

ABSTRACT

The most critical period of human development is conception to age six when the foundations of brain architecture develop (1). How well these brain structures are formed determine child development, well-being, learning and behaviours that follow (2).

Children from disadvantaged communities have substantially increased risk for deleterious health and development outcomes (3). Given the multiplicity of health risks associated with social disadvantage, strategies to promote child health and well-being go beyond the traditional medical-based setting and involve community-wide policy strategies (2).



Community paediatric clinics treat unwell children, monitor developmental concerns and delay, deliver health promotion services, counselling and advice, and referral to other health professionals (4). A substantial number of children attending paediatric clinics have developmental issues (5).

This is the first study to use a systematic approach to retrieval, appraisal and synthesis of evidence on the impact of community paediatric clinics on the developmental outcomes of children living in disadvantaged communities.

OBJECTIVES

1. To systematically search for, identify and select relevant literature.
2. To record, analyse and synthesise data from included studies that examine the impact of community based paediatric clinics on the developmental outcomes of children.
3. To critically appraise included studies.

RESEARCH QUESTION

What are the impacts of community-based paediatric clinics on the developmental outcomes of children living in disadvantaged communities?

METHODS

- Design:** Mixed method systematic review
- Search strategy:**
- Guided by the PRISMA Statement (6)
 - Explicit inclusion and exclusion criteria.
 - Search terms developed, consultation of MeSH terms.
 - Five electronic databases and reference lists searched.
 - 3-stage selection process by two reviewers.
 - Primary studies reporting on community-based paediatric clinics and the developmental outcomes for children living in disadvantaged communities were included.
 - Search outputs, data extraction and quality appraisal undertaken by two reviewers.
- Quality appraisal:** CASP (7,8), JBI (9) and MMAT (10).
Confidence in evidence: GRADE CERQual (11).

- Data analysis and mixed methods synthesis:**
- Guided by the Segregated Framework for Mixed Method Systematic Reviews (12).
 - 'Integrated Model' used to guide transformation of quantitative data into qualitative data.
 - Thematic analysis of qualitative data using NVivo guided by The Framework Method (13).
 - Results conform with the PRISMA Statement (6).

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RESULTS

- Search results:** 18 studies selected for inclusion (Figure 1) (14-31). 7 quantitative, 7 qualitative, 4 mixed-methods.
- Included studies:** Published between 1981 and 2021, reporting on community paediatric clinics implemented in England (8 studies), USA (4 studies), Australia (4 studies), and Canada (2 studies).
- Quality of studies:** Overall moderate score
- Confidence in evidence:** Overall moderate score
- Data analysis & synthesis:** 4 outcome domains encompassing 11 sub-themes (Table 1).
- Interpretation of findings:**
- Clinics identify and monitor a range of developmental needs of vulnerable children (14-22).
 - Collaboration between clinics and community agencies facilitates more responsive care tailored to children's health and developmental needs (20,24,25,28).
 - Flexibility and accessibility of clinics are strong enablers to parents' attendance at appointments (17, 23, 27, 29).
 - Clinics tackle barriers to healthcare access experienced by vulnerable children and families (14-31).

Figure 1: PRISMA flow diagram of study selection process

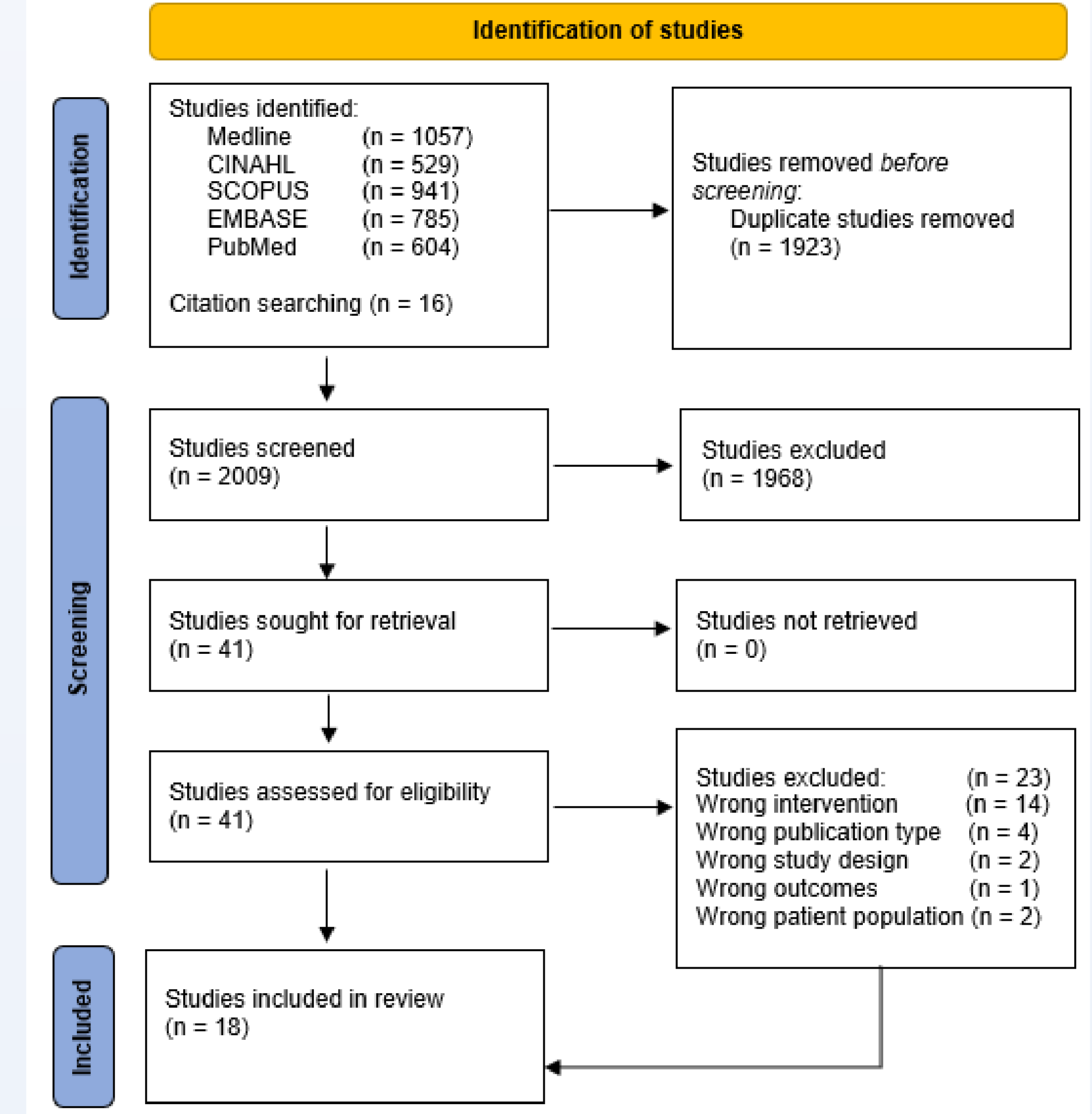


Table 1: Results from thematic analysis

Outcome domain	Sub-themes
Child-level outcomes	- Identification and monitoring of developmental delay - Referral to services - Time to diagnosis
Family-level outcomes	- Attendance
Practitioner-level outcomes	- Engaging vulnerable families - Increasing community awareness of child developmental needs - Transferring specialist knowledge to the community
Community paediatric clinic model of care	- Accessibility and flexibility - Partnership working and shared goals - Management of non-attendance - Tackling barriers to healthcare access

CONCLUSIONS

- Community-based paediatric clinics:
- successfully **engage vulnerable families** reducing health inequalities due to poor access.
 - better meet the **health and developmental needs** of vulnerable populations.
 - facilitate **working relationships** with community agencies aiding detection, monitoring and treatment of child developmental delay.
 - provide disadvantaged areas with **specialist knowledge** of child health and development, **heighten community awareness** of child development, and increase parent and professional choice.
- Parents value **ease of access, education** on child behavioural and developmental problems, and **liaison** values of community clinics.
- Findings contribute to the evidence base on how best to address developmental delay, particularly for vulnerable children.

IMPLICATIONS OF REVIEW

- Implications for practice**
- Community based paediatric clinics have the potential to improve access to specialist paediatric healthcare and to increase community practitioners' knowledge and understanding of developmental needs, aiding their work with vulnerable children and families.
- Implications for policy**
- Findings can be used by policy makers to highlight the value of community-based paediatric clinics which provide access across the continuum of health care services for vulnerable children and families.

- Implications for future research**
- This review highlights the need for high quality comparative studies comparing community paediatric clinics in disadvantaged areas and hospital paediatric clinics. This will add to the evidence base on the value of clinics in disadvantaged settings where outreach may confer most benefit to access and health outcomes of vulnerable children.

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