of Services for Dyslexia Groups in Public Libraries at Home and Abroad

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Abstract

[Purpose/Significance] Through investigating the current status of services for dyslexia groups in public libraries at home and abroad, this paper analyzes the problems existing in Chinese public libraries' services for dyslexia groups, aiming to provide feasible suggestions for improving these services. **[Method/Process]** Literature review, interviews, and online surveys were used to investigate the service status for dyslexia groups in public libraries in Europe, America, and parts of Asia, as well as in provinces, autonomous regions, and municipalities in China. **[Result/Conclusion]** The survey results show that services for dyslexia groups in Chinese provincial public libraries have not been fully developed, with a significant gap compared to foreign countries. The service awareness and attention urgently need to be improved. Libraries should strengthen their attention to dyslexia groups from multiple aspects, improve services, and provide assistance to these groups.

Keywords: public library; dyslexia; reading; service

Classification: G250

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Introduction

In April 2018, the 15th National Reading Survey Report revealed that the comprehensive reading rate of adult nationals across all media in China had reached 80.3%, maintaining steady growth except for a slight decline in 2012 [1]. This demonstrates China's encouraging progress in nationwide reading promotion activities. Meanwhile, as a core force in reading promotion, libraries must not neglect their responsibility to serve disadvantaged readers, particularly dyslexia groups, which have low social awareness and attention in China.

Advocating and providing equal, inclusive services should be integral to library development [2]. The most valuable and core-value-aligned reading promotion should target special populations, with the goal of helping these groups overcome reading barriers [3]. Libraries safeguarding the rights of dyslexia groups to equally access information and knowledge, and providing targeted reading services, is of great significance for achieving truly universal reading.

This paper reviews relevant literature to summarize the current status of foreign library services for dyslexia groups, then investigates 31 provincial public libraries in China to understand the domestic service status. Through comparative analysis of domestic and foreign services, it proposes rational countermeasures and suggestions to improve Chinese public libraries' reading promotion services for dyslexia groups.

2. Related Concepts

2.1 Reading and Reading Ability Reading is a cognitive process of decoding meaningful symbols to extract meaning, encompassing basic visual analysis, orthographic processing, phonological processing, and semantic access [4]. It is a complex mental activity and an important pathway for acquiring knowledge. Reading ability primarily refers to the level of perception, comprehension, appreciation, reflection, and practical application of reading materials [5]. It directly affects reading effectiveness and serves as the prerequisite foundation and important guarantee for successful reading activities.

2.2 Dyslexia The International Federation of Library Associations and Institutions (IFLA), in its report “Guidelines for Library Services to Persons with Dyslexia,” provides a concise and widely accepted definition in the library field: Developmental dyslexia (DD) is a primary, complex neurological disorder characterized by difficulties in number calculation, short-term memory, direction, auditory perception, visual perception, and motor skills without obvious physiological defects. It is a specific learning disability (in reading, spelling, and/or writing) [6]. The reading ability deficits in dyslexia groups prevent smooth reading activities, affect reading outcomes, and cause significant inconvenience and negative impacts on learning and daily life.

3. Current Status of Foreign Public Library Services for DD Groups

3.1 Theoretical Research Achievements Foreign theoretical research on dyslexia can be traced back to the early 19th century. Although literature on dyslexia theory in library and information science is limited, abundant research findings from other fields have provided important inspiration and guidance for foreign libraries serving DD groups.

In terms of dyslexia causation research, the 1990s marked a crucial transition from single visual deficits to phonological deficits [7-10]. From the late 1990s to the early 21st century, research further deepened, proposing the phonological awareness deficit hypothesis [11-12] and cerebellar function deficit theory [13] based on phonological deficits. In dyslexia identification research, widely recognized standardized scales such as the Test of Written Spelling-4, Saxon Spelling Curriculum, Woodcock-Johnson III spelling subtest, and Spelling Sensitivity Score have been employed, providing reliable bases for identifying DD groups [14-18]. In dyslexia intervention research, early studies advocated targeted reading intervention training strategies based on different ability deficit manifestations and age stages of dyslexic patients [19-20]. In recent years, with the rapid development of information and communication technologies, research has validated the effectiveness of software, e-readers, and other technical tools in DD group reading interventions. For example, phonological and multisensory resource software [21] benefits DD groups’ orthographic performance; Abra-

cadabra (ABRA) and E-Pearl5 [22] positively impact letter-sound recognition, phonological awareness, attention, and reading comprehension in DD groups; tablets [23-24], e-readers [25], and multimedia programs (APADYT) [26] support and assist schools in teaching writing and reading to DD children.

3.2 Practical Service Status IFLA began paying attention to DD groups in the early 20th century. Through organizing multiple conferences and issuing various documents and service guidelines, foreign public library services for DD groups started early and are relatively mature in both theory and practice. Based on literature review and website browsing, we summarize the current status of public library services for DD groups in Europe, America, and parts of Asia from the perspectives of departments, service items, institutional cooperation, and relevant regulations and policies [27-47] (see Table 1 and Table 2).

Table 1. Current Status of Services for DD Groups in European and American Countries

- **Library Departments:** Relevant service departments established at all levels of public libraries
- **Service Items:**
 - Personalized book recommendations
 - Dedicated service websites
 - Paper and electronic resource downloads
 - Reading assistance software and tools
 - Various activities
- **Cooperating Organizations:**
 - British Dyslexia Association
 - Chartered Institute of Library and Information Professionals (CILIP)
 - UK local government departments
 - University libraries
 - Municipal, county, and regional libraries
 - Talking Book Centers
 - Talking Book Services Department
 - Talking Book and Braille Center
 - Learning Disabilities Resources Department
 - Library for the Blind and Talking Books
 - Center for the Blind and Disabled
- **Free borrowing/returning of materials**
- **Assistive reading devices**
- **Massive online digital resources**
- **Telephone and broadcast reading activities**
- **Personalized push services**
- **National service alliances**
- **National Library Service**
- **Volunteer associations**

- **International Therapy Dog Association**
- **U.S. Department of Education Office**
- **American Federation of the Blind**
- **Various foundations**
- **Personalized collection materials, easy-to-read materials, audio, video**
- **Relevant Departments and Organizations:**
 - CILIP
 - National Library Service for the Blind and Physically Handicapped (NLS)
 - International Dyslexia Association (IDA)
 - Association for Children with Learning Disabilities (ACLD)
- **Relevant Laws, Regulations, and Policies:**
 - Guidelines for Services to Dyslexia Groups (developed by CILIP)
 - Education Act
 - Birmingham Library Dyslexia Service Standards
 - Special Educational Needs and Disability Act
 - Public Law
 - Library Services for Persons with Disabilities Policy
 - Library Resources for the Blind and Disabled 2009 (NLS)
- **Nordic Countries:**
 - Norway: Norwegian Library of Talking Books and Braille (NLB)
 - Sweden: Agency for Accessible Media (MTM)
 - Finland: National Special Library Celia
- **Services:**
 - Production of talking books
 - Launch of DAISY-format newspapers
 - Establishment of accessible websites
 - Free borrowing/returning of materials and equipment
 - Accessible digital library services
 - Finland: University libraries
 - Norway: Municipal assistance agencies
- **Stakeholder Organizations:**
 - European Dyslexia Association
 - Norwegian Dyslexia Organization
 - Swedish Dyslexia Association
 - Finnish Association for Students with Differences
 - Danish Dyslexia Association
- **Laws and Regulations:**
 - Sweden: Swedish Constitution, Library Act
 - Denmark: Manual for Services to Dyslexia Groups

Table 2. Current Status of Services for DD Groups in Asian Countries/Regions

- **Library Departments:**
 - Using DAISY technology for services

- Face-to-face reading, transliteration, accessible publishing
- Large-print book services
- “Dyslexia Correction Project”
- **Service Items:**
 - Financial assistance
 - Development of various teaching products
 - Volunteers teaching reading skills
 - One-on-one reading instruction for dyslexic children
- **Departments and Social Organizations:**
 - Japan: Library Committee for Persons with Disabilities
 - “24-Hour TV” Charity Committee
 - Singapore Government
 - Charity organizations
 - “Integrated Education” program
 - “Early Identification and Intervention Program”
 - “Peer Tutoring Program”
 - “Accessible Website Award Scheme”
 - Professional skills training
 - “Joyful Reading: Jockey Club Literacy Support Program”
 - Development of assessment tools, teaching materials, and multimedia technology
- **National/Regional Departments and Social Organizations:**
 - Japan: Japan Disability Rehabilitation Association, Library Committee for Persons with Disabilities, Dyslexia Association
 - Singapore: Dyslexia Association of Singapore (DAS)
 - Hong Kong: Education Bureau, Department of Health, Dyslexia Learning Center
 - Establishment of “Love Without Barriers Learning Disability Website”
 - “National Special Education Consultation Network” providing online consultation services
- **Relevant Laws and Policies:**
 - Copyright Law
 - Act on Promotion of Popularization of Specific Textbooks
 - National Diet Library Law
 - Rights of Persons with Disabilities Act
 - Developmental Disabilities Support Act
 - School Education Act
 - Independence Support Welfare Act for Persons with Disabilities
 - Japan Library Association Freedom Declaration
 - Public Library Tasks and Objectives (2004 revision)
 - Services for Students with Learning Disabilities
 - Taiwan Special Education
 - Support Services Measures for Students with Physical and Mental Disabilities

3.2.1 National (Regional) Policy and Regulatory Support

As shown in Tables 1 and 2, the smooth and effective development of DD group services in public libraries in Europe, America, and parts of Asia is directly related to relevant laws, regulations, and policy guarantees. For example, Birmingham Library in the UK regularly holds adult dyslexia support service activities according to the “Library Dyslexia Service Standards” [29]. The U.S. government legally stipulates that DD groups have the right to education and lists them as a “primary disability” protected by law [30], subsequently issuing the “Library Services for Persons with Disabilities Policy” [31] and “Library Resources for the Blind and Disabled 2009” [32]. Sweden’s “Library Act” [33], Japan’s “Japan Library Association Freedom Declaration” [34], “Public Library Tasks and Objectives” [35], and “National Diet Library Law” [36] all reflect these countries’ emphasis on protecting the equal rights of DD groups at the national and legal level, while also clarifying the service responsibilities of public libraries for this group.

3.2.2 Service Organization and Department Establishment

(1) National Departments and Social Organizations. In addition to relevant laws and policies, the UK, USA, Norway, Sweden, Finland, Denmark, Japan, and Singapore have all established specialized dyslexia associations responsible for DD group-related work. These professional organizations are committed to serving dyslexia groups through legislation, conferences, book recommendations, and knowledge dissemination.

(2) Library Service Departments. Most public libraries in the UK, USA, and some Nordic countries (Norway, Sweden, Finland) have established independent departments to provide personalized services for special groups (including DD groups). The UK mainly establishes relevant departments at municipal and county libraries, forming a nationwide network service system [37]. Public libraries in New York [38], Alaska [39], California [40], Washington [41], and South Carolina [42] in the USA have established talking book centers to provide services for visually impaired and DD groups. In Asian countries and regions, fewer specialized departments have been established for DD groups.

3.2.3 Library Service Items and Methods

(1) Service Items. In addition to establishing accessible websites, providing various forms of resources, free barrier-free borrowing, and volunteer assistance, foreign libraries’ services for DD groups have different characteristics. For example, most library websites in the UK and USA provide personalized book recommendation services for DD groups, with books designed in layout, content length, font layout, and other aspects to cater to DD groups’ reading characteristics [43]. Additionally, some countries advocate using reading software and assistive devices to improve service levels, such as UK’s Read&Write Gold, MyStudyBar software, and dyslexia rulers [44], and the USA’s CCTV, screen capture software, screen magnification software, speech synthesizers, DAISY, and Playaway [28,45]. In software and equipment development, Japan has de-

veloped SigtunaDAR3.0, AMIS, and audio teaching materials BEAM for DD groups [46]; Singapore has developed teaching products such as picture cards, morpheme cards, pronunciation wheels, character wheels, phonics cards, and finger spelling [47].

(2) Institutional Cooperation. Libraries actively cooperate with various organizations to provide broader services for DD groups. For example, CILIP in the UK collaborates with the government, university libraries, and public libraries at all levels; the U.S. National Library Service cooperates with volunteer associations, foundations, and state offices; Finland's National Special Library cooperates with university libraries; and Japan's Library Committee for Persons with Disabilities cooperates with the "24-Hour TV" Charity Committee to provide electronic equipment for libraries.

4. Current Status of Domestic Public Library Services for DD Groups

4.1 Theoretical Research Achievements Through CNKI retrieval, screening, and sorting of research literature in China's library and information science field on dyslexia, the concept was first proposed as "reading and writing difficulty" in 2006 [48]. Subsequent research includes:

- **Basic theoretical level research** [49-54] mainly elaborating on concepts and manifestations, discussing the necessity and feasibility of library services for DD groups, and proposing countermeasures and suggestions from dimensions such as publicity, policy systems, library environment, and staff capabilities.
- **Practical service level research** [28,45-46,55-62] mainly summarizes advanced service concepts and methods from foreign countries, including reviewing IFLA's service guidelines for DD groups, analyzing and summarizing practices in the USA, Canada, UK, some Nordic countries, and some Asian countries to provide suggestions for Chinese libraries.
- **Research on services for children and underage DD groups** [63-66] proposes strategies for strengthening internal and external construction and improving service quality by investigating foreign library service status, guidelines, literature, questionnaires, and inter-institutional cooperation methods, combined with the characteristics of dyslexic children and minors.

4.2 Practical Service Status Given China's vast territory and regional differences in development priorities and levels, as well as the advanced nature of public libraries in terms of level, scale, and services, we selected 31 provincial public libraries (excluding Hong Kong, Macao, and Taiwan) and designed relevant questions (see Table 3) based on the 梳理 of foreign library practices, aiming to objectively and comprehensively reflect the current service practice

status and provide a basis for proposing countermeasures through domestic-foreign comparisons.

Table 3. Interview Survey Questions for 31 Provincial Libraries

1. Does your library have services for DD groups?
2. How does your library define the target group (dyslexia)?
3. Does your library have a scientific, systematic identification mechanism for DD groups?
4. Which department(s) plan, organize, implement, and manage services for DD groups?
5. What are the organizational relationships and operational mechanisms between departments?
6. What reading materials (special collection resources) and corresponding assistive equipment does your library provide for DD groups?
7. What service methods or strategies (activities) does your library use for DD groups?
8. Which relevant organizations does your library cooperate with to serve DD groups?
9. Does your library have service evaluation procedures?
10. Do you think DD groups should be included in public library service targets?
11. Do you think it's important for public libraries to serve DD groups?
12. What are the reasons or obstacles for not currently providing services for DD groups?

Through online surveys and interviews, we organized the results by China's economic regions: Northeast, East (divided into Southeast and North coastal), Central, and West (see Table 4).

Table 4. Current Status of Services for DD Groups in Chinese Provincial Public Libraries

- **Northeast Region Provincial Libraries:**
 - **Specialized departments:** Barrier-free service department, Special group service center
 - **Service targets:** Visually impaired, Deaf-mute, Intellectually disabled children, Elderly, Migrant workers
 - **Service items:** Braille books, Easy-to-read materials, Audio books, Reading assistive devices, Audio book donations, Face-to-face reading at blind schools, Sign language teaching, Reading clubs, Elderly learning platforms, Cultural disability assistance activities
 - **Cooperating organizations:** China Braille Association, Provincial Disabled Persons' Federation, Provincial Blind Association, Special education schools, Volunteer service centers, Provincial Department of Culture, Charity foundations, China Braille Library
- **Southeast Coastal Provincial Libraries:**
 - **Specialized departments:** Visually impaired reading room, Visu-

ally impaired information barrier-free service, Audio-visual service center for the blind

- **Service targets:** Disabled persons, Visually impaired
- **Service items:** Braille books, Reading assistive devices, Free mail-out of Braille materials, Barrier-free movies, Book delivery, One-on-one/one-to-many reading, New book sharing sessions, Mobile Braille book stations, Blind reading clubs, Book donations, Library tours, Blind poetry recitation contests
- **Cooperating organizations:** Provincial/municipal Disabled Persons' Federation, Special education schools, China Braille Library, University volunteer groups, Radio stations
- **North Coastal Provincial Libraries:**
 - **Specialized departments:** Rehabilitation reading room, Visually impaired reader service area, Barrier-free service center
 - **Service items:** Braille books, Reading assistive devices, Barrier-free movies, Visually impaired group recitation activities, Blind knowledge competitions, Book delivery, Digital library construction
 - **Cooperating organizations:** Provincial Disabled Persons' Federation, Provincial Blind Association, Special education centers, China Braille Library, University volunteer groups
- **Central Region Provincial Libraries:**
 - **Specialized departments:** Visually impaired reading room, Rehabilitation reading room, Disabled persons' reading room, Blind library
 - **Service targets:** Deaf-mute, Elderly, Physically disabled
 - **Service items:** Braille books, Reading assistive devices, Barrier-free movies, Blind reading clubs, Themed reading promotion activities for visually impaired groups, Digital resources, Volunteer activities at blind schools, Blind social events
 - **Cooperating organizations:** Provincial Disabled Persons' Federation, Provincial Blind Association, Blind schools, Special education schools, University volunteer associations
- **Western Region Provincial Libraries:**
 - **Specialized departments:** Visually impaired reading room, Visually impaired reading area, Disabled persons' library
 - **Service targets:** Deaf-mute, Intellectually disabled children, Farmers and herders
 - **Service items:** Braille books, Reading assistive devices, Barrier-free movies, Training classes for blind digital resources and assistive device usage, Themed reading promotion activities, Transportation services for blind visitors, Talent shows for blind readers, Book delivery
 - **Cooperating organizations:** Provincial Disabled Persons' Federation, Provincial Blind Association, Special education centers, China Braille Library, Blind schools, Special education schools, University volunteer associations

The survey results show that regardless of economic development level, provincial public libraries' services for special reading groups mainly target the blind, deaf-mute, elderly, and children. Department names such as "Blind Reading Area," "Visually Impaired Reading Room," and "Blind Audio-Visual Service Center" clearly indicate a focus on blind and visually impaired populations. In-library services mainly provide special reading materials, easy-to-read resources, electronic audio resources, and reading assistive devices for visually impaired groups, while outreach services mostly cooperate with provincial/municipal Disabled Persons' Federations, Blind Associations, special education schools, and volunteers from all sectors to conduct themed reading promotions, barrier-free movie screenings, lectures, training classes, talent shows, and fellowship activities for special reading groups, especially the blind. Clearly, DD groups are not included in these special populations, indicating that current practical services for DD groups in Chinese provincial public libraries have not been substantively developed, showing a nationwide universal deficiency at the practical level.

5. Comparative Analysis of Domestic and Foreign Services for Dyslexia Groups

5.1 Comparative Analysis at the Theoretical Research Level Comparing domestic and foreign theoretical research on dyslexia reveals several key differences:

1. **Research Timeline:** Foreign research leads domestic research by nearly a century, indicating more professional and profound cognitive understanding of dyslexia in terms of depth, breadth, richness, and reliability of conclusions.
2. **Research Scope:** Foreign dyslexia research is more systematic and comprehensive, covering identification, causation, manifestation, and intervention. Domestic LIS research is in its infancy, focusing on basic issues such as concepts, types, and causes, and learning from foreign literature to guide library practice.
3. **Research Institutions:** Many foreign countries have specialized institutions or associations for dyslexia research, such as the International Dyslexia Association, the National Center for Learning Disabilities, and the Learning Disabilities Association of America. Dyslexia has gradually formed an independent research field abroad with specialized academic journals like *Annals of Dyslexia*. In China, a Learning Disabilities Research Association was established in the early 2000s but disbanded, with no subsequent specialized research institution or academic journal.
4. **Research Subjects:** Foreign research covers young children, adolescents, and adults, while domestic research focuses mainly on dyslexic children.

5.2 Comparative Analysis at the Practical Service Level Comparing domestic and foreign library services for DD groups shows significant gaps. The

advancement of foreign library services is mainly reflected in: rich theoretical research guiding practice, numerous explicit laws and regulations at the national level, collaboration with professional organizations and multiple social sectors, and providing diverse, personalized, and rich reading services for both in-library and home-bound DD groups.

Based on domestic and foreign status analysis, the main reasons for the lack of substantive development of Chinese library services for DD groups are:

1. **Lack of Awareness of Dyslexia:** During interviews, when asked about services for DD groups, few staff inquired about the specific definition of DD groups, mostly equating them with reading disadvantaged groups (physically disabled, blind, deaf-mute, etc.) and giving affirmative answers. This indicates that the concept is vague or completely unfamiliar to Chinese library professionals.
2. **Difficulty in Locating and Scientifically Identifying DD Groups:** After introducing the definition and manifestations of DD groups, all interviewees strongly expressed that libraries have the responsibility and willingness to serve them, while also stating that the main obstacles are how to find these individuals and encourage DD groups to actively visit libraries.
3. **Lack of Relevant Laws, Regulations, and Policies:** Compared to the relatively complete legal and policy systems in European and American countries and some developed Asian regions, mainland China only has the 2008 “China Library Service Declaration” and the 2013 “Proposal on Strengthening Care for Students with Reading and Writing Difficulties to Effectively Implement Educational Fairness” at the Chinese People’s Political Consultative Conference. This deficiency constrains the development of relevant policies and guidelines in the library field.

6. Countermeasures and Suggestions for Chinese Public Library Services for Dyslexia Groups

6.1 Strengthen Publicity for Dyslexia Services Libraries have the responsibility and obligation to conduct a series of promotional activities, such as producing and distributing leaflets and brochures about dyslexia, posting promotional posters in prominent library locations, and pushing relevant content through public accounts; inviting celebrities with dyslexia as ambassadors and regularly holding lectures; cooperating with TV, radio, and news media to produce promotional films, documentaries, and public service advertisements; holding related painting and film exhibitions to attract public attention and care for this group; and using the internet and new media to establish dyslexia websites and create WeChat and Weibo accounts to release and update relevant information and promote library services.

6.2 Develop Service Guidelines for “Dyslexia” The China Society of Library Science should fully play its organizational and leadership role, establish a professional project team, and combine China’s actual conditions to appropriately reference and learn from IFLA’s “Guidelines for Library Services to Persons with Dyslexia” to develop and release China’s own library service guidelines for dyslexia groups. Provincial, municipal, and regional libraries should also formulate reasonable service standards based on their actual conditions and local user needs to provide reading services for dyslexia groups.

6.3 Improve Scientific Identification Capabilities for Dyslexia Libraries can improve their scientific identification capabilities for DD groups through:

- 1. Promoting Multi-field Cooperation:** Dyslexia involves theories and knowledge from medicine, education, and psychology. Libraries should actively cooperate with hospitals, psychological counseling institutions, educational institutions, and university experts and scholars in these fields. With advantages in information resources, physical environment, and service characteristics, libraries can establish reading behavior observation rooms, teaching and research rooms, and psychological research rooms in the library to facilitate exchange and cooperation. By combining neuroscience, reading brain mechanisms, and psychological cognition with reader behavior, libraries can clarify symptoms presented by dyslexic patients and establish a scientific identification standard for DD groups based on different manifestations and severity levels.
- 2. Purchasing Software and Hardware, Cultivating and Introducing Talent:** With rapid scientific and technological development, technologies such as PET, fMRI, MEG, ERP, and eye-tracking are frequently used to study reading behavior. Libraries can purchase professional equipment related to these technologies to provide reading behavior analysis services for library visitors. Simultaneously, regularly organize staff training on dyslexia knowledge and equipment operation, and introduce outstanding talents with professional knowledge to build and cultivate a DD group identification team.
- 3. Establishing Authoritative Identification Processes and Systems:** With human and material support and through cross-field cooperation, libraries should independently develop a systematic DD group identification process and system, test and evaluate its scientificity, feasibility, and effectiveness, and continuously increase promotion to build it into a standard, authoritative, and widely recognized identification system.

6.4 Provide Remedial Training for Dyslexia Groups

- 1. Reading-level Remedial Training:** In addition to conventional reading services, provide targeted remedial training for different symptom charac-

teristics. For example, use reading aloud intensive training to compensate for phonological deficits; use moderate exercise intervention to stimulate neurological senses and compensate for memory deficits; use character memorization intensive training to help establish connections between characters, words, and sentences to compensate for semantic comprehension deficits.

2. **Psychological-level Remedial Training:** Research shows that individuals with dyslexia have higher risks of autism, depression, violence, and suicidal tendencies than normal individuals. Libraries need to provide psychological counseling and guidance services for DD groups and help them rebuild confidence through regularly holding fun reading activities and award ceremonies, providing help and comfort in both reading and mental health.

6.5 Provide Personalized Reading Services for Dyslexia Groups

1. **Personalized Reading Materials:** Based on DD groups' reading abilities, proactively push appropriate reading materials. Both content (theme, genre, difficulty) and format (font size, color, layout) should be selected and pushed considering DD groups' characteristics. In addition to traditional paper materials, libraries should provide various types and formats of electronic resources.
2. **Personalized Library Environment and Assistive Devices:** To provide barrier-free services, libraries can establish dedicated reading areas for DD groups with clear graphic signs or bright color markings. Simultaneously, leverage computer and multimedia technology advantages to add advanced reading assistive devices to reduce barriers from pure text materials.
3. **Personalized Staffing:** Libraries should regularly organize dyslexia professional knowledge training for staff to strengthen service awareness and capabilities, develop deep understanding of DD groups' unique reading characteristics, needs, and difficulties, thereby providing personalized services for these readers.

References

- [1] How many books did you read in 2017? The 15th National Reading Survey Report released [EB/OL]. [2018-04-18]. <http://baijiahao.baidu.com/s?id=1598068112855388141&wfr=spider&>
- [2] Wang Sufang. Review of research on disadvantaged groups services in foreign public libraries [J]. Chinese Journal of Library Science, 2010, 36(3): 95-107.
- [3] Fan Bingsi. Reading promotion and library science: Analysis of basic theoretical issues [J]. Chinese Journal of Library Science, 2014(5): 4-13.

- [4] Snowling MJ, Hulme. The science of reading: a handbook [M]. Malden, MA: Blackwell, 2005.
- [5] Yao Linqun. Reading ability performance: Elements, levels, and indicators [J]. Research in Educational Development, 2012, 36(Z2): 35-39.
- [6] IFLA. Guidelines for library services to persons with dyslexia [OL]. [2017-04-15]. <http://archive.ifla.org/VII/s9/ndl/ifap70e.pdf>.
- [7] Lovegrove WJ, Bowling A, Badcock D, et al. Specific reading disability: differences in contrast sensitivity as a function of spatial frequency [J]. Science, 1980, 210(4468): 439-440.
- [8] Bryant PE, Bradley L. Children's reading difficulties [M]. Oxford: Basil Blackwell, 1985.
- [9] Goswami U, Bryant PE. Phonological skills and learning to read [M]. Hillsdale, NJ: Erlbaum, 1990.
- [10] Livingstone MS, Rosen GD, Drislane FW, et al. Physiological and anatomical evidence for a magnocellular defect in developmental dyslexia [J]. Proceedings of the national academy of science, 1991(88): 7943-7947.
- [11] Stein J. The magnocellular theory of developmental dyslexia [J]. Dyslexia, 2001(7): 12-36.
- [12] Vellutino FR, Fletcher JM, Snowling MJ, et al. Specific reading disability (dyslexia): what have we learned in the past four decades? [J]. Journal of child psychiatry, 2004, 45(1): 2-40.
- [13] Nicolson R, Fawcett AJ, Dean P. Dyslexia, development and the cerebellum [J]. Trends in neurosciences, 2001, 24(9): 515-516.
- [14] Liu Xiaojuan, Xu Rui. Comparative analysis of domestic and foreign dyslexia research and prospects for domestic research [J]. Chinese Journal of Library Science, 2010(3): 95-107.
- [15] Larsen SC, Hammill DD, Moats LC. Test of written spelling [M]. Austin, TX: PRO-ED, 1999.
- [16] Simmons L. Saxon phonics and spelling [M]. Orlando, FL: Saxon/Houghton Mifflin Harcourt School Publishers, 2003.
- [17] Woodcock R, McGrew K, Mather N. Woodcock-Johnson III [M]. Itasca, IL: Riverside Publishing, 2007.
- [18] Masterson JJ, Apel K. The spelling sensitivity score: noting developmental changes in spelling knowledge [J]. Assessment for effective intervention, 2010, 36(1): 35-45.
- [19] Bhattacharya A, Ehri LC. Graphosyllabic analysis helps adolescent struggling readers read and spell words [J]. Journal of learning disabilities, 2004, 37(4): 331-348.
- [20] Kelman ME, Apel K. Effects of a multiple linguistic and prescriptive approach to spelling instruction: a case study [J]. Communication disorders quarterly, 2004, 25(2): 56-66.
- [21] Kast M, Baschera GM, Gross M, et al. Computer-based learning of spelling skills in children with and without dyslexia [J]. Annals of dyslexia, 2011;61(2): 177-200.
- [22] Lysenko LV, Abrami PC. Promoting reading comprehension with the use of technology [J]. Computers & education, 2014, 75: 162-172.

- [23] Berninger VW, Nagy W, Tanimoto S, et al. Computer instruction in handwriting, spelling, and composing for students with specific learning disabilities in grades 4-9 [J]. *Computers & education*, 2015, 81: 154-168.
- [24] Conway PF, Amberson J. Laptops meet schools, one-on-one draw: m-learning for secondary students with literacy difficulties [J]. *Support for learning*, 2011;26(4): 173-181.
- [25] Schneps MH, Thomson CC, Sonnert G, et al. E-readers are more effective than paper for some with dyslexia [J]. *PLOS ONE*, 2013, 8(9): 1-9.
- [26] Rubio G, Navarro E, Montero F. APADYT: a multimedia application for SEN learners [J]. *Multimedia tools & applications*, 2014, 71(3): 1771-1802.
- [27] Li Yingbo. Thoughts on public library services for dyslexia groups in China [J]. *Library Journal*, 2015(11): 81-85.
- [28] Tian HuaMan, Shu Man, Wang Bo. Research on “dyslexia” group services in American public libraries [J]. *Library and Information Service*, 2014, 58(12): 40-44, 25.
- [29] Regular groups and societies which meet at Hall Green Library [EB/OL]. [2017-01-15]. <http://www.libraryofbirmingham.com/article/hallgreenlibrary/hallgreenlibrary-events>.
- [30] Horowitz R. New law identifies dyslexia as ‘primary disability’ [EB/OL]. [2017-07-30]. <http://ncadvertiser.com/43032/new-law-identifies-dyslexia-as-primary-disability/#axzz4HkRI7DLO>.
- [31] ASCLA. Library services for people with disabilities policy [EB/OL]. [2017-07-30]. <http://www.ala.org/ascla/asclaisues/libraryservices>.
- [32] Library resources for the blind and physically handicapped [EB/OL]. [2017-05-08]. <http://www.loc.gov/nls/site.html>.
- [33] Legislation [EB/OL]. [2017-01-06]. <http://www.tpb.se/eng?lish/legislation/>.
- [34] Japan Library Association. Library Freedom Declaration (1979 revision) [EB/OL]. [2018-07-10]. https://www.jla.or.jp/portals/0/html/jiyu/library_{{freedom}}_{{chinese}}.htm.
- [35] Japan Library Association. Public Library Tasks and Objectives [EB/OL]. [2017-02-18]. <http://www.jla.or.jp/library/guideline/tabid/236/Default.aspx>.
- [36] Specific Non-profit Organization Large Print Culture Popularization Association. “National Book [37 [38 *Talkingbookandbraillelibrary*[EB OL [2018 07 13 ht [39 *The Guarantee Law*” (draft) [EB/OL]. [2017-02-18]. <http://www.daikatsuji.co.jp/2013-4-24.html>.
- [37] Shu Man, Sun Bei. Theory and practice of library “dyslexia” group services [J]. *Library Journal*, 2016(8): 136-138.
- [38] New York State Library Talking Book and Braille Library [EB/OL]. [2017-02-26]. http://www.nysl.nysed.gov/tbbl/talk_2.htm.
- [39] Alaska State Library Talking Book Center [EB/OL]. [2017-10-28]. <http://www.talkingbooks.alaska.gov>.
- [40] The California State Library Braille and Talking Book Library [EB/OL]. [2013-11-08]. <http://www.braillelibrary.org/>.
- [41] Washington Talking Book and Braille Library [EB/OL]. [2018-07-13]. <https://www.wtbbbl.org/services.aspx>.
- [42] Connect the dots: newsletter of the South Carolina State Library talking book service [EB/OL]. [2018-07-13]. <https://dc.statelibrary.sc.gov/handle/10827/24179>.

- [43] Barringtonstoke book guide for kids with dyslexia [EB/OL]. [2016-05-05]. <http://www.thebookseller.com/news/barringtonstoke-book-guide-kids-dyslexia>.
- [44] Online dyslexia screening tools [EB/OL]. [2016-05-05]. <http://dds.southwales.ac.uk/screeningtool/>.
- [45] Huang Yaodong, Zhong Fenggui. Research on collaborative services for dyslexic children between American public libraries and social service agencies [J]. *Library Construction*, 2016(11): 5-12.
- [46] Su Liping, Shu Man. Research on “dyslexia” group services in parts of Asia [J]. *Library and Information Service*, 2014, 58(12): 45-50.
- [47] DAS Academy. Teaching tools [EB/OL]. [2017-02-26]. <http://www.dasacademy.edu.sg/resources/learning-resources.html>.
- [48] Wang Sufang. IFLA 弱势群体服务图书馆专业组制定的服务政策及对我国的启示 (上) [J]. *Library*, 2006(6): 17-21.
- [49] Zhang Lijuan. Research on public library services for dyslexia groups [J]. *Library Journal*, 2015(3): 60-62.
- [50] Chen Yanwei. Research on public library services for dyslexia groups [J]. *Library Work and Research*, 2015(5): 86-88.
- [51] Jia Rong. Research on public library services for dyslexia groups [J]. *China Market*, 2016(8): 74-75.
- [52] Sun Bo. How libraries can serve dyslexia groups [J]. *Contemporary Library*, 2016(2): 18-20, 25.
- [53] Shu Man. Research on public library services for dyslexia groups in China [J]. *National Library Journal*, 2015(6): 47-52.
- [54] Huang Danyu, Zhang Zhimei. IFLA’s promotion of library dyslexia services: Origin, process, and effectiveness [J]. *Library and Information Service*, 2013, 57(21): 76-80.
- [55] Zhang Xu, Hao Shuoqiang. Overview of American library services for dyslexia groups [J]. *Chinese Journal of Medical Library and Information Science*, 2015, 24(3): 43-47.
- [56] Song Shuangxiu, Shu Man. Research on “dyslexia” group services in British public libraries [J]. *National Library Journal*, 2014, 23(4): 3-9.
- [57] Song Shuangxiu, Shu Man. Services for dyslexia groups in British university libraries and their implications [J]. *Journal of Academic Libraries*, 2013, 31(6): 18-23.
- [58] Sun Bei, Fang Jiazhong. Research on “dyslexia” group services in Nordic libraries—Based on practices in Norway, Sweden, Finland, and Denmark [J]. *Library and Information Service*, 2014, 58(12): 45-50.
- [59] Zhong Baojun. Practice and implications of Canadian public library services for dyslexic children [J]. *Library World*, 2017(2): 20-23.
- [60] Zong Hechanrui, Song Shuangxiu. Research on “dyslexia” group services in Canadian university libraries [J]. *Library and Information Service*, 2014, 58(12): 51-55.
- [61] Chen Lan, Yao Wei. Multimedia digital accessible information technology and Japanese practice in serving dyslexia groups [J]. *Library Construction*, 2008(6): 74-76.
- [62] Shu Man, Song Shuangxiu. Promotion issues of public library services for

- dyslexic children [J]. *Library Journal*, 2015(10): 13-19, 84.
- [63] Yang Yanchang. Research on strategies for public library services for dyslexic children [J]. *Shandong Library Journal*, 2015(1): 56-59.
- [64] Feng Rui. Research on public library services for dyslexic children [J]. *Inner Mongolia Science Technology & Economy*, 2016(9): 111-112.
- [65] Xu Yunjie. Research on strategies for public library services for dyslexic children in China [J]. *New Century Library*, 2016(10): 38-41.
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Author Contributions

Zhao Tianyuan: Responsible for paper writing and revision;
Ma Jie: Proposed research proposition and overall framework, revised paper and finalized manuscript;
Xu Xiaochen: Revised paper, collected literature, and translated English content.

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A Comparative Analysis of Services for Dyslexia Groups in Public Libraries at Home and Abroad

Abstract: [Purpose/Significance] Through in-depth research on the status of services to dyslexia groups in domestic and foreign libraries, the paper analyzes current problems and provides viable advice on public library services for people with dyslexia. [Method/Process] Literature, interviews, and online surveys were used to investigate the service status of dyslexia groups in public libraries in Europe, America, and parts of Asia, and in provinces, autonomous regions, and municipalities in China. [Result/Conclusion] The survey shows a large gap between services for dyslexia groups in Chinese provincial public libraries and foreign countries, with urgent need to improve service consciousness and attention. Libraries should pay more attention to dyslexia groups, improve services, and provide more help.

Keywords: public library; dyslexia; reading; service

Note: Figure translations are in progress. See original paper for figures.

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