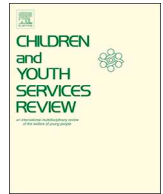




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Family foster care and children's outcomes in China: Evidence from a scoping review



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ABSTRACT

Child maltreatment has become a recognized social problem in China. However, the target of foster care is primarily children who are orphans, abandoned, and disabled but not maltreated children. Responding to child maltreatment, an alternative care system to place children in out-of-home care should be established. This study used a scoping review method to map the scope of research regarding children's outcomes in current foster care in China. Most studies indicated that foster children exhibited better well-being outcomes (e.g., physical health, cognitive, language, motor, social-emotional, social adaptive, academic performance) than children who stayed in child welfare institutions. A few studies examined permanency outcomes of foster children. Factors associated with child well-being and permanency at the child, family, placement, and system levels were identified. This review revealed significant limitations in previous studies, including small sample sizes, less rigorous study designs, limited data analyses, and limited dimensions of children's outcomes. More rigorous work is needed to understand risk factors and protective factors associated with foster children's outcomes. Implications for research, practice, and policy were discussed.

1. Introduction

1.1. Child protection in China

In recent years, child maltreatment has been recognized as a social and public health problem in China. Although there is no national prevalence data on child abuse and neglect, empirical evidence suggests that child maltreatment is pervasive. Fang et al. (2015) meta-analysis estimated that 26.6% of children had suffered physical abuse, 19.6% had experienced emotional abuse, and 26% had neglect history. With regard to child sexual abuse, a meta-analysis of 27 studies indicated that sexual abuse prevalence was 15.3% for females and 13.8% for males in China (Ji, Finkelhor, & Dunne, 2013).

As child maltreatment is becoming a public concern, China has endeavored to protect vulnerable children, including combatting child maltreatment. The administrative measure of *Pilot Work to Establish a Modestly Inclusive Child Welfare System for All Children* has expanded the scope of child welfare services from orphans and abandoned children, most with disabilities, to more vulnerable children, including children of imprisoned parents, children whose parents are severely ill, and

children who are from extremely impoverished families (Social Welfare and Charity Affairs Promotion Division of People's Republic of China, 2013). In addition to expanding the scope of child welfare services, China's Ministry of Civil Affairs initiated a pilot child protection program in 2013, which aimed to establish a public child protection system nationwide (Man, Barth, Li, & Wang, 2017). With the advancement of child protection work in recent years, child custody deprivation due to child maltreatment has been practiced (Zhao, Xu, & Chen, 2018). Along with the legal practice of child custody deprivation and child removal, a significant challenge has emerged as to where to place maltreated children in the Chinese foster care system that currently only targets orphaned and abandoned children (Xu, Bright, & Ahn, 2018).

1.2. Evolution of foster care in China

As a type of family-based placements, foster care was imported to China in the late 1990s (Zeng, 2002). China's foster care policy has been evolving. Family-based foster care is designated as alternative care for orphans and abandoned children in China (Zeng, 2002). In 1998, the very first 236 orphans and abandoned children were fostered in 31

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foster families as a pilot program in Beijing. After this pilot program, foster care has been implemented nationwide (Zhou, 2010). Different from foster care in the United States and many other countries, target children of foster care in China primarily are orphans and abandoned children (often disabled children), especially those who are placed in institutional care (Xu et al., 2018).

To ensure the living conditions of foster children, the Ministry of Civil Affairs successively issued two important regulations concerning the subsidy standards for orphans who were placed in foster homes: *Notice on the Orphan Minimum Fostering Standards* and *Guidance on Minimum Fostering Standards for Children in the Institutional Care* (The State Council, 2009, 2010). These regulations, for the first time, required a minimum living standard for orphans who lived with extended families or other guardians receive a subsidy of 600 CNY (Chinese Yuan Renminbi) per month, while the subsidy for orphans in residential child welfare agencies was 1000 CNY (The State Council, 2009). Furthermore, *Opinions of the General Office of the State Council on Strengthening the Work of Orphans* was passed and provided detailed requirements for protecting and improving the well-being of orphans, which included expanding other placement options (e.g., kinship care, foster care, and adoption) for these children (The State Council, 2010a). Followed by this, the *Notice on Distribution of Basic Living Expenses for Orphans* (The State Council, 2010b) was issued. The notice indicated that the central government would provide 2.5 billion CNY to supplement the living subsidies for orphans in kinship care and institutions (The State Council, 2010b). In 2014, the *Measures for Family Foster Care Administration Approach* (Ministry of Civil Affairs of People's Republic of China, 2014) was enacted and comprehensively regulated qualifications for foster care families, services, supervision, and management in practice, and expanded foster care to street children for the first time. At the practice level, Nanjing was the first city to expand foster care services to vulnerable children, including maltreated children or children who are at a high risk of being maltreated (e.g., parental substance use or incarceration) (China Civil and Commercial Law, 2015). However, at the national level, foster care has not been extended to maltreated children

1.3. Challenges in current foster care in China

Although child maltreatment has been recognized as a social problem in China (Fang et al., 2015; Man et al., 2017; Zhao, Hämäläinen, & Chen, 2017a), the current foster care program is not equipped well to place children who are abused or neglected. Some challenges have emerged in providing alternative care for maltreated children who are in need of out-of-home care. The first challenge focuses on the restriction of target children in current foster care, which creates structural barriers for maltreated children to be placed in family-based out-of-home care. As a result, the current practice has placed maltreated children in agency-based care, such as child welfare institutions and hospitals, or has allowed children to stay in unsafe homes (Zhao, Hämäläinen, & Chen, 2017b). Lack of safe family-like environments may cause further harm and trauma for maltreated children, which would exacerbate the negative effects of traumatic experiences on children's short-term and long-term well-being. Another challenge is that China is facing a shortage of foster care families. The number of motivated and qualified foster parents has dramatically decreased during this time (Zhang, 2016). Moreover, it is very difficult to recruit qualified foster families in urban areas, which has currently led to placing most children in the foster care system with rural families. In addition, there is a significant practice gap between placing children in foster care and achieving children's permanency through adoption as many foster children are not adopted.

1.4. Research Purposes

In the intersections among increased maltreated children, restrictive eligibility for entering foster care, and decreased foster care families,

two questions need to be addressed: What are foster children's outcomes in China? And what is the next direction for the future Chinese out-of-home care policy for maltreated children considering its cultural context and social welfare structure?

To answer these two questions, this scoping review aims to: (1) map the scope of studies about children's outcomes in foster care in China; and (2) summarize children's outcomes in foster care in China. The results of this study will identify gaps in the literature and point to future research directions. Given the urgent needs of an effective alternative care system for maltreated and other vulnerable children, the results of evaluating foster children's outcomes in China will provide policy and practice recommendations for future alternative care systems in China.

2. Methods

This literature review utilized the scoping review methodology developed by Arksey and O'Malley (2005). Scoping reviews are designed to map the scope of literature in a particular area (Arksey & O'Malley, 2005; Gough, Thomas, & Oliver, 2012). According to Arksey and O'Malley (2005), a scoping review includes five steps. These steps are: (1) formulating research questions; (2) identifying relevant studies using systematic searches; (3) screening identified articles using inclusion and exclusion criteria; (4) extracting data and charting data; and (5) synthesizing findings from selected articles.

Scoping reviews primarily differ from systematic reviews in two ways. First, it starts with broader research questions and captures literature in an area rapidly; second, it usually does not appraise the quality of articles (Arksey & O'Malley, 2005; Levac, Colquhoun, & O'Brien, 2010). The aims of scoping reviews usually are to identify gaps in the literature and provide directions for future research (Arksey & O'Malley, 2005). Considering the objectives of this review, utilizing a scoping review method is more suitable than conducting a systematic review.

2.1. Search strategy

A comprehensive search was conducted in October 2017. We searched three Chinese databases, including China National Knowledge Infrastructure (CNKI), Chongqing VIP information (CQVIP), and Wanfang databases, and seven English databases, such as Scopus, PsycINFO, SocINDEX, Social work abstract, Medline, Educational Resources Information Center (ERIC), and Cumulative Index of Nursing and Allied Health Literature (CINAHL). The keyword "family foster care" was used for our search in Chinese databases. This term was used because it was a common way to describe foster care in Chinese. Two other terms "foster care" and "China" were adopted to search articles in the English databases. The reason we did not apply other more specific outcomes as search keywords was that those keywords would have limited the number of articles, which would not have helped identify a broad range of literature. We limited the publication years from 2000 to 2017 because foster care was imported to China in the late 1990s (Zeng, 2002) and research began to emerge in 2000. A total of 2321 articles, including 2221 Chinese articles and 100 articles published in English, were identified across these ten databases. Articles were imported into Refworks (2018), and 1811 articles were left for further screenings and selections after removing duplicates.

2.2. Selection criteria

The first author and second author screened titles and abstracts of these articles independently. They checked each other's records and reached agreements on article selections. If they could not reach consensus, the third author screened abstracts and titles again and helped the decision-making process. The following inclusion criteria were used: (1) studies about children's outcomes, including well-being,

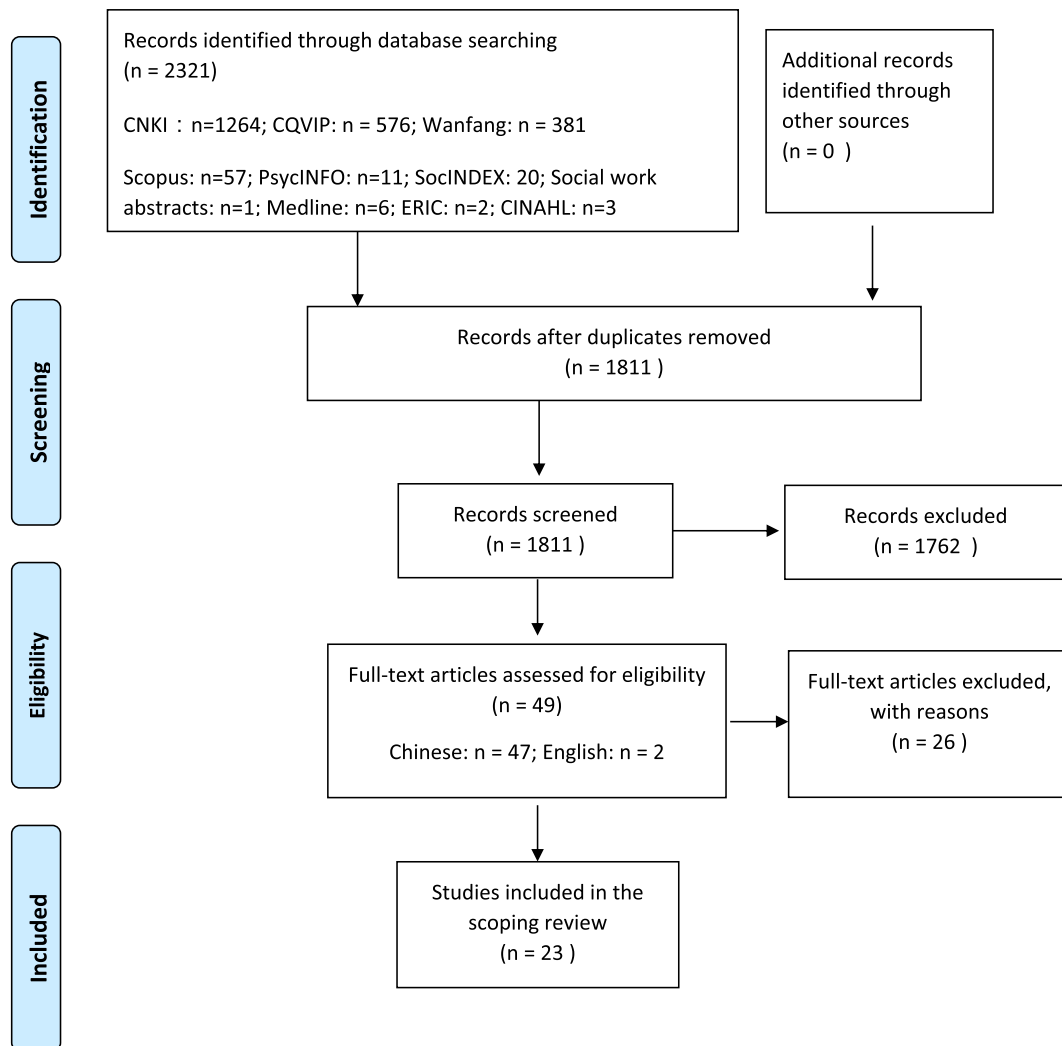


Fig. 1. Foster care and children's outcomes.

permanency, and safety in foster care, and (2) studies used empirical methods to answer research questions. Eliminated articles included conceptual papers that described foster care models in China and compared China's foster care system to other countries; commentary papers which responded to policy changes and analyzed the effects of policy changes on foster care; empirical articles that did not examine the relationship between foster care and children's safety, well-being, and permanency outcomes; and empirical studies examining the effectiveness of social work interventions on orphaned and abandoned children in child welfare institutions. A total of 49 articles were included for full-text eligible assessment. Finally, 23 eligible studies, including 21 Chinese articles and 2 English articles, were selected according to the eligibility criteria of the articles. The detailed selection process is presented in Fig. 1, following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guideline.

2.3. Literature synthesis

Full-text articles assessed for eligibility (n = 49) Chinese: n = 47; English: n = 2. The authors' names, study designs, sample characteristics, methodologies, and main findings were collected and entered a data matrix. Data were analyzed to achieve research objectives. In order to synthesize the results, primary child development goals and early childhood developmental indicators were used as references to organize selected studies and to answer research questions. We first used

children's safety, permanency, and well-being as primary aspects of child outcomes to organize selected studies into three categories (Pecora et al., 2009). We also used a list of child development indicators for low- and middle-income countries as China is a middle-income country (The World Bank, 2018) to synthesize studies that examined children's well-being. The main domains of child developmental outcomes in this inventory include cognitive, language, motor, social-emotional/temperament, attention/executive function, personal-social/adaptive, academic/pre-academic, approaches to learning, and disability (Fernald, Prado, Kariger, & Raikes, 2017).

3. Results

3.1. Scope of research

Among 23 articles, 91.3% (n = 21) were published in Chinese and 8.7% (n = 2) were published in English. The publication years ranged from 2001 to 2014. Although all studies were published in peer-review scholarly journals, only six articles, not including two English articles, were published in journals collected in the Chinese Social Science Citation Index (CSSCI), which was an indicator of high-quality refereed journal articles. Regarding journal distributions, medical journals (52.2%; n = 12) were homes for the majority of articles, followed by social work (13%; n = 3), psychology (13%; n = 3), and interdisciplinary youth studies journals (8.7%; n = 2). The distribution of

Table 1
Selected Articles' Information (N = 23).

	N (%)	Range
<i>Language</i>		
English	2 (8.7%)	
Chinese	21 (91.3%)	
<i>Journal Type</i>		
Social Work	3 (13%)	
Medicine	12 (52.2%)	
Psychology	3 (13%)	
Youth Studies	2 (8.7%)	
Education	1 (4.3%)	
Other	2 (8.7%)	
Peer Review (Yes)	23 (100%)	
Chinese Social Sciences Citation Index (Yes)	6 (26.1%)	
<i>First Author' Affiliation</i>		
Child Welfare Institution	10 (43.5%)	
University	10 (43.5%)	
Hospital	3 (13.0%)	
Published Year		2001–2014

journal articles reflected how these studies conceptualized and evaluated the outcomes of foster care children in China. For example, more studies focused on children's physical health outcomes than psychological and educational outcomes. In terms of first authors' affiliation, nearly half (43.5%; $n = 10$) of authors worked in child welfare institutions, while the rest worked at universities (43.5%; $n = 10$) and hospitals (13.0%; $n = 3$). Table 1 presents these articles' information.

3.2. Nature of research

A summary of the study design, sample characteristics, data analytic strategies, and main findings is presented in Table 2. Of the 23 included studies, two studies (Van Den Dries, Juffer, Van Ijzendoorn, & Bakermans-Kranenburg, 2010; Van Den Dries, Juffer, Van Ijzendoorn, Bakermans-Kranenburg, & Alink, 2012) focused on children who were adopted from foster care families and child welfare institutions from China. Except for these two studies, children included in the rest of 21 studies were sampled from urban areas: Beijing ($n = 3$), Shanghai ($n = 9$), Wuhan ($n = 4$) and Jinan ($n = 2$) cities, and some rural places in central/western China: Yunnan ($n = 1$), Hunan ($n = 1$), and Ningxia ($n = 1$) provinces. Samples from cities represented an urban foster care model, while samples from some places in central/western China presented a rural foster care model.

Almost all the studies employed cross-sectional study designs except for two studies (Chen & Hu, 2003; Van Den Dries et al., 2012) that used longitudinal designs. In terms of methodological approaches, most studies employed quantitative methods, while four studies (Jiang & Tian, 2013; Wang, 2014; Wu, Han, & Liu, 2005; Yin, 2002) employed both qualitative and quantitative methods to understand the phenomena. Two studies (Liu & Li, 2009; Zhou & Chen, 2008) utilized clinical records and case records to study foster care children, while two studies were pure qualitative research (Ma, 2010; Wang, 2014). In terms of data analytic methods, descriptive and bivariate analyses were commonly used across studies, but more advanced analysis like regression models was rarely employed due to the small sample sizes. Qualitative thematic analysis was widely employed to summarize key findings of studies.

We attempted to categorize the studies into three subgroups using a framework of primary child welfare outcomes: Well-being, safety, and permanency. However, the child's safety concern was not a major outcome across studies, although one study mentioned foster care placement disruption was due to suspicious child maltreatment (Zhou & Chen, 2008). Therefore, we grouped our studies into two categories: Child well-being and permanency. Among 23 studies, the vast majority ($n = 20$; 87%) of studies focused on child well-being outcomes in

family foster (Cao, Huang, Xu, & Wang, 2004; Chen & Hu, 2003; Cui & Wu, 2002; Jiang & Tian, 2013; Jin et al., 2001; Jin, Zhou, Zhou, & Gong, 2003; Ma, 2010; Niu, 2009; Van Den Dries et al., 2010, 2012; Wang, 2014; Wang, Qian, Tang, & Zhu, 2001; Wu et al., 2005; Xiao, Chen, Zhou, Zhang, & Hu, 2012; Yang & Yang, 2007; Yao & Zhang, 2009; Yin, 2002; Zeng & Zan, 2001; Zeng, Ji, & Lu, 2002; Zhu, Lu, Qiu, & Tian, 2013), while three studies examined foster care placement changes and foster children's permanency outcomes (Liu & Li, 2009; Lu, Zhang, & Lin, 2002; Zhou & Chen, 2008).

3.2.1. Profiles of foster children and foster parents

Profiles of foster children in China are different from foster children in western countries. As sample characteristics shown in Table 2, children who were placed in family foster care had disabilities to some extent, such as cerebral palsy, neurodermatitis, cleft lip and palate, strabismus, language disorders, anal, thoracic deformity, head stiffness, deafness, and trisomy syndrome (Chen & Hu, 2003; Lu et al., 2002; Ma, 2010; Niu, 2009; Wang et al., 2001; Yang & Yang, 2007; Yin, 2002; Zeng & Zan, 2001; Zeng et al., 2002; Zhu et al., 2013). Due to poor health conditions, the majority of foster children had problems with basic activities of living such as functional mobility, self-feeding and toilet hygiene (Ma, 2010).

In terms of characteristics of foster parents, it is very similar to foster parents and especially kin caregivers in the western countries (e.g., the U.S.) (Berrick, Barth, & Needell, 1994). They were predominately females at middle age (40–60 years old) with middle or high school education (Chen & Hu, 2003; Jiang & Tian, 2013; Niu, 2009; Yang & Yang, 2007). Foster parents were described as having more leisure time and having relatively spacious housing conditions, which could provide a private room for the foster child (Jiang & Tian, 2013; Ma, 2010; Yang & Yang, 2007). In terms of motivations of foster parents, a variety of reasons were identified, including passionate and empathy, social responsibilities, having curiosities of being foster parents, going through an empty nest period, and receiving monetary benefits (Niu, 2009). Foster families mostly stated that they benefited from having foster child/ren at home (Wu et al., 2005; Yang & Yang, 2007); however, they were struggling with child caring practice. Challenges in rearing foster children included lack of rehabilitation training and skills, and unawareness of related social policies and social assistance (Niu, 2009; Zhu et al., 2013).

3.2.2. Child well-being in family foster care

In terms of child well-being, studies focused on a variety of well-being dimensions, such as children's physical health, cognitive, language, motor, social-emotional, social adaptive, academic performance, and disabilities. In terms of physical health outcomes, studies used standardized evaluation criteria: assessing the child's height, weight, head, and chest circumference, and the number of teeth. Assessing these physical health indicators is essential since these children are going through developmental stages and may require special care needs. Most studies' findings supported children in family foster care performed better in physical health indicators compared to their counterparts who stayed in institutional care (Chen & Hu, 2003; Ma, 2010; Niu, 2009; Wu et al., 2005; Yang & Yang, 2007), but a study found no differences in children's physical outcomes (Xiao et al., 2012). However, it is noteworthy that comparisons between children in institutional care and family foster care did not control for confounding variables, such as children's demographics and their physical health outcomes before they entered foster care. Thus, the results might not be accurate. Besides these health indicators, two studies investigated foster children's Intelligence Quotient (IQ) and found that foster children's IQ scores had been improved (i.e., reaching normative levels) after they stayed in foster care (Wang et al., 2001; Yao & Zhang, 2009).

In addition to physical health outcomes, five studies (Van Den Dries et al., 2010; Xiao et al., 2012; Yao & Zhang, 2009; Yin, 2002; Zeng et al., 2002) also found that foster children's outcomes such as

Table 2
Characteristics of Selected Articles.

Authors (Year)	Location	Study Purposes	Sample Characteristics	Study Design	Measures	Analytic Methods	Main Findings
Cao et al. (2004)	Wuhan	To compare children's neuropsychological/developmental differences living in institutional care and foster care	184 children (99 in institutional care, 85 in foster care) Foster care: 7 boys and 78 girls; average age 12.36 months; 24 children with mild disabilities Institutional care: 15 boys and 84 girls; average age 12.4 months; 26 children with mild disabilities 86 children with 87.21% girls; average age 3.36 months	Cross-sectional survey	Diagnosis scale of neuropsychological/development of children	Descriptive analysis; T-test	Foster care children had better outcomes than institutional care children in motor, adaptive behavior, language, and social behavior outcomes.
Chen and Hu (2003)	Wuhan	To examine the effects of foster care on abandoned and disabled children's physical and psychological development		Longitudinal study	N/A	Descriptive analysis	Children living in families with parents who had more education, were older, and lived in urban area(s) had better outcomes in physical and psychological outcomes than their counterparts. No developmental differences were found between high-income and middle-income families. No developmental differences were found in children based on living conditions.
Cui and Wu (2002)	Shanghai	To examine factors associated with foster children's life satisfaction	29 foster children (8 boys and 21 girls) aged from 4 to 12 years old	Cross-sectional survey	Life satisfaction evaluation scale	Descriptive analysis; Multivariate analysis	Foster children had a relatively high level of life satisfaction. Family structures, the quality of relationships between parents, children's emotional satisfaction, children's needs satisfaction, support for children's behavioral problems, and family's attitude were related to children's life satisfaction.
Jiang and Tian (2013)	Shanghai	To understand foster children's social inclusion	83 children (7 boys and 75 girls); average age 17 years; the length in foster care: 7–19 years	Cross-sectional survey and interview	Social inclusion scale	Descriptive analysis; Thematic analysis	Foster children had close relationships with family members and peers in school. Foster children participated in community activities. Foster children were unsatisfied with school performance compared to children who had no child welfare history. More than half of the children were concerned about their identities.
Jin et al. (2001)	Beijing	To compare adaptive behaviors of children living in foster care families and child welfare institutions	22 children (8 boys and 14 girls) in rural family foster care; 26 children (7 boys and 19 girls) in child welfare institutions	Cross-sectional survey	Children's adaptive behavior scale	Descriptive analysis; T-test	Institutional children had worse outcomes than foster children in independent functioning, family role performance, economic-vocational activities, and social adaptive skills. Two groups had no statistically significant differences in both motor and language development.
Jin et al. (2003)	Beijing	To compare adaptive behaviors of children in child welfare institutions vs rural foster care families	245 children (129 girls and 116 boys); 111 children stayed in child welfare institutions; 56 had disabilities and 55 were non-disabled; 134 children stayed in rural foster care families; 112 had disabilities and 22 were non-disabled	Cross-sectional survey	Children's adaptive behavioral scale	Descriptive analysis; T-test	Children with disabilities had no statistically significant differences in children's adaptive behavioral outcomes (i.e., motor, independent living, social responsibility, spatial orientation, and labor skills) between foster care and institutional care. However, institutional children with

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Table 2 (continued)

Authors (Year)	Location	Study Purposes	Sample Characteristics	Study Design	Measures	Analytic Methods	Main Findings
Liu & Li (2009)	Ningxia	To understand foster care placement disruptions for children with epilepsy	20 foster children with epilepsy	Cross-sectional survey	N/A	Descriptive analysis	disabilities had better language development than their counterparts in rural family foster care. For children without disabilities, institutional children had worse performance in motor, independent living, language development, and social responsibility, but not in spatial orientation and labor skills, than their counterparts who stayed in family foster care. Children with epilepsy reported a high rate of experiencing foster care placement disruptions. Children with epilepsy might not be appropriate candidates to be placed in family foster care.
Lu et al. (2002)	Shanghai	To examine factors associated with placement disruptions in foster families	32 disabled children (15 girls and 17 boys), aged from 0 to 14 years	Cross-sectional survey	N/A	Descriptive analysis	Factors related to placement disruptions from the foster parents' perspectives included children's behavior problems, life changes in families, parents' capacity, and child welfare institutions' withdrawal. Factors from foster care workers' perspectives included limited preparation before foster care, insufficient support for families, and unexpected family issues.
Ma (2010)	Jinan	To examine children's adaptive behaviors in rural foster care families	120 children with disabilities; average age 6.2 years	Observation and interview	N/A	Thematic analysis	Most children had difficulty in doing physical activity, chewing, and urinating. Foster children had low social skills (withdrawal, shy, and lack of confidence) at the beginning of entering foster care, but these children made improvements in how they socially interacted. Children in rural family foster care had better recovery in terms of physical health (e.g., height, weight, and participation in physical activities) as compared to those in child welfare institutions. Children who stayed in rural family foster care learned to walk earlier than children who lived in child welfare institutions. Foster children developed positive emotions and attachment to foster families.
Niu (2009)	Jinan	To investigate the motivations of foster parents and the effectiveness of foster care on children's outcomes	31 children with 96.8% having disabilities; parents aged 46–50 years with a middle-school degree, and 95.6% of primary caregivers were female	Cross-sectional survey	N/A	Descriptive analysis	Motivations found in parents of foster children included empathy, empty nest period, social responsibilities, curiosity, and gaining income. Challenges for foster families included disabled foster children's physical health, lack of rehabilitation training

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Table 2 (continued)

Authors (Year)	Location	Study Purposes	Sample Characteristics	Study Design	Measures	Analytic Methods	Main Findings
Van Den Dries et al. (2010)	China & International	To compare the physical, cognitive, and motor development of infants adopted from foster care with infants adopted from institutions	42 formerly fostered girls and 50 post-institutionalized girls adopted from China, age of 11–16 months on arrival	Cross-sectional clinical assessment	Weight, height and head circumference was obtained by parents; Stress regulation measured by salivary cortisol; Cognitive and motor development measured by Dutch Bayley scales of Infant Development	Descriptive analysis; T-test; ANOVA	and skills, and loose attachment between foster parents and foster children. Support for foster parents included in-home training, out-of-home training, process evaluation and monitoring, and psychological support. Outcome evaluations indicated that children's physical health, physiological health, and social adaptive skills were improved after staying in foster care. Physical growth delays were similar between foster care and post-institutionalized children. The daily cortisol curves of the formerly fostered and post-institutionalized children were similar and did not change over time. Former foster children performed better on mental and motor skills than post-institutionalized children. Two groups showed a similar catch-up for mental development, but not for motor development. The effects of foster care versus institutional rearing were stronger on children's cognitive and motor development than that on physical development and hormonal stress regulation.
Van Den Dries et al. (2012)	China & International	To compare short-term outcomes such as maternal sensitivity, child responsiveness, attachment, and indiscriminate friendliness in families with children internationally adopted from Chinese foster care families and institutions	92 children (50 post institutionalized and 42 formerly fostered girls); age of 11–16 months on arrival	Longitudinal design with clinical assessment	Attachment: The Strange Situation procedure; Indiscriminate friendliness: questions about indiscriminate friendliness; Maternal sensitivity and child responsiveness were observed at home during free play time and were coded	Descriptive analysis; Correlation; ANOVA	Post institutionalized children had less secure attachment as compared to former foster children, although the two groups of children had more disorganized attachments as compared to normative data. No difference was found regarding indiscriminate friendliness between post institutionalized and former foster children. No difference was found regarding the sensitivity of adoptive mothers between post institutionalized and former foster children. Foster children had genealogical bewilderment to some extent. Children's genealogical bewilderment was related to their resilience. The support from foster families could help children solve their genealogical bewilderment problems and enhance their resilience.
Wang (2014)	Shanghai	To understand foster children's genealogical bewilderment and resilience	16 adolescents who have lived with their foster families for over 8 years	Cross-sectional in-depth interview	N/A	Thematic analysis	

Shanghai

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Table 2 (continued)

Authors (Year)	Location	Study Purposes	Sample Characteristics	Study Design	Measures	Analytic Methods	Main Findings
Wang et al. (2001)		To examine the Intelligence Quotient (IQ) of children who stayed in foster care	124 children (101 girls and 23 boys; 39 with disabilities); average age: 6 years 2 months; the length in foster care: 2 months to 3 years Three groups: Group A: N = 40 (average age: 4 years 5 months, stayed in foster care for 2-9 months); Group B: N = 44 (average age: 5 years 7 months, stayed in foster care for 15-24 months); Group C: N = 40 (average age: 6 years 9 months, stayed in foster care for 28-36 months) 54 fostered children (35 with disabilities)	Cross-sectional survey	Geiser developmental diagnosis; The Wechsler preschool scale of intelligence; Denver developmental screening test; Peabody picture vocabulary test; Combined Raren's test; Social adaptation test	Descriptive analysis; Chi-square test	21.77% of children had a normal IQ; 24.19% were in the clinical cutoff score; and 50.81% of children had IQ scores below 70. Group A and Group B had significant IQ differences among 0-3 years old children; Group A and Group C had significant IQ differences among children who were > 4 years old.
Wu et al. (2005)	Beijing	To evaluate the effect of foster care on disabled children and orphans		Cross-sectional survey and in-depth interview	N/A	Descriptive analysis; Logistic regression; Content analysis	Foster care had positive influences on children's physical and psychological development. Foster parents and foster children both had concerns about placement disruptions. Children's height, chest, and weight circumference was between 97% - 300% quartiles at 3, 6, 9, and 12 months, and reached normative developmental standards. Two groups had no statistically significant differences in height, chest, and weight circumference at 3, 6, 9, and 12 months. Two groups had statistically significant differences in children's cognitive, language, motor, and social-emotional development at 12 months.
Xiao et al. (2012)	Wuhan	To compare foster and institutional children's physical health outcomes	Group 1: 46 children (21 boys and 25 girls) in a child welfare institution; average age 2.1 months Group 2: 48 children (27 boys and 32 girls) in foster care; average age 2.2 months	Cross-sectional survey	Gesell developmental schedules	Descriptive analysis; T-test	Children's physical health, including height, weight, head, and chest circumference, and the number of teeth, increased after staying in foster care. Children's IQ and social adaptive skills were also improved. Foster children did not want to go back to child welfare institutions. Raising foster children had positive effects on foster families; improving family harmony, having better relationships with neighbors, and having male parents to stay home longer. 85% of foster mothers liked their foster children, and 100% reported treating foster children as their own. Children in foster care had significantly better outcomes in cognitive, language, motor and social-emotional development than children who stayed in child welfare institutions.
Yang and Yang (2007)	Hunan	To examine the effects of family foster care on disabled children and orphans	12 children whose foster parents aged 50-60 years old	Cross-sectional interviews and surveys	N/A	Descriptive analysis	
Yao and Zhang (2009)	Shanghai	To compare IQ development of children who stay in child welfare institutions and foster care	33 children in family foster care (18 boys and 15 girls); average age 31.19 months; and the length in foster care: 1-2 years; 33 children in child welfare institutions (11 boys and 22 girls); average age 30.59 months; and the length in the child welfare institution: 2-3 years	Cross-sectional survey	Gesell developmental schedules	Descriptive analysis; T-test	

(continued on next page)

Table 2 (continued)

Authors (Year)	Location	Study Purposes	Sample Characteristics	Study Design	Measures	Analytic Methods	Main Findings
Yin (2002)	Yunnan	To examine the effects of Caopu foster care program	50 fostered children (20 boys and 30 girls), 19 children had disabilities	Cross-sectional survey and in-depth interview	N/A	Descriptive analysis	Foster children made great progress on life skills, language development, and physical health. Foster children had better mental health outcomes.
Zeng et al. (2002)	Shanghai	To compare differences in educational experiences and expectations between urban and rural foster families; and to examine factors determining the relationship between the foster child and foster parents	64 foster children with disabilities (31 in urban foster families and 33 in rural foster families); average age 7 years	Cross-sectional survey and in-depth interview	Substituted parent-child relationship evaluation form; social support system evaluation form	Descriptive analysis; Bivariate analysis; Regression analysis	Significant differences in educational styles, educational placements, and expectations between rural and urban foster parents were found. Rural and urban foster families reported that they received the same level of social support. Having more informal social support and raising younger foster children were associated with developing intimate substituted parent-child relationships between the child and foster parents.
Zeng and Zan (2001)	Shanghai	To explore the adaptive behaviors of abandoned/disabled foster children	101 children (70 in foster care and 31 in institutional care)	Cross-sectional survey	Child adaptive behavior Scale	Descriptive analysis; T-test	Foster children's adaptive behaviors were significantly better than that of institutional care children. No gender difference in children's adaptive behaviors was found.
Zhou and Chen (2008)	Wuhan	To examine reasons for foster care disruptions and its effect on children	49 foster children (22 boys and 27 girls)	Case records analysis	N/A	Descriptive analysis	Reasons for foster care disruptions included parents having new jobs, unsatisfied with children, no attachment with children, children's behavioral problems, and no special education and rehabilitation conditions in the community. Family foster care disruptions also contributed to children's behavioral problems, including: internalizing problems, externalizing problems, and experiencing a longer adjustment time when reentering another foster care.
Zhu et al. (2013)	Shanghai	To understand social inclusion of foster children	83 children with mild disabilities; average age: 17 years; average length in foster care: 13.3 years	Cross-sectional survey	Social policy awareness; social and cultural adaptation; structural inclusion; identify	Descriptive analysis; Correlation	Families needed to know more about child education policies, social security/subsidies policies, health care policies, and employment policies for children transitioning to adulthood. 84.3% of children liked new communities and environments, 80.7% were satisfied with their current lives; 95.2% were able to use dialect; 92% learned basic customs and got used to local food. 100% of children received in-boundary education, had health insurance and localized vaccination, but needed rehabilitation resources. 41.0% of children experienced discrimination, and 25% could not accept their identity as foster children. 84.4% of foster parents believed that they had close and harmonious relationships with the foster child, and 60.2% of children agreed that they were treated as a family member.

cognitive, language and motor fared better than their peers in institutional care, regardless whether children stayed in foster care for a few years or graduated from foster care. However, Jin et al. (2001) did not find significant differences in motor and language skills between foster care children and institutional children with age ranging from three to 10 years old.

Several studies examined children's social/adaptive development (Jiang & Tian, 2013; Jin et al., 2001; Ma, 2010; Yin, 2002; Zeng et al., 2002; Zeng & Zan, 2001; Zhu et al., 2013). In these studies, qualitative and quantitative studies have examined foster children's interpersonal relationships (e.g., relationships with foster parents, family members, and peers), adaptive social skills, social inclusion levels, and adjustments to new environments. Among quantitative studies, evaluations of psychosocial development did not employ reliable and valid measures but used foster parents and older children's self-report subjective evaluations. These evaluations consistently showed that children had improved their social/adaptive outcomes although there appears to be a significant amount of self-report bias. Across qualitative results, similar findings were reported, that children's social conditions were improved when they stayed in foster care as compared to child welfare institutions according to the foster parents and child welfare workers' interviews.

Children's subjective life satisfaction also is an important component of overall well-being. Cui and Wu (2002) used a cross-sectional survey and found that 79.3% of foster children had high levels of life satisfaction, which indicated that they had received satisfying emotional and social support and essential physical needs, as well as good relationships with foster parents. But self-identification as foster children and low self-esteem made some foster children frustrated (Cui & Wu, 2002). Wang (2014) found that foster children experienced genealogical bewilderment to some extent, but their resilience helped to fight with this identity confusion. Two studies also reflected that a portion of foster children (20–52%) experienced self-identification problems and had concerns about negative consequences such as stigma, discrimination from disclosing their identities as foster care children among peers (Jiang & Tian, 2013; Zhu et al., 2013).

Very few studies investigated children's educational needs and academic performance (Jiang & Tian, 2013; Zeng et al., 2002; Zhu et al., 2013). Jiang and Tian (2013) study revealed that more than half (53%) of children had poor school performance, while Zeng et al. (2002) found that different parental expectations and choices in education existed between rural and urban foster families. Zhu et al. (2013) approached educational well-being from a macro perspective and found that foster children received in-boundary school enrollment, but foster parents expressed their concerns about having not much information about education-related policies.

In sum, the assessment of the well-being of children in foster care in China covered each aspect of child developmental indicators for low- and middle-income countries (Fernald et al., 2017), although the assessment and data analyses should have been conducted more rigorously. Compared to widely evaluated foster care children outcomes (e.g., mental health and behavioral health outcomes) in the high-income countries (e.g., the U.S.) (Xu & Bright, 2018), previous Chinese foster care literature has not emphasized child mental health and behavioral health outcomes much.

3.2.3. Identified factors associated with child well-being in family foster care

Although all selected studies did not perform multivariate analyses to examine factors associated with child well-being in family foster care, descriptive and bivariate results and qualitative summaries of five studies still provided some insights on factors associated with child well-being (Chen & Hu, 2003; Cui & Wu, 2002; Wang, 2014; Yin, 2002; Zeng & Zan, 2001). Using the ecological framework for human development (Bronfenbrenner, 1994), we categorized factors into four levels: Child, family, placement, and system. At the child level, only child age

was found as a factor with younger children having better social adaptive behavioral outcomes (Zeng & Zan, 2001). At the family level, protective factors included foster parents' higher education, older age, living in urban areas, having more family members, having stronger familial support for foster children, and children having more interactions with siblings and peers (Chen & Hu, 2003; Cui & Wu, 2002; Wang, 2014; Yin, 2002). But one study found no significant differences between high-income and moderate-income families and no significant association between the size of the house and children's physical health outcomes (Chen & Hu, 2003). At the placement level, strong instrumental and emotional support from child welfare workers and neighbors facilitated better outcomes (Yin, 2002). At the system level, supportive social policy and public assistance promoted child well-being (Yin, 2002). Although we summarized some protective factors, we should note that study designs and data analytical strategies of these studies (e.g., without conducting multivariate analyses by controlling confounding effects) limit the generalizability of these factors. Further research with rigorous design and analytical plans is needed.

3.2.4. Child permanency in family foster care and related factors

Three studies (Liu & Li, 2009; Lu et al., 2002; Zhou & Chen, 2008) discussed placement changes and disruptions in family foster care. Factors were identified at the child, foster family, and system levels as well. At the child level, children's disabled conditions (Liu & Li, 2009) and child behavior problems (Lu et al., 2002; Zhou & Chen, 2008) were two identified triggers for placement breakdown. In terms of factors at the foster parents' level, parents' limited capacity, dissatisfaction with children, loose attachment with children, having other jobs to making a living, abusive behaviors, and significant family changes were associated with placement breakdown (Lu et al., 2002; Zhou & Chen, 2008). At the system level, active withdrawal of children from foster homes by child welfare institutions, lack of special education and rehabilitation conditions in the community, lack of enough preparations prior to foster care, and lack of sufficient support for foster families were associated to placement disruption (Lu et al., 2002; Zhou & Chen, 2008). Zhou and Chen (2008) also reported the influences of foster care disruption on children's mental health and behavioral outcomes.

4. Conclusion and discussion

4.1. Discussion

This scoping review systematically synthesizes the current literature on foster care children's outcomes in China with a comparison to their peers in child welfare institutions. This review concludes that children in foster care are more likely to have better outcomes in physical health, cognitive, language, motor, social/adaptive development, and subjective well-being compared to their counterparts who stayed in institutional care. However, some studies revealed that foster children had unfavorable academic performances compared to children who never stayed in child institutions (Jiang & Tian, 2013; Zeng et al., 2002; Zhu et al., 2013). In addition to well-being outcomes, this review suggests that children in family foster care have a very high likelihood to have disrupted placements due to children's and families' characteristics. Furthermore, this review also identified child level, family level, placement level, and system-level factors that were significantly associated with children's outcomes in foster care compared to those in institutional care.

As these reviewed studies have some methodological limitations, other countries' empirical evidence generated from experimental designs may be useful references for China's foster care services. Regarding the comparison of children's well-being between foster care and institutional care, the majority of randomized controlled trials were conducted in Romania. Consistent with what we found in China's literature, Romanian studies have also showed that children in foster care had more favorable outcomes in attachment, social skills, mental

health, and behavioral health outcomes than in institutional care (Almas et al., 2015; Humphreys et al., 2015; Smyke, Zeanah, Fox, Nelson, & Guthrie, 2010). Regarding factors associated with permanency outcomes in foster care, previous research in the United States indicates that factors such as the child's developmental disabilities and mental health conditions, child's age and race, and history of staying in therapeutic foster care influence their permanency outcomes (Becker, Jordan, & Larsen, 2007). In terms of what contributes to foster caregiving success, an Australian study demonstrated that caregivers have a high level of empathy, a strong social support network, harmonious family relations, caring satisfaction, and a good relationship between foster parents and the child (Miller, Randle, & Dolnicar, 2019). These findings in other countries are similar to what we concluded in China's studies.

4.2. Strengths and limitations

As a comprehensive study to synthesize foster children's outcomes in China, this study contributes to the knowledge of understanding foster children's well-being and permanency outcomes in comparison with children who stayed in child welfare institutions. However, several main limitations should be mentioned in this study. First, we used a broad search approach based on the scoping review method (Arksey & O'Malley, 2005). This approach allows us to select studies that were relevant to answering the research questions, but the methodology and quality of these studies were not assessed in this study. Second, although we used the most common and relevant keywords in our literature search process, it is still possible that we might have missed other particular search words, and have limited the real scope of our review. Third, as mentioned earlier, most of the selected studies had small sample sizes, less rigorous study designs, limited data analyses, and limited dimensions of child well-being measurements. Consequently, the study findings may not be generalized to all foster care children in China.

4.3. Implications for future research

This study has some significant implications for future research. First, all these studies included in this review had medium to low levels of quality. Future research should employ more rigorous research designs and data analytic approaches to evaluate children's outcomes in out-of-home care. In terms of research design, future research should employ qualitative and quantitative methods using cross-sectional and longitudinal designs. Causal inference frameworks are needed to investigate the causality between placing children in foster care versus institutional care and children's outcomes to eliminate selection bias. While randomizing children into foster care or child welfare institutions is infeasible, other statistical methods, such as propensity score matching, can be employed to make an appropriate comparison group to aid in making causal inference. To follow up with children's outcomes over time, longitudinal research design is necessary. A significant limitation in previous studies is small sample sizes, which limits the statistical power to conduct multivariate analyses. In addition to rigorous research design, future research should aim to recruit more foster children to further understand risk and protective factors of child well-being. Furthermore, more studies are needed to examine foster children's permanency outcomes, particularly for children who are aging out of foster care because promoting family-reunification and facilitating adoptions are ultimate goals of child welfare services. Children's well-being outcomes should be measured using multi-dimensional perspectives using more reliable and valid measures to capture the full picture. For instance, more research is needed to investigate more aspects of child well-being, particularly children's mental health outcomes, which was missing among previous studies. Also, future studies should focus on examining children's maltreatment occurrence and recurrence in care.

4.4. Implications for practice

In terms of implications for child welfare practice, this study has identified multiple factors associated with children's outcomes in family foster care. Future interventions should address these risk factors to support foster children, foster parents, and child welfare institutions and improve children's and families' well-being. Informed by what we found in this study and the findings from studies conducted in other countries, we make recommendations for future practice in China.

At the child and family levels, family-centered services should be provided in order to promote the success of fostering. To address foster parents' challenges in raising children, continuous foster care services are needed. These services could include general policy-related information sharing, educational and social assistance for foster children, respite care services, and financial assistance for foster families. Also, it is significant to provide training on parenting and rehabilitation skills as many studies revealed that foster parents face these challenges. Emotional, psychological and social support from professional and other foster parents should be provided for foster parents as well. In addition, community-based rehabilitation centers are needed to better promote foster children's physical recovery. Furthermore, psychological consultation services should be provided to foster children as many of them face challenges in multiple issues, such as self-identities, peer relationships, and relationships with foster parents' biological children and foster parents. Besides child well-being, child welfare agencies also need to do regular home visits to prevent children from being maltreated in foster homes. Also, child welfare workers need to further support adoption to promote children's permanency. For children who are aging out of foster care, child welfare workers need to provide help to support children's transition to independent living.

At the placement and system levels, developing trauma-informed care is necessary for children who experience multiple adverse childhood experiences. Also, to achieve these outcomes, having a well-trained professional infrastructure, including social workers, psychologists, occupational therapists, pediatricians, and nurses, is needed to provide continuous support for foster children and parents. As the current foster care system in China only targets abandoned children and orphans, more efforts, such as infrastructure change, policy change, and workforce development, are needed to make structural changes and to develop a family-oriented system to respond to the needs of maltreated children.

4.5. Implications for policy

Chinese child welfare policy is transitioning from residual social welfare to a modestly inclusive one, and the foster care program only targeted children without parents which is different from the target children of foster care system in other countries. Since 2010, child welfare practice and policy in China have been advanced in several ways, including expanding vulnerable children to a broader scope, including maltreated children and children who are impacted by incarcerated parents, established mandated and alternative care policy, and implemented pilot child protection projects in 2013 (Man et al., 2017; Zhao et al., 2018). Though there are advances in child protection in China, Zhao et al. (2018) identified some major challenges among the current Chinese child welfare system in responding to child maltreatment, and one significant challenge was lack of alternative care for maltreated children. The out-of-home practice is an important component of child protection system. Therefore, China needs an alternative care system to better respond to child maltreatment and improve child well-being. The results of this review indicate that children have better outcomes in foster care than in institutional care in China. However, foster care in China has experienced shrinkage in terms of numbers and scale. The shrinkage of foster care families is common in many countries. Various factors such as lack of continuous support for foster parents, insufficient financial subsidies, and children's behavioral

problems contribute to the difficulty in recruiting and retaining foster care parents (Knuiman, Rijk, Hoksbergen, & van Baar, 2015). China's foster care shrinkage is also partially a result of the Yuanlihai case in 2013, in which seven foster children died in a private foster parent's home due to a fire accident (Xu, 2013). After the Yuanlihai case, the Ministry of Civil Affairs has tightened foster care standards and enhanced supervision and monitoring foster homes (Ministry of Civil Affairs of People's Republic of China, 2014). As a result, the current child welfare practice still prioritizes institutional placements. This approach is evident in recent issued policies. For instance, *the Law against Domestic Violence (The Standing Committee of the National People's Congress, 2015)* states that placing children in shelters (e.g., institutional care) for their safety is allowed if children are victims of domestic violence. In addition, the State Council's *Opinions on Strengthening the Work of Vulnerable Children (2015)* points that children can be placed in child welfare institutions and temporary shelters. This review advocates policymakers to rethink placing vulnerable children in institutionalized placements as it is associated with worse child outcomes compared to family-based settings. Globally, substantial research has agreed that children in agency-based care have worse outcomes than those in home-based care (Lee, Bright, Svoboda, Fakanmoju, & Barth, 2011; Portwood et al., 2018).

To provide family-based foster care environments for children who have maltreatment history, kinship care, as a type of foster care, would be a good option for the Chinese child welfare policymakers and practitioners to consider. Kinship care refers to having relatives provide childcare when parents are not capable (Annie E. Casey Foundation, 2005). Several systematic reviews have concluded that kinship care keeps cultural connections, provides stable and familiar environments, and children in kinship care may have more favorable outcomes (Bell & Romano, 2017; Winokur, Holtan, & Valentine, 2009). In China, relative care has a very long history and is rooted in familism culture. Especially in rural areas, most vulnerable children who are left-behind children, are taken care of by relatives, particularly grandparents (Shang, 2008; Shang, Saldov, & Fisher, 2011). Thus, kinship care could be a potential placement for future Chinese out-of-home care as non-related foster care is decreasing nowadays.

As the current out-of-home care is mostly designated to assist abandoned children and orphans, there are systematic and implementation barriers to change the current foster care system in order to provide services for abused and neglect children. Building a culturally and socially adapted alternative care system for maltreated children is the next step of building a new child protective system in China.

CRedit authorship contribution statement

Yanfeng Xu: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Writing - original draft, Writing - review & editing. **Xiaoou Man:** Data curation, Formal analysis, Funding acquisition, Investigation, Writing - original draft, Writing - review & editing. **Lixia Zhang:** Formal analysis, Investigation, Methodology, Writing - original draft, Writing - review & editing. **Bruce DeForge:** Methodology, Writing - review & editing.

Declaration of Competing Interest

The authors declare that there is no conflict of interest regarding the publication of this article.

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Appendix A. Supplementary material

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.childyouth.2019.104658>.

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