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Nonmedical barriers and needs of rural children with disabilities and their families in Asia: A scoping review

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Abstract

Children with disabilities encounter unique challenges in rural Asia, where community resources are often lacking. This study is the first scoping review to understand non-medical barriers and needs perceived by rural children with disabilities and their families in Asian countries. A literature search was conducted among six major databases for peer-reviewed articles published between 1 January 2010 and 21 June 2022 and written in English. Based on predefined inclusion and exclusion criteria, 23 studies were identified and included in this review. The barriers and needs experienced by rural disabled children and their relatives are classified into family, school, community, and service levels. The review also highlights potential practice, policy, and research implications. To break down barriers and meet their needs, it is essential to take a holistic approach by supporting the family as a whole. In addition, to promote gender equity and prevent societal stigmatization and discrimination, policies and support programmes must be developed and implemented at the school and community levels. This review also identifies extant research gaps and suggests directions for future research, calling for more quantitative and mixed-method studies, the inclusion of experiences from all Asian countries, a focus on intersectionality, and more research on the pandemic's effects on these marginalized individuals.

KEYWORDS
Asia, caregivers, children with disabilities, families, rural areas

1 | INTRODUCTION

People with disabilities constitute a significant portion of the global population. According to the World Health Organization (2021), approximately one billion people around the world—or 15% of the global population—have a disability. Despite the significant size of this population, their welfare has not been well protected. Approximately 25% of the global disabled population are children (240 million) and are particularly vulnerable (United Nations Children's Fund [UNICEF], 2022b). They confront greater barriers in accessing health care and quality education compared with their peers without disabilities (Dassah et al., 2018; Ge & Zhang, 2019; Ochoa et al., 2017), and they often live in families impoverished by having to shoulder caregiving responsibilities alone (Zheng et al., 2012).

A sizeable portion of children with disabilities reside in rural areas (Raina et al., 2017; Xu & Liu, 2016). For them, the situations are worse due to the lack of resources in those communities: Children living in rural areas are more likely to experience adverse childhood experiences, including economic hardship (Crouch et al., 2019) and educational barriers (UNESCO Institute for Statistics [UIS] &

UNICEF, 2015), have difficulties accessing quality health care (Dassah et al., 2018; Strasser et al., 2016), and have less access to rehabilitation services (Buchter & Riggleman, 2018; Xu & Liu, 2016). These conditions exacerbate the threats to the welfare of rural children with disabilities.

Extant systematic reviews or scoping reviews on children with disabilities and their caregivers, while centring their needs and the barriers they face, have focused on Euro-American or African contexts and lacked a rural focus. Many of these reviews stress the barriers to physical activities or accessing health care. Among them, two reviews were focused on identifying barriers and facilitators of physical activity participation among children and adolescents with disabilities (Shields et al., 2012; Yu et al., 2022). A scoping review examined the barriers and facilitators to health care access in low- and middle-income countries (LMIC) in sub-Saharan Africa, and identified stigmatization, family poverty, poor policy execution, transportation issues, and lack of privacy and trained professionals in health care institutions (Adugna et al., 2020). Michielsen and Brockschmidt (2021) performed a scoping review to investigate barriers to sexuality education for children and adolescents with disabilities in European regions, and they identified barriers such as perceiving the children as asexual, inadequate support, and so on. The only available review of child disability studies in an Asian context mainly explored the daily experiences and encounters of mothers of children with disabilities, found that they were shaped by mothers' beliefs and values towards caregiving that are embedded in Asian cultures, and highlighted the importance of incorporating cultural awareness and sensitivity into support for mothers and their families (Sim et al., 2021).

According to the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD), as well as the social model on which it is based, disability "results from the interaction between persons with impairments and attitudinal and environmental barriers that hinders their full and effective participation in society on an equal basis with others" (United Nations, 2006). Full participation in society entails more than having access to health care and physical activities. Thus, this review aims to synthesize existing evidence of the barriers that children with disabilities and their families encounter and the needs they have in social/nonmedical realms, particularly focusing on children and families in rural areas given their added vulnerability and the lack of reviews to date in this area.

This review concentrates on Asian countries, not just because those are areas less examined in existing reviews but also because we seek to understand how the collectivist, family-oriented culture (Sastry & Ross, 1998) shared by many Asian countries shapes people's experience of disability. A significant proportion of the population in Asian countries is rural. Especially, in Nepal, Cambodia, Burma, India, Vietnam, and Bhutan, the percentage of rural residents was more than 50% (The World Bank, 2020). Katsushi and Malaeb (2016) provided empirical evidence of an increasing rural–urban disparity in terms of income and educational inequalities in Asia countries. Thus, by reviewing the barriers that rural children with disabilities and their families in Asian countries encounter and the needs they have in social/nonmedical realms, this paper will help researchers identify future directions for inquiry and enable stakeholders to improve the welfare of this population through advocacy and actions.

2 | METHODS

This study followed a well-established five-stage scoping review protocol proposed by Arksey and O'Malley (2005).

2.1 | Identifying the research question

The review poses the following question: What are the perceived barriers and needs of rural children with disabilities and their families in Asia? Considering the existing reviews' focus on medical or rehabilitation needs and barriers in Western contexts, this study stresses the nonmedical/social barriers and needs from the perspectives of children and their families in non-Western contexts. Because defining rural status is challenging given the substantial variations that scholars have utilized across regions, ranging from population size (McDaniel et al., 2019; Zablotsky & Black, 2020), to the distance between a place and its neighbours (so-called remoteness) (Wakely et al., 2018), to the national government's predefined rural–urban classification (Loyalka et al., 2014), this review selected studies that self-identified their research population or areas as rural.

2.2 | Identifying relevant studies

A comprehensive keyword search was performed in six main electronic databases: Bibliography of Asian Studies, APA PsycInfo, ERIC, Humanities International Complete, SocINDEX with Full Text, and Web of Science. The search algorithm encompassed all possible combinations of keywords within three groups:

1. "adolescent" OR "boy" OR "boys" OR child* OR "early adulthood" OR "elementary school*" OR "emerging adulthood" OR "girl" OR "girls" OR "high school*" OR infant* OR juvenile* OR "K12" OR "middle school*" OR minors OR "nursery school*" OR pediatric* OR preadolescen* OR preschool* OR "pre-school*" OR preteen* OR "primary education" OR "secondary education" OR "teen" OR teenage* OR "teens" OR toddler* OR youngster* OR "youth" OR "youths" OR family OR families;
2. autism OR autistic OR "blind" OR "blindness" OR "communication disorder*" OR deaf* OR "developmental disorder*" OR "developmental* delay*" OR disabilit* OR disabled OR "down syndrome" OR dyslexia OR handicap* OR "hard of hearing" OR "hearing disorder*" OR impaired OR impairment* OR "intellectual* delay*" OR "language development disorder*" OR "language disorder*" OR "learning disorder*" OR "low vision" OR "mainstreaming" OR "mental* retard*" OR "mute" OR "mutes" OR mutism OR "neurodevelopmental disorder*" OR paralyzed OR paraplegi* OR "physically challenged" OR "prader-willi syndrome" OR quadriplegic* OR

"reading disorder*" OR "speech disorder*" OR "special needs" OR "special education" OR "vision disorder*" OR "visual disorder*" OR wheelchair*;

3. rural* OR "remote area" OR "remote areas" OR village* OR "town" OR "towns" OR "hamlet" OR "hamlets" OR "isolated communit*" OR nonmetropolitan OR "non-metropolitan" OR "farm" OR "farms" OR "farming" OR nonurban OR "non-urban" OR agricultural

The search was restricted to articles published in English by peer-reviewed journals between 1 January 2010, and 21 June 2022.

2.3 | Study selection

All articles identified through the keyword search were downloaded and stored in a shared library of EndNote 20 for screening. Based on developed inclusion and exclusion criteria (see Table 1 below), two researchers independently reviewed the titles and abstracts to identify suitable relevant articles. Cohen's kappa (=0.8) was utilized to assess the inter-rater agreement. Discrepancies were resolved through continuous discussions between the two raters as well as consultation with the other team members. Articles selected from the initial screening were reviewed in full text. A backward and forward reference search was also performed for every included article from the full-text review.

2.4 | Charting the data

Two standardized data extraction forms were utilized to collect the following demographic, methodological, and outcome information from each selected article: Author, publication year, study design, analytical methods, sample size, participant's characteristics, region, type of disabilities, theories, study focus, specific barriers, and specific needs.

2.5 | Collating, summarizing, and reporting results

A tabulation of extracted data revealed substantial heterogeneity among included studies, which prevented calling this study a systematic review and prevented a meta-analysis. The heterogeneity manifested in the basic characteristics of study participants, study locations, study designs, and the study focuses. Instead, we summarized the common themes of the included studies. Two researchers independently conducted the data extraction, theme identification, and narrative summary and reached a consensus through discussions with other members of the research team.

3 | RESULTS

3.1 | Search results

The study selection flowchart shown in Figure 1 provides a summary of the selection process based on the Preferred Reporting Items for Systematic Reviews and Meta-Analyses criteria (Moher et al., 2009). A total of 1168 articles from six databases were identified through keyword search, and 15 additional records were identified in forward and backward searches. After removing duplicates, 1062 articles were included at the stage of screening titles and abstracts. Of these, 57 were selected according to the established criteria and their full texts were carefully reviewed. Among the 57 articles, 34 articles were excluded due to their inability to meet the predefined inclusion

TABLE 1 Inclusion and exclusion criteria.

	Inclusion criteria	Exclusion criteria
Participants	Children 0–18 years old with disabilities and/or their family members (e.g., parents, caregivers, siblings, relatives, and children themselves) Living in rural areas Asian countries	Studies were conducted solely among adults, older adults, educators, doctors, community members, or NGO workers. Studies conducted solely in urban areas Non-Asian countries
Outcomes	Focus on perceived challenges, barriers, and/or needs of rural children with disabilities and their families/caregivers	Studies with a focus on programmes or interventions Studies with a focus on barriers to health care Studies with a focus on risk factors that contribute to disabilities Studies with a medical or a public health focus on disabilities/diseases per se Studies with a focus on prevalence of specific disabilities Studies that did not distinguish outcomes between rural and urban children Studies conducted in a health care/health service setting Not an empirical study (literature review, scoping review, and systematic review)
Study type	Peer-reviewed journal articles from 1 January 2010 to 21 June 2022	Abstract/poster/presentation/research protocol/editorial/opinion/commentary
	Written in English	

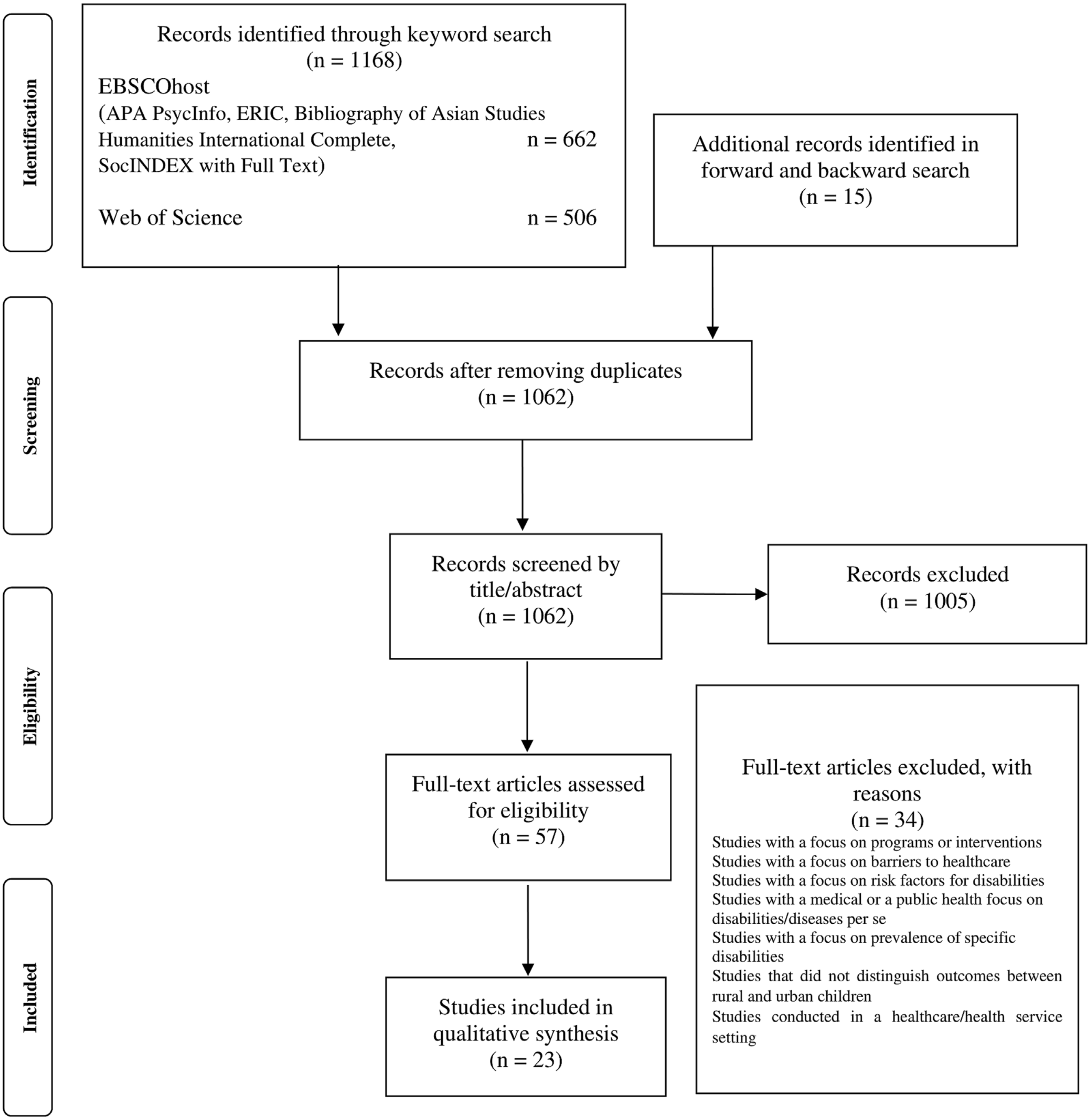

FIGURE 1 PRISMA flow diagram of screening and selection of studies.

criteria. Finally, 23 studies were included in this scoping review. Among all 23 included studies, one was published in two articles that used the same data.

3.2 | Study characteristics

Table 2 summarizes the basic characteristics of the 23 studies included in this review. The included studies were conducted in India (6), Pakistan (4), China (3), Nepal (2), Turkey (2), and Iran, Bhutan, Bangladesh, Indonesia, Vietnam, and Thailand (1, respectively). In terms of study designs, most (18) were qualitative and conducted chiefly through interviews. There were five quantitative studies that used surveys. Thematic analysis is the most frequently (12 of 23 studies) employed analytical method. The sample size ranged from one in a case study to 14 573 in a household survey study, including five with more than 100 participants, two with 50 to 100 participants, and the other 16 with less than 50 participants.

Among all 23 studies, eight (35%) stated the use of theories or frameworks, including critical disability theory (*n* = 1), the gender

TABLE 2 Basic characteristics of included studies.

Study ID	Author, year	Study design	Analytic methods	Sample size	Participant's characteristics	Type of disabilities	Theories	Region
1	Banks et al., 2019	Qualitative: Semi-structured interviews	Thematic analysis	35	21 families including interviews with 20 caregivers and 15 children with disabilities (14 girls and 7 boys; median age is 14 years) in rural areas	Multiple disability types including intellectual, physical, vision, and hearing impairments	Not mentioned	Nepal
2	Benjamin-Thomas et al., 2022	Qualitative: Participatory action research	Thematic analysis	6	6 male children with disabilities, aged between 10 and 17 years	Visual impairment, intellectual disability, speech and hearing impairment	Critical disability theory	India
3	Don et al., 2015	Qualitative: Semi-structured interviews	Narrative analysis	10	10 girls with disabilities aged between 13 to 16 from farming families; enrolled in secondary schools in rural areas	Physical and sensory disabilities	Gendered discourse framework	Iran
4	Guven, 2021	Qualitative: Semi-structured interviews	Inductive analysis	14	14 parents of adolescents with disabilities aged 14 to 18	Intellectual disability and down syndrome	Not mentioned	Turkey
5	Jigyel et al., 2021 Jigyel et al., 2020	Qualitative: Standardized open-ended interviews	Thematic analysis; computational analysis	26	26 parents including 13 fathers and 13 mothers with children in urban, semi-urban, and rural regions	Developmental disabilities including autism, Down syndrome, intellectual disability, and cerebral palsy	Bronfenbrenner's social ecological theory	Bhutan
6	Kale & Sığirtmaç, 2020	Qualitative: Multiple case-embedded design through interviews	Thematic analysis	6	3 elder sisters and 3 elder brothers of 3 children with disabilities	Physical, developmental, and intellectual disabilities	Not mentioned	Turkey
7	Kiling et al., 2019	Qualitative: Semi-structured interviews and photovoice	Thematic analysis	23	23 caregivers including parents, aunts, and foster parents	Physical and mental impairments	Not mentioned	Indonesia
8	Malik et al., 2022	Quantitative: Household survey	Descriptive analysis; multivariate analysis (probit regression)	1050	1050 households including 1549 children	All types of disabilities	Not mentioned	Pakistan

(Continues)

TABLE 2 (Continued)

Study ID	Author, year	Study design	Analytic methods	Sample size	Participant's characteristics	Type of disabilities	Theories	Region
9	Maridal et al., 2021	Quantitative: Questionnaire and scales through interviews	Descriptive analysis; Pearson's correlations; T-test; multiple forward linear regression	63	63 female caregivers including mothers, grandmothers, and aunts of children aged 2 to 12	Neurodevelopmental disorders	Not mentioned	Nepal
10	Munir et al., 2021	Qualitative: Open-ended interviews	Thematic analysis	176	176 parents (136 mothers) of children (aged between 3 to 5 years) with intellectual and developmental disabilities	Intellectual and developmental disabilities	Not mentioned	Pakistan
11	Naz et al., 2010	Quantitative: Survey	Descriptive analysis; chi-square	200	200 mothers with children in schools	Physical disabilities	Not mentioned	Pakistan
12	Ngo et al., 2013	Qualitative: In-depth interviews and focus groups	Thematic analysis	55	24 children and youth aged 14 to 19 and 31 mothers of children with disabilities from ethnic-minority backgrounds	Physical and sensory disabilities	Not mentioned	Vietnam
13	Philip, 2015	Qualitative: Single-case study through observations and semi-structured interviews	Thematic analysis	6	The single case/participant, who is a 17-year-old girl with intellectual disability, and six individuals involved in her life including her grandmother, mother, sibling, a project director, and a social worker	Intellectual disability	Not mentioned	India
14	Power et al., 2019	Quantitative: Observational study through surveys	Mann Whitney *U* χ^2 test Fisher's exact test Hierarchical multiple linear regression.	327	154 caregivers of adolescents with cerebral palsy and 173 caregivers of adolescents without disability	Cerebral palsy	Not mentioned	Bangladesh
15	Reddy et al., 2021	Qualitative: Interviews	Thematic analysis	20	20 parents of children with intellectual and developmental disabilities	Intellectual and developmental disorders	Not mentioned	India

TABLE 2 (Continued)

Study ID	Author, year	Study design	Analytic methods	Sample size	Participant's characteristics	Type of disabilities	Theories	Region
16	Richard, 2014	Qualitative: Ethnography including observations, interviews, and focus groups	Not mentioned	32	12 families and 20 disabled youth aged 8 to 18	Cognitive disabilities	Conceptualization of well-being	India
17	Rose et al., 2021	Qualitative: Semi-structured interviews	Thematic analysis	8	4 caregivers and 4 children with disabilities	Not specified	Capability theory	India
18	Scheidegger et al., 2010	Qualitative: Ethnography including observations and interviews	A grounded theory emphasis through a comparative method	2	2 families with disabled children	Physical and mental disabilities	Not mentioned	China
19	Shang & Fisher, 2014	Qualitative: Life history case studies through observations and semi-structured interviews	Not mentioned	6	3 mothers in rural areas and 3 mothers in urban areas	Physical and intellectual disabilities	Social policy theories about rights	China
20	Shang et al., 2011	Qualitative: Case study approach including observations and interviews	Not mentioned	1	1 focus family with a 15-year-old boy who has physical disabilities and epilepsy	Physical disabilities and epilepsy	Child disability rights framework	China
21	Singal, 2016	Qualitative: Semi-structured interviews	Thematic analysis	8	8 mothers of children with disabilities	Physical, learning, and hearing disabilities	Hirschman's framework on the concepts of exit, voice, and loyalty	India
22	Singal et al., 2020	Quantitative: Household survey	Logit model; linear regression model; linear probability model	14 573	14 573 households covering 36 076 children aged 5 to 16 years	Physical and intellectual disabilities	Not mentioned	Pakistan
23	Sukmak & Sangsuk, 2018	Qualitative: Interviews	Thematic analysis; Hermeneutic phenomenology	5	5 caregivers including three grandmothers, two mothers, and one sister-in-law of the child's father	Autism spectrum disorder	Not mentioned	Thailand

discourse framework ($n = 1$), Bronfenbrenner's social ecological theory ($n = 1$), the conceptualization of well-being ($n = 1$), capability theory ($n = 1$), social policy theories about rights ($n = 1$), child disability rights framework ($n = 1$), and Hirschman's framework on the concepts of exit, voice, and loyalty ($n = 1$).

The focus of the studies is laid out in Table 3. Of the 23, 11 were focused on the perceptions of caregivers, two looked directly at the perspectives of the disabled children, nine accounted for both children and their caregivers, and one aimed to understand the experiences of siblings. Among those studies that looked at caregivers' experiences, the vast majority of study participants were female caregivers, particularly mothers. Regarding the types of disabilities that children had, eight out of 23 studies focused on developmental and intellectual disabilities, five focused on physical and sensory disabilities, nine included children with multiple types of disabilities as participants, and one did not specify the disability type.

3.3 | Barriers facing rural children with disabilities and their families

We first reviewed the barriers that rural children with disabilities and their families face in their everyday lives and social participation as shown in Table 3. Following Bonfenbrenner's (1997) ecological systems theory, we classify the barriers into family, school, community, and service levels.

3.3.1 | Family-level barriers

Family poverty and financial insecurity

Of the 23 studies reviewed, 12 reported that families or caregivers of disabled children found financial stress or insecurity to be one of the major barriers to their well-being. Children with disabilities living in rural areas were more likely to live in poverty compared with their urban counterparts, and taking care of a child with disabilities often exacerbated existing household poverty (Kiling et al., 2019; Malik et al., 2022). For example, Ngo et al. (2013) discovered that mothers in rural Vietnam had to give up means of earning money like doing farm work when tending to children with frequent illnesses and were pushed into further poverty. This phenomenon was also found in rural Tibet, where one family member inevitably had to leave the labour market so as to devote time and attention to a disabled child (Scheidegger et al., 2010). Likewise, in one study conducted in rural China, single mothers faced high levels of financial stress and insecurity as a result of not being able to take a full-time job, limited income from unstable, part-time work, and the lack of support from the fathers of the disabled children and other family members (Shang & Fisher, 2014).

Mental health issues of caregivers

Five studies revealed that caregivers of disabled children suffered from high levels of psychological and emotional duress. A study conducted in rural Nepal indicated a high prevalence (90.5%) of psychological distress among caregivers of children with neurodevelopmental disorders, and nearly half of them (46%) experienced a severe level of distress (Maridal et al., 2021). Another study, focusing on rural Bangladesh, found that caregivers of children with cerebral palsy reported significantly higher levels of depression and stress compared with caregivers of children without disabilities (Power et al., 2019). Three qualitative studies—conducted in rural India, China, and Thailand, respectively—found that female caregivers, particularly the mothers of disabled children, were likely to suffer severe anxiety and emotional distress in their daily lives (Richard, 2014; Shang & Fisher, 2014; Sukmak & Sangsuk, 2018).

Discrimination against the child within the family

Three studies showed that caregivers perceived disabled children as burdens (Scheidegger et al., 2010; Shang et al., 2011; Shang & Fisher, 2014), denying them opportunities and devaluing their potential. These studies found that children with disabilities experienced exclusion, neglect, and violence within their families. In addition, families were often not aware of their disabled children's educational opportunities (Banks et al., 2019). In particular, families often overlooked the value of education for girls as a result of gender stereotypes and biases prevalent in rural areas. Discrimination based on disability and gender often intersects to create further marginalization. Don et al. (2015) found that girls with disabilities in rural Iran were not expected to work, so parents believed that it was unnecessary to send them to schools. Similarly, another case study conducted in rural India found that parents played down the importance of education for daughters with disabilities and viewed the ideal future in marrying them out (Philip, 2015). Thus, girls with disabilities were more likely to be out of school compared with boys with disabilities and girls without disabilities (Malik et al., 2022).

3.3.2 | School-level barriers

Exclusion and discrimination from peers and teachers

Eight studies focused on the experiences of children at school, particularly social exclusion and discrimination due to their disabilities. A study conducted in Bhutan revealed that children with disabilities were bullied, physically abused, and called names by their peers (Jigyel et al., 2020, 2021). Moreover, three studies conducted in Nepal, China, and India identified exclusion of children with disabilities from their peers but found that they faced discrimination and violence from teachers as well (Banks et al., 2019; Benjamin-Thomas et al., 2022; Shang et al., 2011; Singal, 2016). For instance, Banks et al. (2019) found that two-thirds of children with disabilities and their caretakers reported school bullying and violence from their peers *and* teachers in rural Nepal. Benjamin-Thomas et al. (2022) took a participatory research approach and found that children with disabilities were often excluded from participating in extracurricular activities like sports and cultural programmes at school. According to a study in rural Turkey, the siblings of children with disabilities in

TABLE 3 Barriers and needs of rural children with disabilities and their families.

Study ID	Study focus	Specific barriers	Specific needs
1	Perceptions of caregivers and children as to barriers accessing "inclusive and equitable quality education" in schools and their contributing factors	1. Reported school bullying, discrimination, and violence towards them by both teachers and peers. 2. Inadequate assessment of their learning progress in schools 3. Lack of educational resources in school 4. Limited inclusion in schools 5. Safety concerns in schools, particularly for girls: Sexual violence and rape 6. Lack of disability-friendly infrastructure in schools. 7. Financial difficulty for families 8. Attitudes and low level of awareness among families about educational opportunities	1. Educational resources, including training and relevant resources for teachers 2. Address violence and discrimination against them: Involvement of child protection bodies, social protection programmes 3. Interventions to improve school cultures to promote an inclusive education 4. Physical accessibility of schools and revised curriculum 5. Change in school culture to be more socially inclusive 6. Disability scholarships
2	Situations of occupational injustices faced by children with disabilities	1. Faced exclusion and marginalization in school 2. Experienced marginalization at home 3. Encountered exclusion and discrimination from the community 4. Family faced chronic poverty	Not mentioned
3	Education-related barriers and issues for girls with disabilities	1. Difficulty in getting from home to school considering the long distance and lack of transportation 2. Limited educational opportunities and higher school dropouts compared with boys 3. Higher likelihood to encounter sexual harassment in schools, 4. Limited access to facilities and services in schools 5. Girls' education devalued or overlooked by families	1. Support rural children with disabilities to get to school 2. Improve accessibility of school buildings: Ramps and wide doorways 3. Gender-based policy to address safety concerns for girls with disabilities 4. Economic resources for families with children, especially girls, with disabilities
4	Parental views about the sexual development of their children with disabilities	1. Children exhibited inappropriate socio-sexual behaviours 2. Lack of sexuality education 2. Parents had limited knowledge of sexuality education 3. Parents felt incapable teaching their children about sexuality	1. Schools offer comprehensive sexuality education as a required course 2. Provide school-family cooperation on sexuality education
5	The expectations of parents for their children and inclusive education	1. Lack of physical facilities in schools 2. Lack of social skills development 3. Worried about children's future employment and their independence without parents 4. Children experienced school bullying and discriminative name-calling	1. Resource support in schools 2. Support in speech development 3. Support children to live an independent life by supporting their future employment 4. Promote peer awareness in schools 5. Counselling services in school 6. Peer support programme 7. Trained specialized teachers
6	Barriers faced by siblings as caregivers	1. Social exclusion by their peers 2. Reduced social and physical activities time with their peers	Not mentioned
7	How parents perceive risks	1. Children often live in families with poverty and low levels of parental education 2. Both parents and children face social isolation and stigmatization 3. Hesitant to send their children to schools due to a fear of stigma. 4. Lack of targeted programmes/services to support children and parents 5. Long distance between schools and hometown	1. Promote mental health literacy and reduce stigma in the community by replacing stigmatized terms such as "handicap" with "disability" 2. Various social programmes to address poverty and access to services. 3. Community/church leaders and cultural figures can use their roles to reduce stigma and improve the lives of children with disabilities

(Continues)

TABLE 3 (Continued)

Study ID	Study focus	Specific barriers	Specific needs
8	School enrolment and learning gap in schools	1. Children with disabilities are more likely to live in poorer families 2. Around 25% of children with moderate to severe disabilities are out of school 3. Girls with disabilities are more likely to be out of school compared with boys 4. Children with disabilities have lower learning outcomes in literacy and numeracy	1. Need to address the gender preference on boys' education 2. Recognize the value that parents place on the education of their children with disabilities, as evidenced by enrolment in private schools
9	The psychological distress and overall burden of caregivers	1. The majority of caregivers have a high level of psychological stress 2. Caregivers experience adverse impacts of having disabled children on their family income, physical health, other siblings, workload, social life, and dreams and expectations for the future. 3. Lack of mobility aids, combined with inaccessible roads	1. Interventions to reduce caregivers' workload 2. Intervention to promote children's feeding skills 3. Intervention to facilitate social support such as community-based support groups to promote informal peer support for caregivers 4. Professional mental health services for caregivers 5. Simple and affordable mobility aids
10	Parental perceptions of barriers during the pandemic	1. Financial constraints due to job loss and business closure 2. Reduced content of learning and interaction with peers for children 3. Children's mental health like socio–emotional status and behavioural status was negatively affected 4. Inaccessibility to consumable items 5. Unawareness of basic civil rights and limited knowledge about available resources	Provide guidance, counselling, and offering opportunities for parents as well as children with IDDs through health care professionals and other government agencies
11	Mothers' perceived barriers	1. Living in low-income status 2. Concerned about study problems of their handicapped children 3. Worried about children's communication with others 4. Lack of information about various services and benefits available for their children	1. Use digital media to make information available 2. Direct training programmes with families
12	Barriers and needs from both the children's and mothers' perspectives	1. Having a disabled child worsened their poverty status 2. Negative impact on mother's physical health 3. Unequal access to information on available financial assistance and services mainly due to language barriers, illiteracy, and costs of application 4. Children experienced educational barriers such as dropping out from schools to support families 5. Lack of special education services in schools 6. Both mothers and children faced stigmatization in the community due to disability and coming from an Agent Orange area; children also encountered bullying in schools and communities	1. Independent job in the future 2. Safe space to support each other for mothers and children 3. Community-based interventions to promote awareness and reduce stigmatization and bullying 4. Equitable, streamlined application and selection process to access services 5. Targeted poverty alleviation programmes 6. Support and inclusion by peers 7. Involvement of young people with disabilities and their families in community-based organizations to ensure their voice is heard 8. Partnership with culturally responsive international partners to communicate needs to the government 9. Affirmative action and prioritization by the central government

TABLE 3 (Continued)

Study ID	Study focus	Specific barriers	Specific needs
13	Life opportunities of girls with disabilities	1. Parents did not value girls' education due to gender stereotypes, education costs, and low return 2. Transportation issue to training centre due to a long distance 3. Low self-esteem due to discrimination in the community 4. Lack of various educational opportunities	1. Special services to meet educational needs 2. Awareness programmes to promote beliefs in gender equity among parents and the community 3. Home-based training programmes 4. Financial assistance 5. Increase access to formal and vocational training
14	Comparing the mental health of caregivers of children with disabilities and those without	1. Caregivers of children with disabilities reported a significantly higher risk of depression and stress	1. Develop and implement interventions for improving caregivers' mental health 2. Add poverty reduction measures to mental health intervention
15	Parents' perceived needs and barriers in accessing social welfare benefits	1. Lack of awareness about information and process on social service benefits 2. Lack of welfare services in the locality 3. Bureaucratic application process 4. Logistic problems 5. Fear of stigma if exposing the disability of their children	1. Special school for children 2. Daycare centre to offer training and engage with children 3. Personnel support on applying for social service benefits 4. Case management approach is needed for the facilitation of accessing social welfare benefits
16	The wellbeing of disabled children from both families' and children's perspectives	1. Mothers were more likely to experience mental health stress and to be blamed 2. Family's financial constraint 3. Not only children themselves but also their families, particularly mothers, face stigmatization 4. Lack of information and health/mental health infrastructure 5. Caretaking burdens on families, occasionally relieved by institutionalization, but this often leads to isolation of the child with a disability 6. The exclusion of children with moderate to profound cognitive disabilities in inclusive education	1. Socio–emotional support for families 2. Available information and services 3. Financial resources/security 4. Assistance from NGOs in various situations
17	Comparison between a rural school and an urban school	1. Lack of mental health assessments and relevant psychological support in the rural school 2. Lack of awareness of available services and rights in the rural school 3. Lack of adequate special education schooling choices in the rural school 4. Lack of specialized teachers in the rural school	1. Provision of mental health services in schools 2. Provision of training and accredited professional development courses for specialist teachers 3. Educationally appropriate digital devices for rural children
18	Tibetan family's perceived needs	1. Families faced occupational pressures due to the workload of caregiving 2. Both families and children faced social exclusion and stigmatization in the community including exclusion by relatives	1. Children can live independently in the future 2. Community programme to promote health education and increase awareness 3. Teamwork and cooperation to help build trust within the village 4. For international organizations to reach remote areas so that families could be better supported

(Continues)

TABLE 3 (Continued)

Study ID	Study focus	Specific barriers	Specific needs
19	Barriers perceived by mothers with children of disabilities	1. Mothers faced financial stress and insecurity in rural areas—cannot work due to caregiving duties 2. Children had difficulty accessing school education in rural areas 3. Both mothers and their children faced discrimination and social exclusion in rural areas, even within their own families 4. Mother faced emotional stress in rural areas 5. Lack of social support for mothers 6. Lack of income and social service support in rural areas	1. Leverage social policy to promote economic development and redistribution 2. Share responsibility and care through support from other family, community members and government services 3. Social support for mothers 4. Income and social service support
20	Families' perceptions of barriers	1. Discrimination against the disabled child within the family and community; violence inflicted by the mother 2. Family financial insecurity was exacerbated by having a disabled child 3. Children faced exclusion, bullying, and discrimination in schools from peers and teachers 4. Discrimination also results in an inability to receive educational assistance from the government. 5. Lack of formal/institutional support for family and children	1. Income/financial support 2. Government-sponsored disability support services 3. Policy interventions particularly strengthening the social inclusion of school education 4. Self-help approach of peer support groups in communities
21	Mothers' perception of children's education within schools	1. Poor quality of children's schooling 2. Teachers' inability to respond to their children's needs due to a lack of training and their discriminative attitudes 3. Lack of available disability facilities to support their children in schools 4. Children faced discrimination and exclusion from their peers and teachers 5. Inadequate and infrequent specialist support 6. No-detention policy: Promotion to next grade regardless of learning	1. Specialist teachers to support children 2. Policy to engage parents to be the partners in children's education 3. Support in physically reaching school, such as a wheelchair 4. Disabled-friendly toilets in school 5. More interactions between teachers and inclusive education resource teachers
22	Caregivers' perception of barriers faced by their children with disabilities in accessing school and learning	1. Children with moderate to severe disabilities were less likely to be enrolled in schools 2. Children with moderate to severe disabilities had lower levels of school learning outcomes 3. The sibling or coresident in a family with disabled children was less likely to be enrolled in schools as well as had a lower level of learning outcome.	1. Inclusive education policy to increase access for children with disabilities 2. Improve the quality of school education 3. Support the family as a whole instead of focusing on children with disabilities themselves
23	Caregivers' experiences of caring for a child with autism	1. Caregivers experienced psychological stress and problems 2. Struggled with the stigma associated with autism 3. Difficulty in choosing a suitable school for their child 4. Concerned about the future of their child 5. Physical distance and tuition costs of special education centres	1. Caregiver support programmes 2. Improve education facilities 3. Financial assistance

rural schools also experienced social exclusion from their peers and had limited social interactions with their classmates (Kale & Siğirtmaç, 2020).

A paucity of educational resources

Six studies (30%) reported a lack of educational resources for children with disabilities in mainstream schools. Studies identified the scarcity of disability-friendly facilities, including structural elements like ramps and accessible toilets (Banks et al., 2019; Jigyel et al., 2021) that limited the mobility of students with disabilities (Don et al., 2015). In addition, three studies emphasized the paucity of special education teachers with proper training and other regular special education services in schools (Ngo et al., 2013; Rose et al., 2021; Singal et al., 2020).

Difficulty getting to school

Four studies indicated that the long distance from the homes of rural children with disabilities particularly to their schools, most of which are located in urban areas, was a major barrier to access to education. One qualitative study in rural Iran found that girls with physical and sensory disabilities had to travel far to get to the nearest school, as no schools were available in their villages (Don et al., 2015). To get to the school, they had to depend solely on their fathers or brothers. The daily expense of transportation was also a considerable burden for their families, most of whom already lived in poverty.

Poor school outcomes

Four studies identified poor school outcomes among students with disabilities. Two quantitative studies on rural Pakistan found that children with moderate to severe disabilities were more likely to be out of school and that children with disabilities generally had lower learning outcomes in literacy and numeracy (Malik et al., 2022; Singal et al., 2020). Both studies also noted that siblings of disabled children also had lower school attendance rates and poorer academic performances. Another study in rural Pakistan indicated that 85.5% of mothers perceived study problems in their children with physical disabilities (Naz et al., 2010) and a qualitative study conducted in rural Vietnam discovered that children with physical and sensory disabilities had to drop out of schools to assist with household duties and engage in income-generating activities (Ngo et al., 2013).

Sexual harassment and violence

Two studies conducted in rural Nepal and Iran respectively reported that children with disabilities, particularly girls, experienced sexual harassment and violence when attending school. The studies found that girls with disabilities were more vulnerable to sexual violence, harassment, and rape, due to their difficulties to fight back and the barriers they encountered in reporting the abuse. Perpetrators were also emboldened by the fact that children with disabilities were often seen as “nonsexual” due to their disabilities, which leads to dismissal and distrust of reports of abuse made by these children (Banks et al., 2019; Don et al., 2015).

3.3.3 | Community-level barriers

Stigmatization of both disabled children and their families

Ten studies revealed stigmatization of, and discrimination against, children with disabilities and their families by community members. A few studies focused on the stigmatization of disabled children, showing that it greatly affected the mental health of both the children and their caregivers—generating distress and low self-esteem, leading to their social exclusion and isolation (Ngo et al., 2013; Philip, 2015; Shang & Fisher, 2014; Sukmak & Sangsuk, 2018). Family members, particularly caregivers, most of whom are mothers, also experienced discrimination daily within the community. Richard (2014) recounted the case of a mother of a child with cognitive disabilities in a rural Indian community who suffered from stigmatization, which prevented her from engaging in social activities in the community and exacerbated her anxiety level. One study indicated that community-level discrimination could be traced to the limits of rural education systems and a lack of knowledge, information, and awareness of the disabilities (Kiling et al., 2019).

Transportation

Another barrier identified in two studies was the difficulty with regard to transportation. Compared with their urban counterparts, the access to education and health care by rural residents, including children with disabilities, was greatly limited by inaccessible roads and long distances to service organizations such as schools, hospitals, and training centres (Maridal et al., 2021; Philip, 2015).

3.3.4 | Programme and services barriers

Lack of social services and programmes

Generally, social services and programmes are lacking in rural areas. Three studies reported a scarcity of targeted support programmes (offered by an NGO or governmental agency) to improve the livelihood or mental health of families with disabled children. These studies conducted interviews in the rural communities of Indonesia, India, and China, respectively, to make this determination (Kiling et al., 2019; Reddy et al., 2021; Shang & Fisher, 2014).

Limited or unequal access to information on available resources

Four studies documented limited or unequal access to information on available services, assistance, and programmes offered by either NGOs or governmental agencies. Research in rural Pakistan found that families with disabled children had no channel to receive information on services available to them (Munir et al., 2021; Naz et al., 2010). Moreover, a study on the perspectives of disabled children and their mothers in rural Vietnam discovered that the application process for disability support services was not transparent and could only be accessed by families selected by the People's Committee (Ngo et al., 2013). Even when families received information on a particular programme or assistance, they encountered the bureaucratic hurdles of complicated and burdensome application processes (Reddy et al., 2021), which often required a level of literacy that many families did not have (Ngo et al., 2013).

3.4 | Needs of children with disabilities and their families

We have summarized the needs of children with disabilities and their families living in rural Asia (see Table 3). Given that needs are mostly consistent with or originate from the barriers they are experiencing, the needs of children and their families were similarly classified into the family, school, community, and service levels.

3.4.1 | Family-level needs

The most frequently mentioned need at the family level (10 out of 23 studies) was psychosocial support for caregivers, such as socio–emotional support programmes for families (Richard, 2014), professional psychological counselling services (Maridal et al., 2021; Munir et al., 2021), direct training programmes on parental skills to better aid child development (Naz et al., 2010), peer support programmes for caregivers to share their experiences in a safe space (Ngo et al., 2013; Shang et al., 2011), and other forms of specific social support for mothers (Shang & Fisher, 2014). The second most identified (eight out of 23) need was financial support for families, such as implementing targeted poverty alleviation programmes (Kiling et al., 2019; Ngo et al., 2013) and providing economic resources for girls with disabilities specifically (Don et al., 2015). In addition to direct financial assistance to families, three studies revealed that parents often had a pressing concern about their children's future employment, which they saw as central to their children's future independence (Jigyel et al., 2020, 2021; Ngo et al., 2013; Scheidegger et al., 2010). Two studies also stressed the need of promoting parental gender equity beliefs and spreading awareness of the importance of education, particularly for girls with disabilities (Malik et al., 2022; Philip, 2015). One study emphasized the importance of sexuality education for both parents and children (Guven, 2021).

3.4.2 | School-level needs

Needs at the school level include improving the quality of education and addressing discrimination and violence experienced by disabled children, especially girls. More specifically, improving school quality involves training more and better-equipped special education teachers (Banks et al., 2019; Don et al., 2015; Rose et al., 2021; Singal, 2016), and building accessible infrastructures in schools such as ramps, wide doorways, and accessible toilets (Don et al., 2015; Singal, 2016). To prevent discrimination and violence against children with disabilities at school, studies proposed implementing social protection programmes (Banks et al., 2019), creating gender-specific school policies to address gender-based violence (Don et al., 2015), promoting peer awareness of disability and discrimination (Jigyel et al., 2020, 2021), and providing mental health services for children (Rose et al., 2021).

3.4.3 | Community-level needs

At the community level, the most urgent need identified in the studies was to eradicate the stigma of disability and create a more inclusive community through the promotion of mental health literacy and awareness, as well as avoidance of discriminatory terms such as "handicapped" (Kiling et al., 2019; Ngo et al., 2013; Scheidegger et al., 2010). The roles of rural religious organizations, community leaders, and cultural figures could also be leveraged in efforts of intervention design and implementation in order to best address discrimination against children with disabilities and their families (Kiling et al., 2019).

3.4.4 | Social service-level needs

The predominant need identified at the legislative level was to increase access to information on social services or welfare benefits and make the application processes more equitable. Specifically, studies called for making use of electronic media (Naz et al., 2010), promoting an equitable, streamlined application and selection process for social services (Ngo et al., 2013), and providing personnel support on service or benefits applications (Reddy et al., 2021).

4 | DISCUSSION

Rural children with disabilities and their family members in Asian countries are some of the most vulnerable groups in the world, and yet they have not received much scholarly attention. By searching for, sorting, and synthesizing existing studies about them, this review cast light on the barriers they encountered and the needs they had in their local ecologies. With a focus on nonmedical realms of life, this review illuminated their barriers and needs within families, educational institutions, community, and service and programme provision systems. As discussed below, our findings entail significant implications for social service practices, policies, and research.

4.1 | Practice and policy implications

This review revealed that gender stereotypes and discrimination are still prevalent and ingrained in the rural contexts of Asian countries. Gender-based discrimination is present at the family, school, and community levels, and it affects both girls with disabilities and female caregivers. Studies in this review found that rural girls with disabilities experienced more sexual harassment in schools and had fewer educational opportunities than boys. As Don et al. (2015) indicated, disability added to the hardship of being a girl in rural Iran, as it contributed to the vulnerability that came from family beliefs on gender roles, and it further discouraged families from seeking education for disabled girls. Addressing education equity is aligned with Sustainable Development Goal 4 of the United Nations, which aims to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all" (United Nations, 2021). In addition, women, often the primary caregivers of children with disabilities, also face discrimination and stigmatization in communities through association with their children's disabilities. These biases render girls with disabilities and female caregivers extremely vulnerable to indifference, discrimination, and violence. Thus, gender-specific interventions are critical.

Targeted programmes, support, and resources for improving the mental health and wellbeing of girls with disabilities, as well as female caregivers of disabled children, can be a potential solution. Specifically, respite services and community care can be offered to alleviate the burden many caregivers experience. The burdens on mothers and other female caregivers are financial as well and therefore more should be done to enhance their economic stability. For children—especially girls—with disabilities, schools should provide sexual education tailored to their preferences and abilities in receiving information, so that they understand their right to bodily integrity and what they can do to protect it. This is echoed by one included study that emphasized the importance of sexuality education for both parents and children to both help children with disabilities behave appropriately in public spaces and protect them from violence (Guven, 2021). In addition, it is also necessary to develop and implement community- and school-level awareness and protection programmes to promote awareness of gender equity among parents and community members to eliminate gender-based violence. Gender-sensitive policies on child protection and inclusive education, with a strong emphasis on the vulnerabilities and needs of girls, women, and other female-identified persons with disabilities, should be formulated and enacted. For example, policymakers need to make sure that disabled victims of gender-based violence have access to shelters, other mechanisms of protection, and legal redress. There should be various reasonable accommodations in those venues, and providers or officials should respect, trust, and avoid retraumatizing the victims.

In addition, this review highlights the importance of undertaking a holistic approach to supporting children and their families in tandem. The rationale for taking a holistic approach has three aspects. First, our results show that children and their caregivers or siblings are all exposed to stigmatization and exclusion from the community, thereby all experiencing high levels of psychological stress. This phenomenon may be traced to the collectivist culture present in some Asian countries, which, in comparison to the individualist culture of many Western countries, tends to see members of the same family as interrelated and responsible for each other. For instance, community members might see a child's disability as a result of the whole family's bad karma. Second, in a collectivist culture, not only parents but also siblings and other family members are often expected to take on caregiving responsibilities for persons with disabilities throughout their lives. For example, Kale and Siğirtmaç (2020) discovered that the collectivist culture in rural Turkey played an essential role in defining the obligations of elderly siblings in caring for their disabled sisters or brothers, and that the heavy obligations gave the siblings and other family members unpleasant experiences. Therefore, supporting the family as a whole could lead to a greater impact in societies of collectivist culture than simply supporting the disabled child. Third, discrimination against disabled children not only comes from outside the family but also from family members, who sometimes view raising a disabled child as a substantial burden and a hopeless endeavour. As such, the problem of stigma cannot be fully resolved without addressing the needs and conflicts within the household. Richard (2014) emphasized the importance of establishing a supportive and inclusive home environment that sees the disabled child not as an unwanted duty but as a loved one with great potential. Maridal et al. (2021) also noted that taking a holistic approach to addressing the family's hardships could be effective in reducing family members' psychological distress and creating an inclusive family environment. In Ghana, Zuurmond et al. (2019) showed that the community-based caregiver support programme was effective in improving the self-efficacy and knowledge of caregivers, as well as reducing their self-blame. Similar programmes can be developed and examined in rural communities in Asia, along with psychosocial support for siblings of disabled children, programmes that educate families and their surroundings about disability, and socioeconomic support for households with disabled children.

Moreover, cultural beliefs and community organizations can also be used to prevent and combat stigmatization and discrimination around disability. Kiling et al. (2019) identified religious and social support as key factors in helping disabled children and their families get through hardships in rural Indonesia. They thus proposed empowering community leaders such as church leaders in offering social support to parents of disabled children. In addition, Scheidegger et al. (2010) suggested that social service practitioners work with local staff to gain a deep understanding of Tibetan culture and participate in cultural festivals to build trust and cooperation to be able to work more effectively with families of disabled children. Compared with urban communities, rural communities are often more tightly knit through common religious and cultural activities. Therefore, it is crucial for programmes that support rural disabled children and their families to incorporate local cultures and religions.

4.2 | Research implications

This review sheds light on gaps in existing studies, mainly in regard to research methodologies. Studies in the past decade mostly utilized qualitative interview methods to understand the barriers and needs. Moreover, they typically had a small sample size, lacked theoretical guidance, and relied on single data collection sources, such as collecting data solely from either children or parents. Concerning future research directions, more quantitative studies containing a nationally representative sample will allow us to understand the severity and prevalence of barriers and needs. One potential solution is to add disability-relevant variables into current national-wide household surveys, rather than creating a separate large-scale survey, which would require significant time and funding investments. The UNICEF and the Washington Group on Disability Statistics have developed the Child Functioning Module for use in census and surveys, which can cover children aged 2 to 17 years old (UNICEF, 2022a). Building on the advancement of previous scales, it provides a better measure of the level of functional difficulties experienced by children with disabilities (Loeb et al., 2018). Governments and organizations can use it to collect population-level estimates of children with disabilities and disaggregate policy- and service-related data by disability. Having a standardized set of disability measurements like that also allows for cross-country comparisons. In particular, Loeb et al. (2017) indicated that the validity of the Child Functioning Model has been tested in multiple global contexts including Asian countries like India. Future research can employ this new method in more Asian countries and adapt those questions to local contexts, with robust training of researchers to ensure cultural sensitivity and accuracy in the way of asking questions. These large-scale quantitative studies can be supplemented by in-depth qualitative studies that examine barriers and needs as perceived by multiple stakeholders and analyse them from an ecological approach, so as to understand how family, school, and community processes are connected to shape people's lived experiences and relationships.

Another research gap is a lack of diversity in countries represented among included studies. Most studies are conducted in India, Pakistan, and mainland China. Researchers have called for more research on rural children with disabilities to better understand how welfare systems impact populations and explore potential improvement of those systems (Zheng et al., 2016). Future research can explore and compare more disparate national contexts so as to achieve a broader understanding and formulate regional strategies that will better support rural children with disabilities.

Only one study included here looks at the impact of COVID-19 on rural children with disabilities and their families (Munir et al., 2021). It sought to understand parent perceptions of barriers during the pandemic in Pakistan, revealing financial constraints due to job loss and business closure resulting from the pandemic. These barriers aggravated the existing hardships that families with disabled children had already experienced. The study also discovered that the learning outcomes and socio–emotional status of rural children with disabilities were negatively affected by the pandemic. More research is needed to understand the pandemic's impact on this group of children in various contexts, in order to improve policy and service responses to the ongoing pandemic and future crises.

The final research gap identified in this review is a lack of focus on the intersectionality between disability and factors such as rurality, ethnicity, family poverty, and gender. Intersectionality studies should not be simply seen as putting two or more factors or variables on the table. Rather, they examine interlocking systems of oppression holistically and thoroughly, thereby allowing people to understand the sentiments of individuals most impacted and the severity of problems arising from cumulative barriers (Collins, 2020). For instance, rurality contributes to the hardships experienced by disabled children, as it is often correlated with long distance to school and other social services, school teachers' reluctance to work in local schools, constrained community and school resources, and scarce governmental support (Rose et al., 2021). Future studies should be more sensitive to intersectionality by examining the complex array of challenges facing rural children with disabilities and their families, as well as the aggravated vulnerability they produce.

4.3 | Limitations

This review only examined articles written and published in English and was thus unable to achieve an exhaustive search of articles written in other languages. It looked at heterogeneous outcomes and did not provide a deep analysis of a particular barrier or need. Moreover, this review did not assess the quality of included studies using rigorous standards; there may be some studies with less well-designed methodologies. Despite these limitations, this study, which aims to analyse the nonmedical barriers and needs of children with disabilities and their families, offers suggestions for future practice, policy, and research so that this population could be better supported.

5 | CONCLUSION

This review elucidates essential nonmedical barriers and needs of rural children with disabilities and their families in Asian countries from multiple system levels. The 23 included studies reveal the unique challenges and illuminate potential policy and practice solutions. The most prominent problem lies in the entrenched gender bias and discrimination against girls with disabilities and female caregivers in rural Asian communities. To dismantle barriers and address their needs, to obtain greater impacts and more helpful effects, it is crucial to take a holistic approach to interventions by supporting the family as a whole. In addition, school- and community-level support programmes and policy changes are necessary to promote inclusive education and gender equity and to eliminate social stigmatization and discrimination towards rural children with disabilities and their families. This review sheds light on current research gaps and future research directions, calling for quantitative and mixed-method studies, the inclusion of experiences from all Asian countries, attention to intersectionality, and more research on the pandemic's impact on these marginalized individuals.

CONFLICT OF INTEREST STATEMENT

The authors report there are no competing interests to declare.

DATA AVAILABILITY STATEMENT

Research data are not shared.

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