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Barriers to oral health care for persons with disabilities: An overview of systematic reviews

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Background: Nearly one billion individuals globally live with disabilities, facing greater risk of dental issues. Systematic reviews have identified barriers to oral health care for persons with disabilities (PWDs), but a comprehensive synthesis to inform health-policy guidelines is lacking. This overview addresses this gap by summarizing the key barriers to oral health care access for PWDs. ***Objectives***: (1) summarize key findings on the barriers PWDs encounter in seeking dental and oral healthcare, (2) evaluate the influence of disabilities on accessibility to dental and oral health services, and (3) identify facilitators to improve access and inform future health policy. ***Methods***: Systematic review of systematic reviews of both cross-sectional and evaluative studies that identified barriers to oral health care access for PWDs. A comprehensive search of databases was conducted from inception to 24 February 2024, using specific keywords and Boolean operators. Data extraction and quality assessment were performed using AMSTAR 2 to ensure transparency and reliability. ***Results***: Five systematic reviews were included. These reviews highlighted financial constraints, provider reluctance, access difficulties, systemic barriers, and patient-related factors as major obstacles. Methodological variations across reviews were noted, affecting the transparency and reliability of findings. ***Conclusion***: Barriers to oral health care access for PWDs include financial, provider-related, access-related, systemic, and patient-related factors. Addressing these barriers, particularly in developing countries, should be a priority for future research and interventions.

Keywords*: health disparities, oral health care, persons with disabilities, access to dental care, barriers to access*

Introduction

According to the World Health Organization, approximately 1.3 billion people, or about 16% of the global population, live with significant disabilities. This number is rising due to the aging population and an increase in chronic health conditions. Disability is a natural aspect of the human experience, with most individuals likely to encounter temporary or permanent disabilities at some point. The occurrence of disability results from the interaction between a person's health conditions and contextual factors, including environmental and personal influences (WHO, 2022).

Oral healthcare is often considered a personal responsibility rather than a public health priority, leading to systemic neglect of oral health in many healthcare systems (Ozar, 2006; Wang *et al*., 2020). Furthermore, persons with disabilities (PWDs) often do not receive priority in accessing healthcare, exacerbating their health disparities (Leal Rocha *et al*., 2015; Lim *et al*., 2021). PWDs typically have worse oral health and more susceptibility to dental diseases than the general population. Disparities in oral health are evident and vary depending on the type of disability (Zhou *et al*., 2017; Uliana *et al*., 2024; Bensi *et al*., 2020; Costa Silva-Freire *et al*., 2022; Rondón-Avalo *et al*., 2024). These disparities stem not only from the impact of disability but also from greater unmet dental needs than the general population (Carter *et al*., 2022; Scambler and Curtis, 2019).

Primary barriers refer to the main or most significant obstacles that individuals face when trying to access a service or resource. In the context of oral health care for PWDs, these barriers can include physical accessibility, such as the lack of ramps, elevators, or accessible examination chairs. Communication barriers might include difficulties in understanding or being understood due to communication impairments. Additionally, there may be issues with the availability of specialised dental services or practitioners trained to handle the specific needs of PWDs. Financial barriers, such as high costs or insufficient insurance coverage can also impede access to necessary dental care.

Accessibility, as defined by Levesque et al. (2013), refers to the ability of individuals to identify, seek, reach, obtain, and engage with healthcare services that meet their needs. Accessibility is a multidimensional concept encompassing several aspects: approachability, acceptability, availability/accommodation, affordability, and appropriateness. Physical access, which refers to the ability to enter and use healthcare facilities and equipment promptly, falls under the dimension of availability/accommodation. Service availability highlights the presence and capacity of healthcare services to meet the needs of various populations, while affordability addresses the financial feasibility of accessing services, considering factors such as insurance coverage and out-of-pocket costs. Awareness relates to approachability, which involves knowing about the availability of services and

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how to access them. Appropriateness considers whether healthcare services are designed to meet the specific needs of individuals, ensuring that they are suitable for the population they serve.

The elevated rates of oral disease among PWDs can be attributed to several factors, including structural barriers, such as inadequate physical accessibility of facilities, motor difficulties, communication challenges in expressing oral health needs, and reliance on caregivers for hygiene and dietary practices (da Rosa *et al*., 2020). Structural barriers refer to physical, systemic, and procedural obstacles that prevent PWDs from accessing adequate dental care.

Most dental care for PWDs can be administered successfully in primary and community settings if dental professionals possess the necessary skills and attitudes (FDI World Dental Federation, 2017). However, the inadequate training of dental students, coupled with biased views among healthcare providers, contributes to the unmet dental needs of PWDs. This hinders access to quality care and exacerbates existing inequalities (Iezzoni *et al*., 2021; Nanji *et al*., 2024).

PWDs need healthcare that is delivered by empathetic and responsible professionals (Reddington and Weir, 2024). However, accessing dental services presents significant challenges, including the need for providers to understand the specific needs of PWDs and streamline pathways within the healthcare network. Access to dental care should prioritise both basic and specific oral health needs while considering broader systemic and contextual factors. Geographic proximity to services, service organisation tailored to individual needs, and mutual acceptance between healthcare professionals and patients are all critical in overcoming barriers to oral healthcare for PWDs (Northridge *et al*., 2020).

While several systematic reviews have explored the barriers PWDs face in accessing dental care, no publication has comprehensively summarized these findings to inform health-policy guidelines that can improve access to dental care for PWDs communities (da Rosa *et al*., 2020; Krishnan *et al*., 2020). Therefore, we aimed to analyze the available systematic reviews to (1) summarize key findings on the barriers PWDs encounter in seeking dental and oral healthcare, (2) evaluate the influence of disabilities on accessibility to dental and oral health services, and (3) identify facilitators to improve access and inform future health policy.

Method

We adapted the participants, intervention/exposure, control and outcomes framework of the *Cochrane Handbook* (Higgins *et al*., 2023), along with the guidelines from the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) statement (Page *et al*., 2021) to answer the following questions: What is the influence of disabilities on accessibility to dental and oral health care? What are the barriers PWDs encounter in seeking dental and oral health care?

We defined systematic reviews as studies that employed a structured and transparent method to identify, appraise, and synthesise relevant research on disabilities and their impact on accessibility to dental and oral health care for PWDs. We included systematic reviews of randomised clinical trials, observational studies, cross-sectional studies or any other non-randomized clinical study design. These reviews focused on the primary barriers, which include cost of care, access to providers, transportation, physical accessibility and appointment availability, and secondary barriers, which encompass factors such as lack of awareness or knowledge, anxiety or fear of dentists, cultural and language barriers, social stigmas and caregiver burden, PWDs may encounter in accessing care. Any additional barriers were identified during literature search and screening. The list of the barriers was identified upon consultation with a specialist in special care dentistry and a medical information specialist (MIS). No restrictions were applied regarding the gender, sex, or type of disability in the included populations. The search covered publications from the inception of the databases up to February 2024. Excluded materials included original studies, narrative reviews, and non-peer-reviewed items.

The search was carried out by a certified medical information specialist and peer-reviewed following the PRESS (Peer Review of Electronic Search Strategies) guidelines (McGowan *et al*., 2016). Systematic reviews were identified in PubMed, Embase.com, Clarivate Analytics/Web of Science Core Collection, Scopus, Wiley/Cochrane Library, and the Cumulative Index to Nursing and Allied Health Literature (CINAHL). The search terms were structured using free-text words, MeSH terms and Boolean operators (Appendix 1). Sources were screened independently by two reviewers, with any disagreements resolved through discussion or consultation with a third reviewer. Screening ensured the inclusion of relevant and high-quality systematic reviews.

Data extraction used pre-calibrated screening forms. Two authors independently extracted data from each included systematic review, including general characteristics such as author, publication year, research question, study designs, population information, risk of bias assessment tools, and main outcome domains. Data on barriers to dental care and conclusions drawn by the authors were extracted to synthesize the overall outcomes. Any disagreements during the data extraction were resolved by consensus or by consulting a third reviewer.

To synthesise results, we mapped overlapping barriers reported across the systematic reviews to generate a comprehensive list of common barriers encountered by PWDs when accessing dental services.

The quality of the included reviews was assessed using 'A MeaSurement Tool to Assess systematic Reviews 2' (AMSTAR 2) (Shea *et al*., 2017). AMSTAR 2 examines how well research questions were formulated, the study selection process, data extraction methods, the quality assessment of included studies, synthesis of results, and consideration of publication bias. This tool ensured the robustness and reliability of the data used in our analysis.

Results

The initial search yielded 42 records (Figure 1). Of these, 29 duplicates were excluded, leaving 13 articles for screening based on title and abstract. Six irrelevant studies were excluded based on their titles and abstracts, leaving seven studies for full-text analysis. Of these,

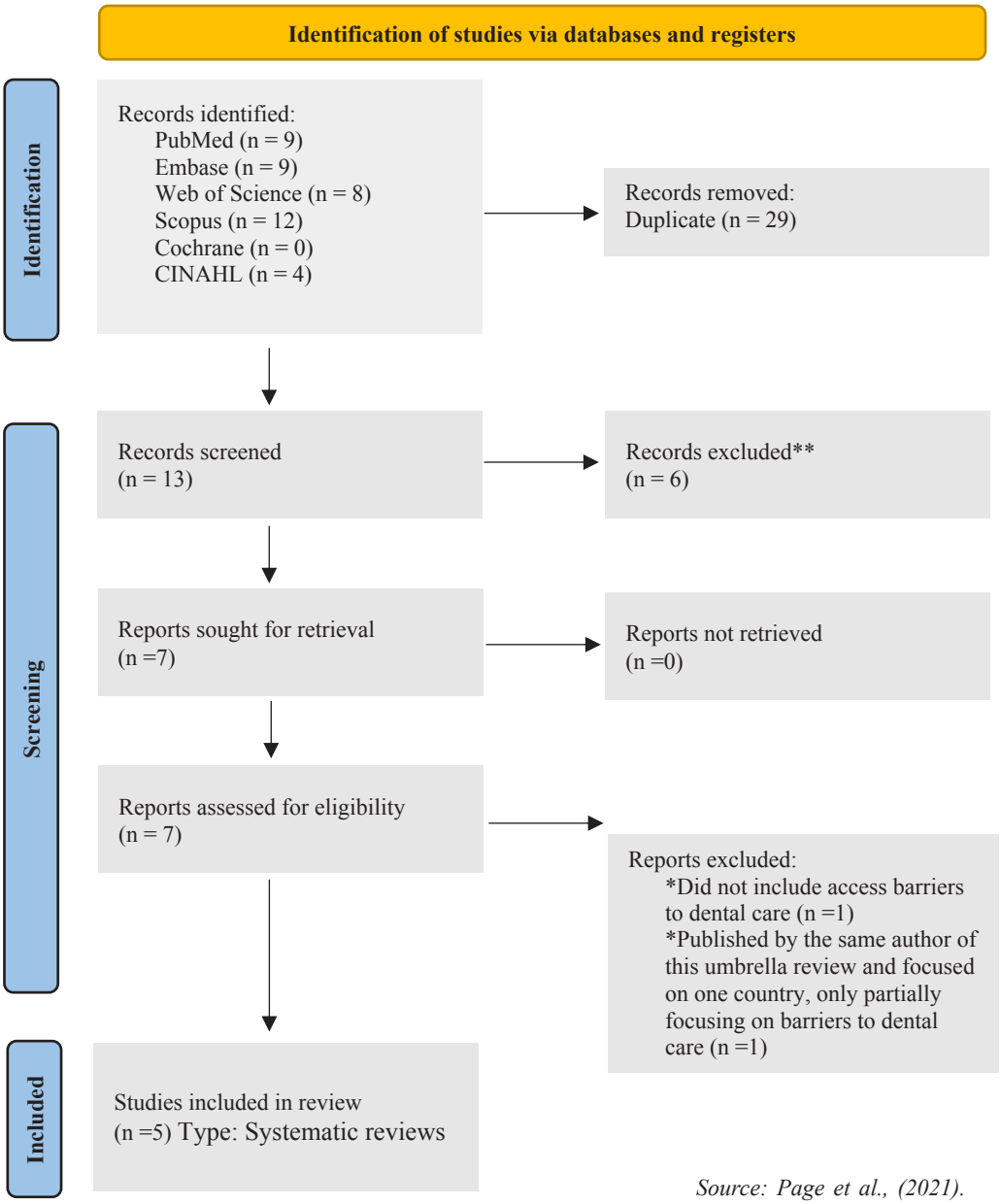

Figure 1. *PRISMA 2020 Flow Diagram for New Systematic Reviews Including Database Searches.*

two systematic reviews were excluded because they did not include barriers to dental care (Bright and Kuper, 2018). Another study, conducted by the same author as this umbrella review, focused on one country and only partially addressed barriers to dental care (Asiri *et al*., 2022). Therefore, five systematic reviews were included in this overview (da Rosa *et al*., 2020; Krishnan *et al*., 2020; Khan *et al*., 2022; Erwin *et al*., 2022; Bhadauria *et al*., 2024).

Of the five included reviews (Table 1), Krishnan et al. (2020) included observational studies involving with 1,842 children/parents of children with disabilities visiting dentists and assessing dental care utilisation and barriers using the Newcastle Ottawa Scale. Da Rosa et al. (2020) examined how PWDs access oral health services in 16 cross-sectional studies involving 17,771 participants (patients, dentists and caregivers) evaluating barriers using the Downs and Black assessment tool. Khan et al. (2022) included multiple designs in their review of 21 studies with 47,584 participants (children, adults, parents/caregivers and health care providers/managers/dental professionals) using several quality assessment tools (QATQS, Estabrooks' Quality Assessment and Validity Tool and Critical Appraisal Skills Program). Erwin et al. (2022) conducted a mixed-methods review of 59 studies (42 quantitative, 11 qualitative and 6 mixed-methods) involving 1,854 participants. They focused on factors influencing oral health behaviours, access and delivery of dental care for autistic children and adolescents, using the mixed-methods appraisal tool for assessment. Bhadauria et al. (2024) included cross-sectional (7), cohort (2), qualitative (2) and case-control (1) designs (12 total with 954,644 patients with multiple disabilities) and assessed access using the Agency for Healthcare Research and Quality (AHRQ) tool, Newcastle Ottawa Scale (NOS) and Joanna Briggs Institute tool for qualitative studies.

The barriers reported across the reviews were categorized into Levesque et al.'s (2013) five dimensions of healthcare accessibility:

Table 1. General characteristics of the included systematic reviews.

Author, year	*Focused question*	*Design (No. studies)*	*Population, age, (No. participants)*	*Risk of bias scale*	*Outcomes assessed*
Krishnan, 2020	NR	Observational (7)	Children/parents of children with disabilities visiting dentists (6- 18 years, n = 1842[1])	NOS	Dental care utilisation rate and barriers.
Da Rosa, 2020	How do people with disabilities access oral health services?	Cross-sectional (16)	Patients, dentists and caregivers (n = 17,771)	Downs and Black	Barriers.
Khan, 2022	NR	Multiple (21)	Children, adults, parents/ caregivers, and health care providers/managers/ dental professionals (n = 47,584)	QATQS; Estabrooks' Quality Assessment and Validity Tool for Cross-Sectional Studies; CASP	Barriers and other factors affecting access to oral health care
Erwin, 2022	NR	Mixed-methods (42 quantitative, 11 qualitative, 6 mixed-methods)	Children/adolescents with autism (1854)	Mixed-Methods Appraisal Tool	Patient-related, parent/carer related, clinician-related factors
Bhadauria 2024	Factors influencing access to oral healthcare among PWDs.	Cross-sectional (7), cohort (2), qualitative (2), case-control (1)	Patients with multiple disabilities (954,644)	AHRQ. NOS; JBI tool for qualitative studies	Access and barriers

[1]Data available from only 5 studies.
NR: Not reported; Obs: Observational; PWDs: Persons with disabilities; CS: Cross-sectional; NOS: Newcastle Ottawa Scale; QATQS: Quality Assessment Tool for Quantitative Studies; CASP: Critical Appraisal Skills Program; AHRQ: Agency for Healthcare Research and Quality; JBI: Joanna Briggs Institute

1. Approachability: Barriers related to awareness and transparency, such as lack of knowledge about dental services and limited information about available providers.
2. Acceptability: Patient-related factors such as fear of dentists, distrust, cultural norms, or personal beliefs that lead to avoidance of care.
3. Availability and Accommodation: Access-related barriers, such as transportation difficulties, lack of adapted facilities for PWDs, inconvenient appointment times, and geographical challenges.
4. Affordability: Financial barriers, including high treatment costs, lack of insurance or funding, and general financial constraints limiting access to dental care.
5. Appropriateness: Provider-related and systemic barriers such as reluctant or untrained dentists, shortages of dental staff, and the low prioritisation of oral healthcare by policymakers.

All five sources identified barriers to accessing oral health services among PWDs (Table 2). Krishnan et al. (2020) identified obstacles such as waiting time, high costs, reluctant dentists, fear of dental procedures, transportation issues, medical conditions and inconvenient appointment times and recommended further research using improved study designs to address the unequal access to health care. Da Rosa et al. (2020) found that PWDs face challenges of high cost of treatment, lack of trained dentists, inadequate facilities and accessibility issues. They emphasised enhanced dentist training and implementating legal frameworks to ensure access. Khan et al. (2022) highlighted the shortage of adequately trained carers, low priority of oral health care by policymakers, financial constraints and geographical factors. They noted insufficient data supporting the effectiveness or cost efficiency of proposed solutions and advocated a shift in perception towards oral health care needs rather than viewing disability as a negative outcome. Erwin et al. (2022) underscored factors intrinsic to autism, such as social interaction differences and sensory sensitivities restricting healthy oral behaviours including access to care and pointed out that better care could be achieved by responding to the individual needs of autistic children through accommodation, education and adaptation, necessitating greater awareness and knowledge of autism among dental health professionals. Bhadauria et al. (2024) reported delayed initial visits, lack of confidence in dentists, age, female gender, insufficient dentists, transport challenges and financial barriers to care. They stressed the importance of education, training and raising awareness about dental hygiene and regular checkups to enhance access to oral health care services for PWDs.

The AMSTAR 2 identified variations in assessment criteria across the five studies (Table 3). Four sources (da Rosa *et al*., 2020; Krishnan *et al*., 2020; Khan *et al*., 2022; Erwin *et al*., 2022) presented PICO criteria and one did not (Bhadauria *et al*., 2024). Four (da Rosa *et al*., 2020; Khan *et al*., 2022; Erwin *et al*., 2022; and Bhadauria *et al*., 2024) presented review methods or protocols, whereas Erwin et al. (2022) only described their selection of study types. Four (da Rosa *et al*., 2020; Khan *et al*., 2022; Erwin *et al*., 2022; Bhadauria

Table 2. Author-identified barriers and conclusions in included studies.

Author, Year	*Barriers to access*	*Key conclusions*
Krishnan, 2020	Waiting time, high cost, reluctant dentist, fear of dentist, transportation/ inaccessibility, medical conditions, inconvenient appointment times	'available literature forms a lower standard of evidence, further evaluation of barriers is recommended using better designed studies to substantiate the unequal access to healthcare facilities by these marginalized population.'
Da Rosa, 2020	Cost of treatment, untrained dentist, inadequate dental facilities, lack of accessibility/adaptation for people with disabilities	'people with disabilities continue to run into complex physical, behavioural, or multidimensional barriers in accessing dental services. Improved training of dentists for the care of this population is hereby emphasized,' '…legal framework enabling access to dental care for people with disabilities must also be respected in each country.'
Khan, 2022	Lack of adequately trained caregivers, low priority of oral health care by policy makers, financial factors, lack of funding, geography/ location factors	'…research on factors to oral care for people with SHCN have been presented at specific region and disability classes with…', 'not enough data to support the efficacy or cost efficiency of such solution'; ', disability has been considered a negative OH outcome rather than a population with ongoing OH care needs'.
Erwing, 2022	Affordability and accessibility, Autism-related issues, child and parental stress, stigma and discrimination, communication issues	Access 'can be facilitated by responding to the individual needs of autistic CYP through accommodation, education and adaptation. This necessitates greater awareness and knowledge of autism amongst DHPs and the provision of appropriate services. More methodologically robust intervention studies are needed to identify effective ways to support autistic CYP'.
Bhadauria, 2024)	Delayed first visits, lack of confidence in dentist, age, women, lack of dentist, transportation, poor accessibility, finances	'There is a need for provision of education, training and increasing awareness on dental hygiene and annual dental checkups to improve access.'

Table 3. Quality of Included Studies.

Assessment criterion	*Author, year*				
	Krishnan, 2020	*da Rosa, 2020*	*Khan, 2022*	*Erwin, 2022*	*Bhadauria, 2024*
PICO	Yes	Yes	Yes	Yes	No
Review methods/protocol	No	Yes	Yes	Yes	Yes
Study type selection explanation	No	No	No	Yes	No
Search strategy	No	Yes	Yes	Yes	Yes
Study selection in duplicate	No	Yes	Yes	Yes	Yes
Data extraction in duplicate	No	Yes	No	No	Yes
Excluded studies	No	Yes	No	No	No
Description of included studies	Partial yes	Yes	Yes	Yes	Yes
RoB assessment	Partial yes	Yes	Yes	No	Yes
Funding of selected studies	No	No	No	No	No
Meta-analysis	No	No	No	No	No
Impact of meta-analysis	N/A	N/A	N/A	N/A	N/A
RoB in individual studies	No	Yes	No	No	No
Explanation of heterogeneity	N/A	N/A	N/A	N/A	N/A
Publication bias assessment	No	No	No	No	No
Conflict of interest/funding	Yes	Yes	Yes	No	No

et al., 2024) employed duplicate search strategies, study selection, and data extraction to varying extents. Three (da Rosa *et al*., 2020; Khan *et al*., 2022; Bhadauria *et al*., 2024) conducted risk of bias assessments, whereas Krishnan et al. (2020) performed a partial assessment and Erwin et al. (2022) did not use an appropriate method. None of the studies reported funding sources for included studies, and there were no meta-analyses. Only da Rosa et al. (2020) discussed the risk of bias in individual studies, with none providing explanations for heterogeneity or conducting publication bias assessments. Conflict of interest and funding sources were addressed in three reports (Krishnan *et al*., 2020; da Rosa *et al*., 2020; Khan *et al*., 2022) and omitted in two (Bhadauria *et al*., 2024; Erwin *et al*., 2022).

Discussion

Addressing the myriad barriers to accessing oral health services for PWDs requires a comprehensive, multi-level approach tailored to tackle specific challenges. Achieving universal access to oral health care necessitates political commitment, economic and social considerations, system organization, and cultural competence. According to Levesque's (2013) framework, solutions should focus on the five dimensions of accessibility: Approachability, Acceptability, Availability, Affordability, and Appropriateness.

Financial constraints, such as high treatment costs and limited funding, can be alleviated through public benefit packages, insurance coverage, and reductions to out-of-pocket payments (Ghanbarzadegan *et al*., 2021). Additionally, systemic issues, such as the low prioritisation of oral healthcare in policy agendas, could be tackled through advocacy, policy changes, and resource allocation to prioritise dental care for PWDs. Political action and targeted financial support can also make dental services more affordable; increasing public funding for dental healthcare and integrating dental services with other health and social services have been identified as potential solutions to financial access barriers for vulnerable groups (El-Yousfi *et al*., 2019). Inclusive policies, such as those prioritising preventive oral care and expanding insurance coverage for dental services, would enhance affordability and early accessibility for PWDs (Bastani *et al*., 2021).

Provider-related issues, such as reluctance from dentists and inadequate training, can be mitigated through training programmes and guidelines for accommodating PWDs (O'Rourke *et al*., 2023; Nanji *et al*., 2024). Enhanced special care dentistry training and exposure to patients with disabilities improve skills and attitudes towards PWDs among future dental professionals (O'Rourke *et al*., 2023; Nanji *et al*., 2024). The International Association for Disability and Oral Health (IADH, 2012) has developed an Undergraduate Curriculum in Special Care Dentistry, which serves as a foundational guide for training dental professionals to treat PWDs. This curriculum can be integrated into dental education to improve providers' competencies.

Challenges such as transport and inaccessible facilities could be alleviated by improving transport and adapting facilities. Improving healthcare quality and access for people with disabilities requires not only physical accommodations, such as ramps, but also comprehensive facility adaptations in dental institutions (Iezzoni and O'Day, 2006; Kim and Park, 2021).

Domiciliary dentistry, delivering dental care to patients in their homes or communities, is a valuable alternative for individuals unable to visit conventional clinics (Emanuel and Mintz, 2021; Abed *et al*., 2021). Mobile dental units can bring dental services directly to underserved communities, providing comprehensive care such as prevention and basic treatments (Vashishtha *et al*., 2023). Additionally, teledentistry presents a novel solution by enabling remote consultations, follow-ups, and referrals, facilitating early diagnosis and treatment planning. This reduces the need for physical travel, offering more timely and accessible dental care, particularly for individuals in rural areas or those with mobility challenges (Giraudeau *et al*., 2019; Goffin *et al*., 2024). Community-based oral health programmes, when integrated into primary healthcare systems, can expand access to care for underserved populations (Prasad *et al*., 2019). Collaborations between dental clinics, hospitals, and special education schools improve access to dental services by facilitating coordinated care, sharing knowledge, and identifying individuals who need additional support in accessing oral healthcare (Bhadauria *et al*., 2024). School-based oral health promotion can improve oral health behaviours and enhance access to preventive care, particularly when collaboration between parents, oral health care providers, and teachers is established (Bramantoro *et al*., 2021).

Patient-related hurdles, such as fear of dentists, medical conditions, and lack of confidence in dental care, could be addressed through patient education, specialised support services, and outreach programmes targeting underserved populations (da Rosa *et al*., 2020; Krishnan *et al*., 2020; Khan *et al*., 2022; Erwin *et al*., 2022; Bhadauria *et al*., 2024). Moreover, improving the dental clinic environment by incorporating assistive tools for PWDs (e.g., tactile stimuli, dimmed lighting, calming sounds) could reduce anxiety and minimise negative behaviours during visits (Reynolds *et al*., 2023; Ahmed *et al*., 2022).

None of the systematic reviews stratified or differentiated outcome data based on the income levels of the countries. However, one focused exclusively on countries with a high Human Development Index (HDI) (Erwin *et al*., 2022). Different socio-economic conditions in low and medium-HDI countries may create additional barriers or exacerbate existing challenges, making them more difficult to overcome. More research should investigate these barriers in these countries, focusing on their unique healthcare systems, cultural contexts, and socio-economic conditions to develop targeted interventions that improve health outcomes.

None of the included studies conducted a meta-analysis, mainly due to the lack of common comparisons and homogeneous outcomes, limiting the quality of evidence. The absence of meta-analyses and comparative studies constrains the reliability of these systematic reviews. Without meta-analysis, these reviews depend heavily on qualitative assessments, hindering their ability to quantify effect sizes or identify patterns in barriers to oral healthcare for PWDs (Higgins *et al*., 2023). Future research should prioritise high-quality data, employing robust study designs that allow for comparative analyses. Rigorous research, including randomised controlled trials or cohort studies, could provide more robust insights into the barriers faced by PWDs and support evidence-based interventions.

The methodological discrepancies across the included reviews may have impacted the results. While all reviews addressed PICO criteria, many lacked detailed explanations of their methods, affecting transparency and reproducibility. The absence of consistent risk of bias assessments and insufficient attention to heterogeneity further compromises the reliability of the conclusions. Additionally, the varying attention to conflict of interest and funding sources raises concerns about potential bias. Addressing these methodological weaknesses would enhance the credibility of future research, ensuring that the findings are robust and generalisable.

In conclusion, barriers to oral health services for PWDs can be categorised into five domains: financial, provider-related, access-related, systemic and patient-related. Further studies and interventions are necessary to overcome these barriers, particularly in developing countries.

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Conflict of interest statement

The authors declare that there are no conflicts of interest.

Ethical Approval

The authors confirm that this review was conducted in compliance with the guidelines and standards set by the Committee on Publication Ethics (COPE). Due to the nature of this review, an IRB review was not required

Data availability statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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Appendix 1. Search terms in included database.

PubMed

Search	*Query*	*Results*
#1	("Access"[Title/Abstract] OR "barriers"[Title/Abstract]) AND ("dental health Services"[MeSH Terms] OR "dental health services"[Title/Abstract] OR "oral health services"[Title/Abstract] OR "dental services"[Title/Abstract] OR "dental care"[Title/Abstract] OR "oral health care"[Title/Abstract] OR "dental care for Disabled"[Title/Abstract]) AND ("disabled"[All Fields] OR "special need"[All Fields] OR "persons with disabilities"[All Fields] OR "persons with disability"[All Fields] OR "people with disabilities"[All Fields] OR "people with disability"[All Fields] OR "individuals with disability"[All Fields] OR "people with special health care needs"[All Fields] OR "with cerebral palsy"[All Fields] OR "autistic"[All Fields] OR "with autism spectrum disorder"[All Fields] OR "with down syndrome"[All Fields] OR "blind"[All Fields] OR "with visual impairment"[All Fields] OR "deaf"[All Fields] OR "with hearing impairment"[All Fields] OR "with Attention deficit hyperactivity disorder"[All Fields] OR "with learning disabilities"[All Fields] OR "with intellectual disabilities"[All Fields]) AND ("systematic review"[Title/Abstract] OR "meta analysis"[Title/Abstract])	9

Embase

Search	*Query*	*Results*
#1	('Access':ti,ab,kw OR 'barriers':ti,ab,kw) AND ('dental health'/exp OR 'dental health services':ti,ab,kw OR 'oral health services':ti,ab,kw OR 'dental services':ti,ab,kw OR 'dental care':ti,ab,kw OR 'oral health care':ti,ab,kw OR 'dental care for disabled':ti,ab,kw) AND ('disabled' OR 'special need' OR 'persons with disabilities' OR 'persons with disability' OR 'people with disabilities' OR 'people with disability' OR 'individuals with disability' OR 'people with special health care needs' OR 'with cerebral palsy' OR 'autistic' OR 'with autism spectrum disorder' OR 'with down syndrome' OR 'blind' OR 'with visual impairment' OR 'deaf' OR 'with hearing impairment' OR 'with attention deficit hyperactivity disorder' OR 'with learning disabilities' OR 'with intellectual disabilities') AND ('systematic review':ti,ab,kw OR 'meta analysis':ti,ab,kw)	9

Web of Science

Search	*Query*	*Results*
#1	TS=((“Access” OR “barriers”) AND (“dental health services” OR “oral health services” OR “dental services” OR “dental care” OR “oral health care” OR “dental care for Disabled”) AND (“disabled” OR “special need” OR “persons with disabilities” OR “persons with disability” OR “people with disabilities” OR “people with disability” OR “individuals with disability” OR “people with special health care needs” OR “with cerebral palsy” OR “autistic” OR “with autism spectrum disorder” OR “with down syndrome” OR “blind” OR “with visual impairment” OR “deaf” OR “with hearing impairment” OR “with attention deficit hyperactivity disorder” OR “with learning disabilities” OR “with intellectual disabilities”) AND (“systematic review” OR “meta analysis”))	8

Scopus

Search	*Query*	*Results*
#1	TITLE-ABS-KEY((“Access” OR “barriers”) AND (“dental health services” OR “oral health services” OR “dental services” OR “dental care” OR “oral health care” OR “dental care for Disabled”) AND (“disabled” OR “special need” OR “persons with disabilities” OR “persons with disability” OR “people with disabilities” OR “people with disability” OR “individuals with disability” OR “people with special health care needs” OR “with cerebral palsy” OR “autistic” OR “with autism spectrum disorder” OR “with down syndrome” OR “blind” OR “with visual impairment” OR “deaf” OR “with hearing impairment” OR “with attention deficit hyperactivity disorder” OR “with learning disabilities” OR “with intellectual disabilities”) AND (“systematic review” OR “meta analysis”))	12

Cochrane (0)

Search	*Query*	*Results*
#1	((Access) OR (barriers)):ti,ab,kw AND ((dental NEXT health NEXT services) OR (oral NEXT health NEXT services) OR (dental NEXT services) OR (dental NEXT care) OR (oral NEXT health NEXT care) OR (dental NEXT care NEXT for NEXT disabled)):ti,ab,kw AND ((disabled) OR (special NEXT need) OR (persons NEXT with NEXT disabilities) OR (persons NEXT with NEXT disability) OR (people NEXT with NEXT disabilities) OR (people NEXT with NEXT disability) OR (individuals NEXT with NEXT disability) OR (people NEXT with NEXT special NEXT health NEXT care NEXT needs) OR (with NEXT cerebral NEXT palsy) OR (autistic) OR (with NEXT autism NEXT spectrum NEXT disorder) OR (with NEXT down NEXT syndrome) OR (blind) OR (with NEXT visual NEXT impairment) OR (deaf) OR (with NEXT hearing NEXT impairment) OR (with NEXT attention NEXT deficit NEXT hyperactivity NEXT disorder) OR (with NEXT learning NEXT disabilities) OR (with NEXT intellectual NEXT disabilities)):ti,ab,kw AND ((systematic NEXT review) OR (meta NEXT analysis)):ti,ab,kw	0

CINAHL (4)

Search	*Query*	*Results*
#1	TI((“Access” OR “barriers”) AND (“dental health services” OR “oral health services” OR “dental services” OR “dental care” OR “oral health care” OR “dental care for Disabled”) AND (“disabled” OR “special need” OR “persons with disabilities” OR “persons with disability” OR “people with disabilities” OR “people with disability” OR “individuals with disability” OR “people with special health care needs” OR “with cerebral palsy” OR “autistic” OR “with autism spectrum disorder” OR “with down syndrome” OR “blind” OR “with visual impairment” OR “deaf” OR “with hearing impairment” OR “with attention deficit hyperactivity disorder” OR “with learning disabilities” OR “with intellectual disabilities”) AND (“systematic review” OR “meta analysis”)) OR AB((“Access” OR “barriers”) AND (“dental health services” OR “oral health services” OR “dental services” OR “dental care” OR “oral health care” OR “dental care for Disabled”) AND (“disabled” OR “special need” OR “persons with disabilities” OR “persons with disability” OR “people with disabilities” OR “people with disability” OR “individuals with disability” OR “people with special health care needs” OR “with cerebral palsy” OR “autistic” OR “with autism spectrum disorder” OR “with down syndrome” OR “blind” OR “with visual impairment” OR “deaf” OR “with hearing impairment” OR “with attention deficit hyperactivity disorder” OR “with learning disabilities” OR “with intellectual disabilities”) AND (“systematic review” OR “meta analysis”)) OR KW((“Access” OR “barriers”) AND (“dental health services” OR “oral health services” OR “dental services” OR “dental care” OR “oral health care” OR “dental care for Disabled”) AND (“disabled” OR “special need” OR “persons with disabilities” OR “persons with disability” OR “people with disabilities” OR “people with disability” OR “individuals with disability” OR “people with special health care needs” OR “with cerebral palsy” OR “autistic” OR “with autism spectrum disorder” OR “with down syndrome” OR “blind” OR “with visual impairment” OR “deaf” OR “with hearing impairment” OR “with attention deficit hyperactivity disorder” OR “with learning disabilities” OR “with intellectual disabilities”) AND (“systematic review” OR “meta analysis”))	4