



University of Wales
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*To explore the impact of early
intervention on Autism Spectrum
Disorder in the UK*

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DECLARATION

This work has not previously been accepted in substance for any degree and is not being concurrently submitted in candidature for any degree.

Signed: Denise Cardoso

Date: 09 December 2025

STATEMENT 1

This dissertation is being submitted in partial fulfilment of the requirements for the degree of BSc.

Signed: Denise Cardoso

Date: 09 December 2025

STATEMENT 2

This dissertation is the result of my own independent work/investigation, except where otherwise stated.

Other sources are acknowledged by footnotes giving explicit references. A bibliography is appended.

Signed: Denise Cardoso

Date: 09 December 2025

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I am deeply grateful for the ongoing support my family gave me throughout my dissertation research.

ABSTRACT

Aim and Objectives

The research aimed to investigate early intervention methods for 0–8-year-old children with autism spectrum disorder based in the UK, and their effects on long-term development, behavioural and social growth. It also reviews current policies and services to identify service gaps by location, which will guide the development of evidence-based solutions to enhance early intervention programs for children with ASD and their families.

Background

The diagnosis of Autism Spectrum Disorder evolved from its first creation into a modern evidence-based system which unites behavioural and cognitive, and ecological theoretical frameworks. The international community, along with the UK government, supports early intervention as the foundation for child development. The delivery of adequate early support for autistic children remains difficult because of service disparities, extended wait periods, and irregular service availability.

Methods

A qualitative systematic literature review method was adopted to analyse UK-based studies about early intervention programs for autistic children aged 0 to 8 years. The review conducted structured searches to find peer-reviewed studies from 2015 to 2025 before applying its selection criteria. This study employed Braun and Clarke's method to conduct thematic analysis of 12 articles. Ethical guidelines were used throughout the study.

Main Findings

The UK requires early intervention programs for autistic children to achieve success through both specific therapeutic methods and proper system-wide support structures. The best results emerge when children receive their interventions through teams that include multiple professionals who work with trained parents in services that match their cultural needs and maintain excellent connections between healthcare facilities, educational institutions, and community organisations.

The review shows parents need to work as therapeutic partners. Still, they cannot access appropriate training and cultural support during long pre-diagnostic periods, which reduces their ability to assist as early co-therapists.

The research shows that different regions experience varying levels of service delivery problems due to local practices, insufficient staff numbers, weak connections between agencies, and insufficient post-diagnostic support. The combination of cultural differences and communication obstacles makes it harder for parents to participate in their child's care. The research develops an integrated ecosystem model that enables equitable, sustainable

outcomes through early family education, culturally sensitive methods, and standardised multidisciplinary care.

The review data enabled researchers to develop an integrated ecosystem model that evaluates early intervention methods in the UK. The model structure is presented conceptually in Appendix F: The integrated Ecosystem model of early intervention effectiveness.

Conclusion

The review concluded that children with ASD in the UK achieve better developmental, behavioural and social results through early intervention programs which follow a structured format and involve their families. The UK faces three significant barriers to equal access to services: extended waiting periods, insufficient staffing levels, and uneven service distribution across different areas. The delivery of equal, high-quality early intervention services to all families requires stable funding and improved multidisciplinary teamwork and cultural sensitivity programs.

Keywords:

- Autism, spectrum, disorder, ASD, frameworks, family, strategies, community support, intervention, multidisciplinary approach, health inequalities, UK, outcomes, support.

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CHAPTER 1: INTRODUCTION

Background of the study

Autism Spectrum Disorder (ASD) is a neurological and developmental condition characterised by persistent difficulties in social interaction and communication, including challenges with social-emotional reciprocity, nonverbal behaviours, and social relationships, as well as restricted and repetitive patterns of behaviour (American Psychological Association, 2013).

The scientific community has made significant breakthroughs in autism research since the initial identification of the condition. Leo Kanner first identified autism in 1943 when he studied children displaying severe social withdrawal and an inability to form emotional bonds with others. Around the same period, Hans Asperger studied children with similar symptoms to those he described in his syndrome, but not as withdrawn. Despite all early identification of Autism, this syndrome has been poorly misunderstood since its inclusion in the (Diagnostic Statistical of Mental Disorders) DSM-IV criteria (APA, 1994) and in the (International Classification of Diseases) ICD-10 (WHO, 1993) and is now classified as Autism spectrum disorder, characterised by autistic social impairment and a pattern of restricted, repetitive, and stereotyped behaviours, interests, and activities. These pivotal moments shifted the outdated approach of blaming parenting (i.e. 'refrigerator mother theory') to a more scientific evidence of autism and are now recognised as a neurodevelopmental and behavioural condition (Bertelli *et al.*, 2023).

Early intervention strategies for autism are grounded in a range of theoretical frameworks. These interventions facilitate understanding and guiding the provision of developmental support.

The recent study conducted by Newcastle University found that approximately one in fifty-seven children is diagnosed with autism spectrum disorder (NCL, 2021). The early years of a child's life are crucial for brain development, especially from birth to 8 years, and this period is seen as a vital opportunity for intervention. Research on early intervention has attracted widespread attention due to its potential to produce positive outcomes in children with ASD. These strategies include structured and evidence-based approaches such as behaviour therapy, speech and language therapy, occupational therapy, and parent-mediated intervention.

Research analysing the impact of early intervention consistently shows that early intervention in children with ASD improves cognitive, behavioural, and social functioning. In the UK, the services related to early intervention for children with ASD vary across regions depending on the availability of local authority resources and skilled and trained professionals. Despite government initiatives to promote early identification and intervention support, families also struggle for diagnoses due to long waiting times, inconsistent service quality and limited awareness regarding the availability of services.

Rationale and relevance of the research

Autism Spectrum Disorder (ASD) can be defined as a neurodevelopmental condition that affects the ability of an individual to initiate communication and reciprocate social interaction. According to the WHO (2023), this disorder emerges during the developmental phase. Around 1 in 57 children displays characteristics of autism spectrum, which is gradually increasing, and more than 60% of families experience long waiting times through the referral to the diagnostic assessment process (NCL, 2021). Within the UK, the increasing ASD prevalence of ASD highlights the need for early interventions in children.

Despite ongoing frameworks, socio-demographic disparities persist in the UK at high levels, children from deprived areas experience delayed care four times longer than those from affluent areas. These inequalities highlight an urgent need for research-based strategies to ensure equal access and effective early intervention strategies (APPGA,2022).

Evidence demonstrated that early intervention improved children's spoken language, social communication, and behaviour-related outcomes (Fuller and Kaiser, 2020). Moreover, Hasson (2022) highlights the significant contribution of a multidisciplinary approach within the current education system in the UK. Additionally, community support and family involvement also play a crucial role in promoting a positive outcome for autistic children in Adulthood.

The research holds importance because the UK requires efficient and fair early-intervention methods for children with ASD. The international evidence supporting early intervention programs is strong, yet countries vary in their success in implementing them. The delivery of immediate medical care remains restricted due to ongoing regional service gaps, insufficient staffing levels, and delayed medical assessments.

This study, therefore, focuses specifically on UK-based evidence and policy contexts to understand how early-intervention frameworks can promote sustainable, family-centred outcomes for children aged 0–8. The program supports national objectives set out in the NHS Long Term Plan (2019) and the SEND Code of Practice (2015), which aim to detect neurodivergent children early and provide them with inclusive support.

Contribution of the research

The systematic review adds new information through its analysis of UK peer-reviewed studies, which creates an integrated system to understand early intervention success factors. Research shows that early intervention programs achieve success through particular treatment methods and the organisational frameworks which provide support to children.

The review indicates that successful early intervention requires multiple factors to work together, including team collaboration between different disciplines, parental education programs and services that respect cultural differences, involve communities, and follow consistent health, education, and social care policies.

The research discovers that a "family-centred coordination gap" exists in UK services because parents must lead therapy but lack equal access to suitable training and early support, especially before receiving a diagnosis. The current gap prevents parents from accessing affordable, parent-led interventions that research has proven effective.

The review combines medical, social, and policy perspectives to develop an operational framework which improves family-based early intervention services throughout all UK regions.

The visual design of the Integrated Ecosystem Model presented in Appendix F: The integrated Ecosystem model of early intervention effectiveness demonstrates its conceptual contribution.

Definition of Key Terms

Autism Spectrum Disorder: Autism Spectrum Disorder (ASD) is a neurological and developmental disorder that is characterised by a persistent deficit in an individual's ability to interact and communicate with others. The symptoms also include restricted and repetitive patterns of behaviour (American Psychological Association, 2013).

Early Intervention: A Range of relevant support services and therapeutic approaches designed to offer help for children from birth to 8 years who have signs of developmental delays or disabilities. In the context of Autistic spectrum disorder (ASD), early intervention includes therapy (behavioural, speech and language, occupational), early childhood education programs, parent-mediated intervention, and family support services (Adeoye et al., 2025).

Neurodevelopmental disorder or condition: Inabilities associated primarily with the functionality of the neurological system and brain (Exposito-Alonso and Rico, 2022).

Cognitive development: The development of a child's ability to understand and process information, including the development of knowledge, thinking skills, problem-solving abilities and use of languages (Bamicha and Drigas, 2022).

Behavioural development: Behavioural development refers to the complex interaction of genetically guided processes that influence the formation of neural circuits and behaviour throughout an individual's lifespan (Braddick *et al.*, 2011).

In this study, the term refers to the progression of emotional control, behavioural regulation, and the development of adaptive skills in young children.

Keywords

Autism, spectrum, disorder, ASD, frameworks, family, strategies, community support, early intervention, multidisciplinary approach, health inequalities, UK, outcomes, support.

Aim of the research

This research aimed to explore a systematic literature review of the outcomes of early intervention strategies for children aged 0 to 8 years with autism spectrum disorder in the UK context. It explores the long-term consequences of the multidisciplinary approaches amongst children with ASD, highlighting the role of families, the community support structure and its impact on the interventions for autistic children. Moreover, this study also aims to explore the effects of early interventions on behavioural development, cognitive progress, and social interaction in childhood.

Review question

How early intervention strategies approach impacts developmental and behavioural outcomes on children diagnosed with ASD in the United Kingdom context.

Objectives of the research

- To illustrate the notion of autism spectrum disorder and critically analyse the progression of its definitions and diagnostic criteria.
- To investigate the current policies, services, strategies and relevant legislation that influence early intervention approaches on individuals with ASD in the UK(NHS Long Term Plan (2019), and SEND Code of Practice)
- To explore the current gaps, inequalities, and challenges within the early intervention

process for autistic children across the UK (Socioeconomic and geographic accessibility)

- To develop evidence-based recommendations for enhancing early intervention strategies on ASD in the UK.

Structure of the Dissertation

Chapter One: Introduction

This chapter provides an overview of the topic by presenting the background, rationale, aim and objective of the study. It also defines the key terms used throughout the study to avoid misconceptions.

Chapter Two: Literature Review

This chapter critically reviews prior research relevant to this topic to identify key themes, the theoretical framework, and gaps that justify the study.

Chapter Three: Research Methodology

This chapter outlines the research design, methods, and approaches used to gather and analyse information. Moreover, it includes sampling techniques, data collection tools, ethical considerations, and the study's limitations.

Chapter Four: Findings and Discussion

This chapter presents the study's findings, which address the research aim and objectives. This chapter systematically organises key themes, highlights patterns, and provides insights from the literature.

Chapter Five: Conclusion and Recommendations

This final chapter concludes the study, highlighting the main points, outlining the implications, and offering recommendations for future research.

CHAPTER 2: BACKGROUND

The second chapter provides essential background information, enabling one to understand UK-based early intervention approaches for Autism Spectrum Disorder. The chapter describes the development of autism over time, presents essential theoretical models, explains both worldwide and British autism policies, and evaluates existing research findings. The chapter provides vital background information which supports the research questions and thematic analysis.

2.1 Historical Background

Autism Spectrum Disorder (ASD) has been described for almost a century, with early conceptualisations influencing how it has been understood and managed over time. Leo Kanner, in 1943, first described autism when he examined eleven children who displayed severe social withdrawal together with communication challenges, along with repetitive behavioural patterns (Bertelli et al., 2022). During that time, Hans Asperger studied children who had fewer symptoms but showed both verbal strengths and severe social interaction problems. Two separate categories emerged from initial reports, which eventually merged into the autism spectrum under its current definition.

The DSM-III established autism as a developmental disorder in 1980 when it officially designated autism as a developmental disorder rather than blaming parents for its occurrence, which was known as the "refrigerator mother" theory (Kaland, 2011). The classification process evolved through DSM-IV (1994) and ICD-10 (1993), developing standards for social impairment, restricted behaviours, and communication challenges (APA, 1994; WHO, 1993). The DSM-5 (2013) of the American Psychological Association (2013) officially combined autistic disorder with Asperger's disorder and pervasive developmental disorder into a single autism spectrum disorder diagnosis. The evolution from misconceptions and negative attitudes to scientific evidence-based support methods demonstrates a developmental path in autism understanding.

The DSM-5 (APA, 2013) and ICD-11 (World Health Organisation, 2019) adopted Autism Spectrum Disorder as a single term to describe the wide range of autism characteristics and symptoms. The updated assessment approach yielded better diagnostic results, enabling experts to develop individualised assessment and treatment plans (Happé, Ronald and Hoekstra, 2020). The revised criteria are criticised for potentially blocking people with less

severe symptoms and multiple health issues from receiving early-intervention services right away (McGillivray and Evert, 2021). The changing definitions of autism have affected how the UK health and education systems identify and handle autism through their focus on early intervention as a core national policy.

2.2 Theoretical Background

The theoretical framework serves as the basis to explain how early intervention models work for Autism Spectrum Disorder (ASD). The model integrates multiple developmental and psychological theories that explain how children learn behaviours and social cues from their environments and cultures. The theories support the core elements of early intervention approaches by offering specific guidance for their application in educational and clinical environments.

The diagram shows the fundamental theoretical models which form the basis for early intervention programs for ASD.

The structure of Applied Behaviour Analysis (ABA)

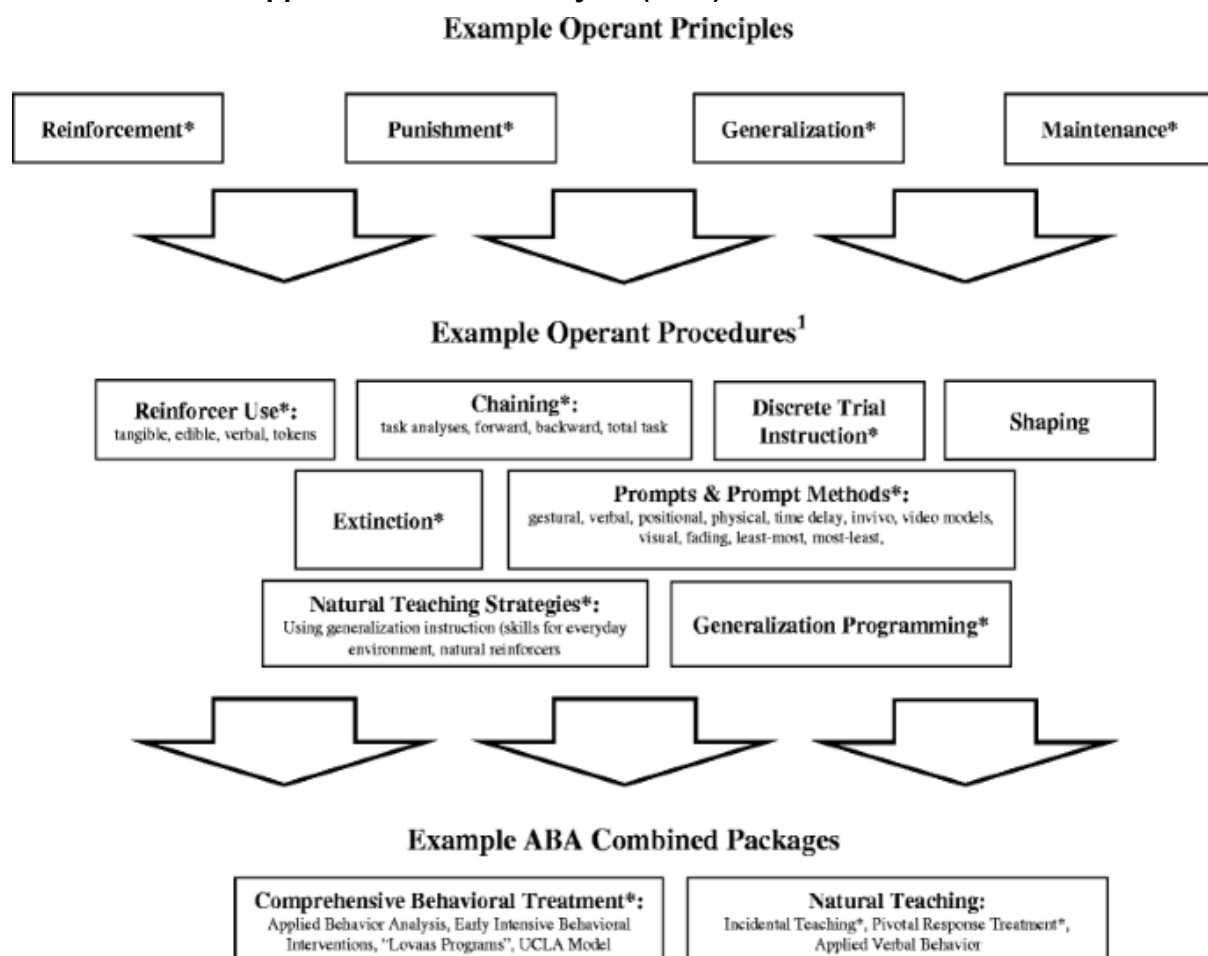


Figure 1 : The structure of ABA principles and procedures (Adapted by Ivy and Schreck, 2016)

Fig. 1. The illustration shows the fundamental principles and procedures of Applied Behaviour Analysis (ABA), a standard early intervention method for treating Autism Spectrum Disorder (ASD) in children. The principles of reinforcement, shaping, prompting, chaining, and generalisation explain how behaviours can be taught, strengthened or reduced through structured learning.

The components serve as fundamental elements of early intervention because they establish a structured approach to help young children develop their communication skills, social abilities, and adaptive behaviours. The figure presents two evidence-based intervention packages from ABA, used in clinical and educational services throughout the UK, as well as early-intervention pathways, including Comprehensive Behavioural Treatment and Naturalistic Teaching.

The figure shows how behavioural strategies work together to deliver evidence-based early intervention that aligns with UK priorities for improving developmental and behavioural outcomes in autistic children aged 0-8 years.

According to **Skinner's theory of operant conditioning** (1957), **behaviourism** demonstrates that behaviours can become learned through properly designed reward-based systems. ABA stands as one of the leading autism intervention methods, which applies operant conditioning principles to teach autism patients to develop social interaction skills as well as communication abilities and to eliminate harmful behavioural patterns.

Theory of Mind (ToM)

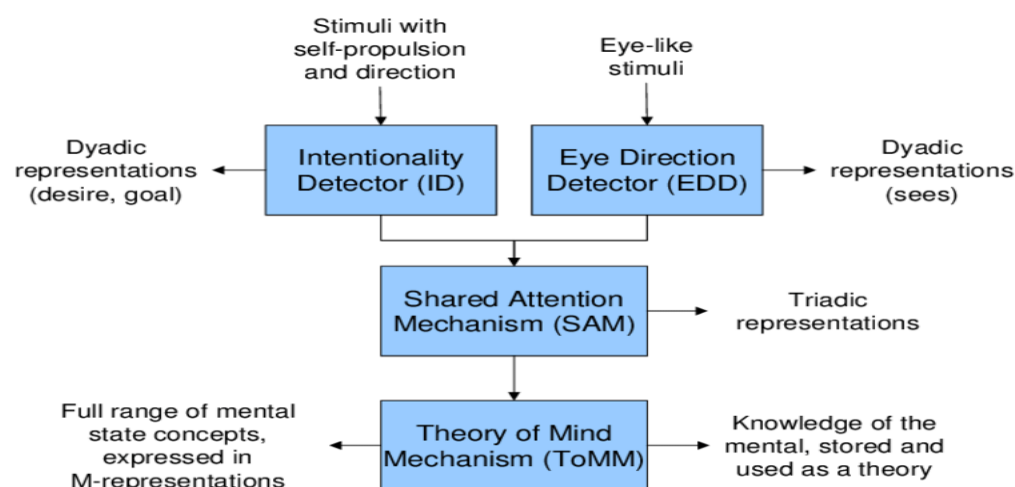


Figure 2. Theory of Mind Mechanism (ToMM) (Baron et al., 1985)

Fig.2 The developmental processes of Theory of Mind (ToM) follow the framework established by Baron-Cohen (1995). It proposes that children acquire the ability to understand others' mental states through a sequence of cognitive modules: the Intentionality Detector (ID), which interprets goal-directed behaviour; the Eye Direction Detector (EDD), which processes gaze and attention; and the Shared Attention Mechanism (SAM), which enables joint focus on objects or events. The early perceptual and social mechanisms lay the foundation for the Theory of Mind Mechanism (ToMM), which allows people to recognise mental states, such as beliefs, desires, and intentions, in others. Children with Autism Spectrum Disorder (ASD) experience particular developmental challenges in joint attention and gaze following during their early growth, which creates obstacles for their social learning and communication skills. The theoretical framework supports early intervention methods, including behavioural and parent-mediated therapies, that focus on social attention and reciprocal communication skills from birth. Interventions designed to enhance perspective-taking, social understanding, and empathy originated in this cognitive framework.

Bronfenbrenner's Ecological Systems Theory

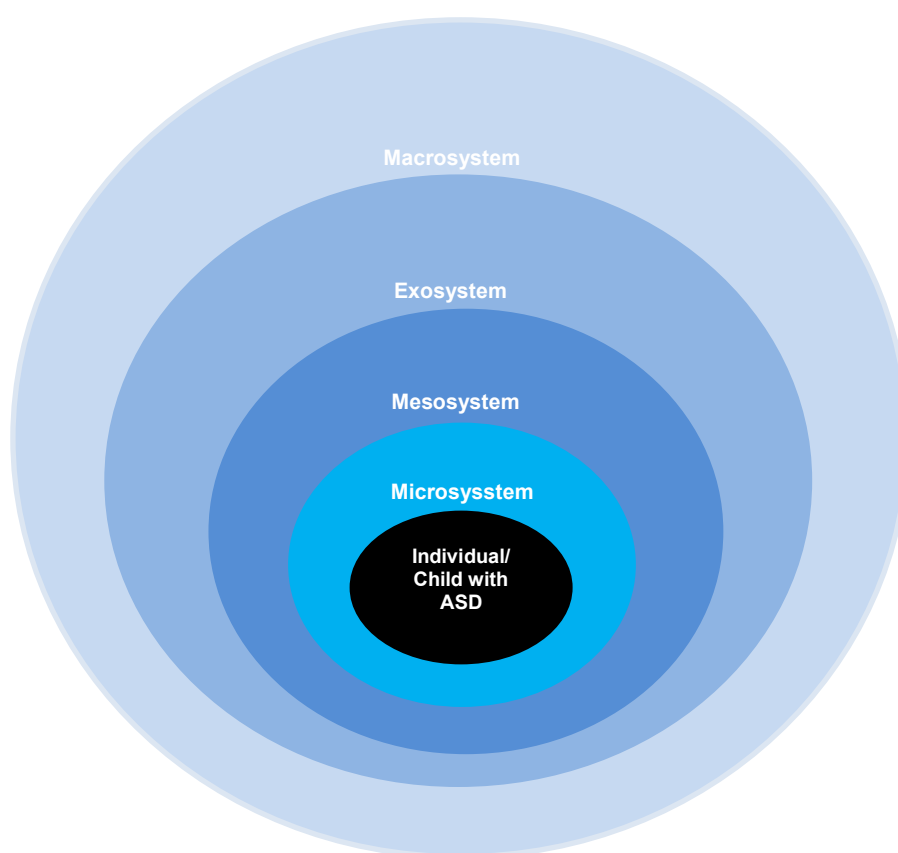


Figure 3 : Bronfenbrenner's Bioecological Model applied to early intervention in ASD (Adapted from Bronfenbrenner, 1979)

Macrosystem
-Culture and beliefs -National Policies: NHS Long Tern plan (2019)
Exosystem
-Local authorities: CAMHS SENCO
Mesosystem
Multidisciplinary approach Link between home-school-NHS
Microsystem
-Family -School -Therapist
Child with ASD
-Communication -Social skills -Behaviour

Fig.3 The diagram demonstrates Bronfenbrenner's Bioecological Model of Human Development, which shows how different systems affect early intervention outcomes for children with Autism Spectrum Disorder (ASD). The child with ASD is placed at the centre of the diagram because early intervention programs focus on developing communication skills, managing behaviour, and improving social abilities (Fuller and Kaiser, 2020).

The microsystem consists of three main environments which directly affect the child through daily contact: family, school and therapeutic settings. Research indicates that interventions delivered by parents and implemented in schools within the microsystem produce significant positive effects on children's communication abilities and adaptive behaviours (Green et al., 2017; Leadbitter et al., 2022).

The mesosystem refers to the connections between these core environments, such as home–school collaboration, multidisciplinary teamwork and communication between NHS providers and families. Strong mesosystem connections need to develop because they produce stable intervention outcomes while reducing family stress levels (Grahame et al., 2021; Hasson, 2022).

The exosystem comprises external systems that affect the child through their decisions and actions, such as local authority choices and CAMHS service availability, SENCO support, and service acquisition processes. The three factors determine the duration of patient service delays and their capacity to obtain rapid assessments and premium service routes (Crane et al., 2021; Pellicano et al., 2021).

The macrosystem consists of cultural values and national policies which direct early intervention practices throughout the UK through the SEND Code of Practice (Department for Education, 2015) and the NHS Long Term Plan (NHS England, 2019). The National guidelines state that early detection is an essential element of quality intervention programs, which need to establish inclusive support systems and work through multi-agency partnerships.

The ecological perspective posits that ASD outcomes result from the interplay among child factors and the interactions among family and community elements, service systems, and national policies, according to Bronfenbrenner (1979) and current ASD research by Moody et al. (2020).

In addition, Vygotsky's Sociocultural Theory (1978) showed that social learning emerges through peer interactions and adult guidance. Early intervention strategies for autistic children rely on this theory to demonstrate the need for structured social interactions with parents and for culturally appropriate support (Bodrova and Leong, 2024).

Theories provide evidence to support multidisciplinary and family-based early interventions, which integrate behavioural, cognitive and social approaches to achieve the

best developmental results.

2.3 International Context

The World Health Organisation (2023) reports that approximately 1 in 100 children worldwide have been diagnosed with Autism Spectrum Disorder (ASD) as autism prevalence continues to rise globally. Early intervention stands as the worldwide best practice for autism because brain development remains most adaptable during the initial years of life.

The Individuals with Disabilities Education Act (IDEA, 2004) in the United States provides guaranteed early childhood intervention services for children with developmental disabilities, including autism, through its policies. The Early Start Denver Model (ESDM) combines play-based and relationship-focused strategies with ABA principles to produce consistent positive results in language and cognitive development (Dawson *et al.*, 2010).

Sweden and Denmark allocate significant funds to early detection of autism and to delivering family-focused interventions. Research studies conducted in European countries demonstrate that parent-mediated intervention techniques help reduce behavioural challenges and improve families' daily interaction skills (Pickles *et al.*, 2016). International research indicates that Low- and Middle-Income Countries (LMICs) require urgent improvements in access to diagnosis and interventions. The absence of skilled professionals and discrimination against affected children, together with insufficient healthcare resources, block access to early support services. A study by Rahman *et al.* (2016) demonstrates that community health worker interventions in India and Pakistan can successfully deliver early intervention programs in resource-limited settings.

The international data show that intervention models differ, yet early and structured intervention proves beneficial for developmental outcomes in children with ASD across all populations.

2.4 National / Local UK Context

The prevalence of ASD continues to increase in the UK, according to Newcastle University (2021), which estimates that 1 in 57 children now have autism spectrum disorder. The increasing number of ASD cases creates substantial strain on healthcare services as well as education and social care systems, which demonstrates the necessity of well-designed early interventions.

Policies and Frameworks:

Multiple frameworks operate in the UK to guide autism services. The NICE Guidelines (2013, updated 2021) emphasise the need for prompt diagnosis, followed by multidisciplinary assessment and individualised early support for patients with ASD. The SEND Code of Practice (2015) establishes legal requirements for schools and local authorities regarding support for children with autism and their families. The National Autism Strategy (2021–2026) strengthens early identification processes, reduces diagnostic delays, and provides enhanced support for families.

Service Provision:

Service delivery shows substantial differences across regions. Family members endure extended diagnosis waiting periods, which sometimes reach two years, resulting in delayed access to necessary interventions, according to the National Autistic Society (2022). The delivery of early intervention services is inconsistent because professionals receive varying levels of training, and specialist services are scarce.

Role of Families and Community:

Research demonstrates repeatedly that parents must actively participate in intervention programs. Implementing parent-mediated programs yields successful outcomes, enhancing communication skills and daily living competencies while reducing family stress (Fuller and Kaiser, 2020).

Community-based support makes early intervention work better by moving services out of clinics and into schools, early years centres, charities, and parent support groups. The schools, early years centres, charities and parent support groups provide places that offer support, peer mentoring, practical guidance and play-based learning (Grahame et al. 2021). Resources promote engagement, social inclusion and help reduce isolation after diagnosis.

However, access across the UK is still uneven. The cultural and linguistic barriers, service awareness, and geographical inequalities keep minority ethnic families and families with low incomes from accessing services (Crane et al., 2021; Pellicano et al., 2021).

2.5 Critical Review of Previous Studies

Research about early intervention approaches for ASD has been expanding, and evidence shows that ASD interventions lead to positive results in cognitive development, social abilities, and behavioural outcomes.

Positive Outcomes:

Fuller and Kaiser (2020) conducted a meta-analysis that showed that children with ASD under 8 years old who received early intervention treatments showed significant improvement in spoken language and social communication skills. Pickles et al. (2016) revealed that parent-led social communication therapy led to enduring reductions in autism symptoms, which persisted even after the therapeutic period ended.

Intervention Models:

The Early Start Denver Model (Dawson et al., 2010) and ABA-based programs demonstrate quantifiable gains in IQ, language, and adaptive behaviour. The research confirms that naturalistic play-based methods remain effective treatments (Kasari et al., 2015).

UK-Specific Studies:

Hasson et al. (2022) examined educational inclusivity by demonstrating how family-professional-school partnerships enhance student outcomes. The main service challenges stem from inconsistent service delivery and limited public understanding.

Identified Gaps:

Research supports short-term positive changes, but does not explore how these improvements persist from adolescence through to adulthood. A significant number of interventions lack cultural adaptation, while research conducted in the UK demonstrates that service delivery varies across geographic locations and socioeconomic groups.

The existing literature confirms that early intervention proves successful, yet its accessibility remains inconsistent, which supports the focus of this dissertation on exploring UK-based strategies.

CHAPTER 3: METHODS

The third chapter describes the research methodology employed in this dissertation. The chapter describes the research design and data collection methods and explains the selection criteria for participants and the thematic analysis procedure. The chapter discusses ethical aspects and methodological constraints to achieve complete transparency and maintain both credibility and research rigour in the systematic literature review.

3.1 Research Design

The research methodology in this dissertation uses a qualitative secondary research design

grounded in a systematic literature review (SLR). The SLR approach is suitable because it allows for the comprehensive evaluation and integration of existing peer-reviewed literature on early intervention strategies for children with Autism Spectrum Disorder (ASD) in the UK. This method is preferable to primary research because it does not involve collecting data from participants; thus, it is free from ethical and time-related issues while still providing access to a wide range of evidence (Snyder, 2019).

The study utilises secondary data to compare different intervention models and policies, thus providing a robust, evidence-based understanding of the topic.

3.2 Data Collection

3.2.1 Sources of Literature

Data was obtained from peer-reviewed journals, policy documents, and official guidelines to ensure academic credibility. The following academic databases were accessed:

-PubMed, ProQuest, Google Scholar, UWTSD Online Library.

Additionally, government reports and national strategies (e.g., NICE Guidelines and the National Autism Strategy) were included to strengthen the UK policy context.

3.2.2 Search Strategy

A systematic search was conducted using Boolean operators and key terms. Example search strings included:

("Autism Spectrum Disorder" OR "ASD") AND ("early intervention" OR "early support" OR "early childhood") AND ("UK" OR "United Kingdom")

("Autism" AND "0–8 years" AND "intervention strategies")

("ASD" AND "multidisciplinary approach" AND "family involvement")

This structured search ensured comprehensive coverage of the topic across multiple databases.

3.2.3 Keywords

Autism, spectrum, disorder, ASD, frameworks, family, strategies, community support, early intervention, multidisciplinary approach, health inequalities, UK, outcomes, support.

3.3 Inclusion and Exclusion Criteria

Inclusion criteria:

- Studies on children aged 0–8 years diagnosed with ASD.
- Publications between 2015 to 2025.

- Conducted in the UK.
- Peer-reviewed journal articles, government reports, or policy documents.
- English language only.

Exclusion criteria:

- Studies focused on adolescents or adults.
- Articles published before 2015.
- Non-academic or non-peer-reviewed sources (e.g., blogs, magazines).
- Publications in languages other than English.

These criteria ensured that only relevant, recent, and credible studies were selected.

3.4 Sampling

The search process initially identified around 600 studies. After screening for relevance, quality, and duplication, a final sample of 12 peer-reviewed journal articles was selected.

Prisma Flow Diagram

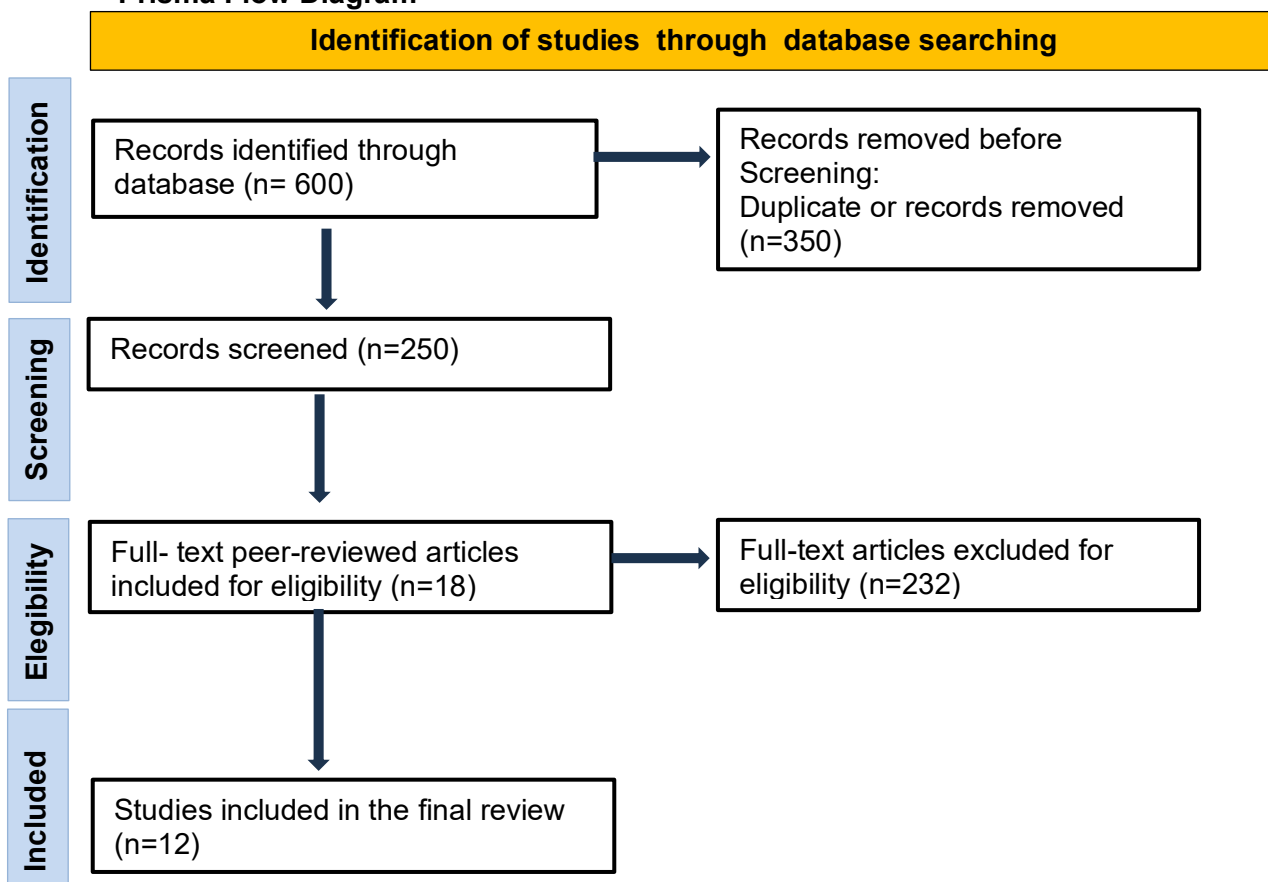


Figure 4. Prisma Flow Diagram illustrating the selection process of studies included in the literature review (developed by me,2025)

Fig. 4 The PRISMA flow diagram illustrates the systematic process researchers used to select studies that met the criteria for this review. The database search produced 600 results at the beginning of the process. The screening process started with 250 records, after discarding 350 duplicate and non-relevant search results. At this stage, a large number of studies were excluded because they did not meet the focus on early intervention, the age range, or the UK context. The research evaluated 18 full-text peer-reviewed articles for their eligibility. After applying strict inclusion and exclusion criteria for study design, population, relevance, and quality, 12 studies met the requirements and were included in the final review. The researchers based their findings on high-quality evidence from the UK because of the strict selection criteria.

These represent high-quality evidence on early intervention strategies in the UK and provide a balance of different approaches, including:

Applied Behaviour Analysis (ABA)

Speech and Language Therapy

Parent-mediated interventions

Play-based/naturalistic approaches

Policy and service delivery research

This selective sampling ensured both depth and diversity in the analysis.

3.5 Data Analysis

The study employed Thematic Analysis, following Braun and Clarke's (2006) six-step process:

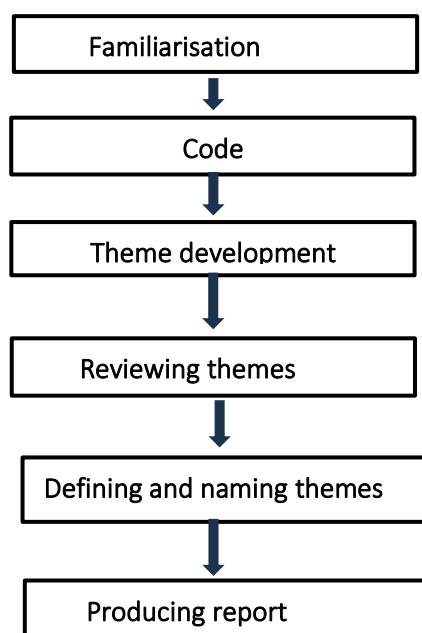


Figure 5. Thematic Analysis diagram, following Braun and Clarke's (2006) six-step process (created by the author)

1. Familiarisation: Reading and re-reading the selected studies.
2. Coding: Identifying significant patterns and findings (e.g., improvements in language, social interaction, parental involvement).
3. Theme development: Grouping codes into broader categories such as “communication outcomes”, “family role”, “policy gaps”.
4. Reviewing themes: Ensuring themes reflected the literature consistently.
5. Defining and naming themes: Refining categories for clarity.
6. Producing the report: Presenting findings in Chapter 4.

Fig. 4. This study used Thematic Analysis, based on Braun and Clarke’s (2006) six-step framework, to examine how early intervention strategies for Autism Spectrum Disorder (ASD) are presented in UK-based research. The research began with familiarisation, reading the selected studies multiple times to understand how each paper presented intervention models, service delivery methods, and developmental outcomes. The researchers used initial coding to identify patterns, which included communication benefits and family participation, service disparities, and policy effects. The researchers organised the collected data into broader categories during theme development to find recurring concepts across the literature. The reviewing themes stage allowed researchers to refine their developing themes by assessing their consistency with the study evidence and research objectives. The refinement process led to the development of defined themes, which were then named to create a structured thematic framework that shows developmental results, family and community strategies, and UK service delivery difficulties. The last stage of the research process required the authors to create the report, which combined the themes to explain how early intervention supports developmental advancement for autistic children in the UK setting.

Thematic analysis was chosen for its flexibility and suitability in synthesising qualitative data from multiple studies (Naeem et al., 2023).

3.6 Ethical Considerations

This dissertation is based on secondary data, meaning there was no direct involvement of human participants, and thus no ethical approval was required from the university.

Nevertheless, ethical standards were maintained by:

- Using only credible, peer-reviewed sources.
- The research included only peer-reviewed or academic journal articles of primary and

secondary research to ensure credibility (UK Statistics Authority, 2022)

- The authors received full recognition through UWTSD Harvard referencing. All the sources are paraphrased and supported by in-text citation and a complete reference list.
- The research maintains appropriate sensitivity when dealing with autism-related topics.
- Ethical approval was obtained from the supervisor.
- This research ensures academic integrity by maintaining the work's originality and avoiding plagiarism.

3.7 Limitations of the Methodology

Exclusion of Primary Data: The absence of interviews or surveys limits the ability to gain real-world insights from families and practitioners.

Geographic Focus: Restricting the study to UK-based literature may exclude relevant international findings.

Publication Bias: Journals often publish positive outcomes more frequently than null or negative results.

Sample Size: Limiting the review to 12 studies allows depth but may omit lesser-known research. Despite these limitations, the methodology remains appropriate for addressing the study's aim and objectives.

CHAPTER 4: RESULTS AND DISCUSSION

The systematic literature review results are presented in Chapter 4, where they are connected to the research objectives. The chapter describes the chosen studies before presenting essential research findings to establish thematic connections between developmental outcomes, family participation, multidisciplinary teamwork, policy obstacles, cultural elements, and broader system problems in UK early intervention systems.

Twelve peer-reviewed articles from the UK between 2016 and 2022 met the inclusion and exclusion criteria for this analysis. The research investigated early intervention methods for children with Autism Spectrum Disorder (ASD) between 0 and 8 years old through both systematic reviews and randomised controlled trials.

The selected studies receive a summary presentation in **Table 1**, which demonstrates their connection to research objectives and thematic analysis through their essential

characteristics and results.

4.1 Presentation of Selected Studies Included in the Review

Article Citation	Aim of study	Methods sample size and characteristics	Summary of main finding
Pickles <i>et al.</i> (2016)	Examine the long-term results of (PACT) Paediatric Autism Communication Therapy intervention	Longitudinal randomised controlled trial,(n=152) Children 2-4 Years in UK	Showed the significant impact on social communication growth and autism symptom reduction that continued for six years following the intervention
Green <i>et al.</i> (2017)	The evaluation process for early parent-mediated communication training needs assessment.	Randomised controlled trial; 146 children aged 2–6 years with ASD.	Indicated that parental training improved adaptive communication and reduced parental stress.
Grahame <i>et al.</i> (2021)	The evaluation system examines parent group interventions that follow a structured approach to treat restricted and repetitive behaviors.	Randomised controlled trial; 250 children aged 3-9 years and their families,UK-based	The program produced beneficial behavioral outcomes and economic efficiency during its operation in community environments.
Hasson (2022)	To explore how multidisciplinary collaboration within UK early years and educational settings influences the delivery and quality of early intervention for children with ASD	Qualitative study; interviews around UK in educational and early years professionals	The research demonstrates that the success of early intervention requires a solid multidisciplinary team approach but UK services face two main challenges which prevent sustained support delivery because of poor coordination and unequal service distribution.
Hodgson <i>et al.</i> (2022)	To evaluate the cost-effectiveness of early intensive (ABA)-based interventions for	Economic modelling study with a 15.5-year	The early intensive ABA interventions led to better results in adaptive behavior

	preschool autistic children compared with treatment as usual	time horizon; based on an individual-patient-data meta-analysis; compared early intensive ABA programmes vs treatment as usual (TAU) from a UK public sector perspective	and cognitive ability. The research indicates these interventions lack cost-effectiveness in the UK because they have not demonstrated enduring positive results.
Leadbitter <i>et al.</i> (2022)	To examine the effectiveness and cost-effectiveness of the Empower-Autism intervention compared to treatment-as-usual	Randomised controlled trial;196 parents of autistic children aged 2-15 years,based in UK	Findings show that structured, post-diagnostic support enhances family wellbeing and strengthens early-intervention pathways.
NICE (2021;2022)	To evaluated the updated national clinical guidelines which will help UK healthcare providers assess and diagnose autism in children and provide early support through evidence-based methods that maintain service consistency.	Evidence-based guideline developed through systematic review of research. No sample size. The project incorporates feedback from NHS medical staff and teaching professionals as well as social care workers and autistic people and their parents.	The UK faces three major obstacles to early intervention according to NICE which include extended waiting periods and uneven service distribution and insufficient staff numbers. The guidelines support family-centered care through evidence-based practices from multiple disciplines which focus on early detection and provide assistance during waiting periods and guarantee that health and education and social care services collaborate effectively.
Pollard <i>et</i>	To examine how local	Mixed-methods	The study demonstrates

<i>al. (2022)</i>	authority funding decisions and resource distribution and service organization affect autistic children's access to early intervention and support services throughout the UK.	study involving analysis of local authority policies and funding data, surveys and interviews with UK service providers.	that different local authority funding patterns result in varying early-intervention results throughout the United Kingdom. The regions with limited financial support and insufficient trained staff experienced longer delays for services and restricted access to care and inadequate support systems.
Randell <i>et al.</i> (2022)	To examines how well sensory integration therapy (SIT) works in terms of both medical results and monetary value when used instead of typical treatment methods for children with Autism Spectrum Disorder (ASD) and sensory processing disorders in the United Kingdom.	Randomised controlled trial (RCT) in the UK (Wales & England). Children aged approx. 4–11 years with a diagnosis of ASD and sensory processing difficulties.	The therapy failed to demonstrate better results than standard care in treating behavioral and functional issues and improving quality of life while its cost-effectiveness for broad UK early intervention service use remains uncertain.
Crane <i>et al.</i> (2021)	To explore the experiences of autistic children and their families when accessing autism assessment and early support services in the UK, and to identify key barriers within the diagnostic and early-intervention pathway.	Sample: +1,500 parents, caregivers and autistic individuals. Mixed-methods design: quantitative survey + qualitative open responses.	The research demonstrates that UK services deliver services with inconsistent quality and limited accessibility which prevents autistic children from receiving timely support.
NHS Long Term Plan 2019	To examine the document outlines national priorities for enhancing English healthcare services through	National policy document developed by NHS England. The	The plan implements methods to decrease diagnosis delays and enhance early intervention

	a 10-year plan which focuses on early detection and diagnosis and support systems for children with autism and neurodevelopmental disorders.	research draws its information from professional consultations with clinicians and policymakers and service leaders and families and advocacy organizations. No sample size.	routes and boost funding for community-based services and enhance NHS and education and social care system connectivity. The implementation of these programs faces challenges because worker shortages together with different local funding levels result in varying outcomes between different areas.
Pellicanno (2021)	The research on autism needs to transition toward a neurodiversity-based method which involves autistic people as active participants to determine research directions	Narrative research review; no sample size; analysis of UK and international autism literature.	Highlights the need for autistic-led, long-term and participatory research. The author criticizes deficit-based models while demonstrating how current systems produce social inequalities.

Table 1 Presentation of Selected Studies Included in the Review. (made by oneself)

Table 1. This table summarises the aims, methodological characteristics and main findings of the UK-based studies included in this review.

4.2 Thematic Analysis:

The research data underwent thematic analysis, which produced three primary results:

1. Developmental and Behavioural Outcomes
2. Family and Community-Based Approaches
3. Multidisciplinary Collaboration and Professional Practice
4. Systemic Barriers and Policy Gaps
5. Cultural Adaptation and Inclusion in Early Intervention
6. The Impact of early intervention strategies and frameworks on results
7. Challenges, financial effects and Need for Further long-term research

4.2.1 Theme 1: Early Development and Behavioural Outcomes

Theme	Description	Key Source
Early developmental and behavioural Outcomes	Early intervention among children with ASD contributes to improving communication, cognitive development and adaptive functioning.	Pickles <i>et al.</i> (2016) Hodgson <i>et al.</i> (2022) Randell <i>et al.</i> (2022) NICE(2021;2022)

Interpretation:

Pickles *et al.* (2016) presented longitudinal data demonstrating that the effects of early interventions may persist for up to 6 years after the intervention and indicating the long-term effectiveness of timely, structured interventions in autism-related cases (Pickles *et al.*, 2016).

Hodgson *et al.* (2022) assessed the economic value of UK-based Applied Behaviour Analysis (ABA) intensive behavioural interventions. The research demonstrated that ABA interventions produce enduring advantages for children with ASD because they improve their communication skills, social abilities, and daily life competencies, although they need expensive initial investments. The research results show that UK healthcare organisations need to maintain their structured behavioural programs to achieve permanent developmental progress (Hodgson *et al.*, 2022). The study by **Randell *et al.* (2022)** showed that sensory integration therapy, facilitated by occupational therapists, can improve sensory responsiveness, attention, and daily functioning in children with ASD. The SenITA, which was carried out in the context of the UK NHS and the school environments, was found to be valid in terms of the fact that early intervention into sensory facilitated behavioural, developmental benefits and, as such, sensory-based strategies should be included in the framework of early intervention strategies (Randell *et al.* 2022). The National Institute for Health and Care Excellence (**NICE, 2021; 2022**) supports this evidence through policy frameworks that promote rapid autism detection, immediate evaluation, and evidence-based treatment coordination for children under 19. The NICE guidelines support a family-based treatment approach that unites multiple professional teams to deliver equal access to therapy approaches which focus on communication skills, sensory processing, and behavioural adjustment. The integration of these national standards ensures that early intervention programmes are not only practical but also sustainable within the UK's public health and educational systems. Overall, the convergence of research and policy highlights that early developmental intervention, when delivered in line with NICE guidance, improves long-term behavioural and adaptive outcomes, while promoting equity and consistency in autism care across the United Kingdom.

4.2.2 Theme 2: Family role and community-based Intervention

Theme	Description	Key Sources
Family role and community- based Intervention	Family involvement caregivers' participation, parent well-being and the parental mediated therapy model contributed to children development and behavioural progress.	Pickles <i>et al.</i> (2016) Green <i>et al.</i> (2017) Grahame <i>et al.</i> (2021) Leadbitter <i>et al.</i> (2022)

Interpretation:

Research shows that family participation stands as a crucial factor which determines the success rate of early intervention programs for children with ASD. **Pickles *et al.* (2016)** provided robust longitudinal evidence from the PACT trial showing that when parents are trained to deliver social-communication therapy at home, children demonstrate sustained improvements in communication and adaptive behaviour for up to six years post-intervention. The research indicates that UK early-intervention services should allocate their funding to support caregiver empowerment, as this approach yields enduring benefits for therapeutic delivery (Pickles *et al.*, 2016). **Green *et al.* (2017)** showed that parents who underwent structured training on their child's needs achieved better infant developmental outcomes while experiencing reduced parental stress. The study proved that parent-led interventions work well in the UK because they help children develop better adaptive abilities (Green *et al.*, 2017). The article by **Leadbitter *et al.* (2022)** offers strong evidence within the United Kingdom using the REACH-ASD randomised controlled trial, which showed that post-diagnostic psychoeducation with Acceptance and Commitment Therapy (ACT) positively impacted parental mental health, family adjustment, and utilisation of autism services. This contributes to the emerging UK focus on preparing parents as agents of change in early intervention (Leadbitter *et al.*, 2022). **Grahame *et al.* (2021)** further strengthened the evidence base on parent-mediated interventions by assessing a structured parent group intervention targeting restricted and repetitive behaviours. The research incorporates behavioural concepts within available community-based settings, revealing the transition to scaled, cost-efficient family-based interventions in the UK. Its two-fold interest in clinical and financial results demonstrates that group-based parent programmes can achieve both therapeutic outcomes and sustainability within the public services framework. This confirms that family and community involvement play a key role in providing long-term, cost-effective early intervention strategies. The parent-mediated methods, in which caregivers are taught

to provide therapeutic strategies to children as part of their everyday lives, offer long-term benefits due to their continuity and naturalisticity. There is continued indication that interventions at the child and family level are more practical in the attainment of developmental and behavioural progress (Grahame *et al.*, 2021)

Recent research by Green *et al.* (2022) and Gentles *et al.* (2024) suggests that the success of early intervention programs depends on caregivers' emotional state and empowerment level (2024). Research shows that parents who participate in structured psychoeducation programs with ongoing mentorship develop stronger skills to work as co-therapists, creating responsive emotional environments at home that enhance children's social and communication skills. The UK Early Intervention Framework now includes collaborative goal-setting between professionals and families, which research shows leads to greater family involvement and lower program dropout rates, helping achieve sustainable results.

4.2.3 Theme 3: Multidisciplinary collaboration and Professional Practice

Themes	Description	Key Sources
Multidisciplinary collaboration and Professional Practice	Effective outcomes of early intervention require multidisciplinary collaboration and interdisciplinary teamwork within the UK educational and healthcare System.	Hasson (2022) Randell <i>et al.</i> (2022) Green <i>et al.</i> (2022) Pollard <i>et al.</i> (2022)

Interpretation:

One of the consistent themes in the UK literature is the value of interdisciplinary teamwork in providing effective early intervention. According to **Hasson (2022)**, a standard cross-professional model can lead to effective communication and planning among therapists, educators, and families, thus leading to better outcomes for children with ASD (Hasson, 2022). Indeed, the SenITA trial (**Pollard et al., 2022**) represented how occupational therapists, psychologists, and educators can collaborate within the context of a sensory integration programme to resolve behavioural issues. All these results underscore the point that professional integration is not only positive but also critical towards the realisation of the objectives of early intervention models in the education and health fields of the UK (Pollard *et al.*, 2022).

The PACT-G RCT by **Green *et al.* (2022)** is an essential contribution to the UK-based early intervention landscape, demonstrating that a multi-setting approach involving collaboration among families, educators, and clinical professionals can expedite change in children with severe autism's social communication. Participating in the study of shared professional responsibility and the consistency of communication strategies across different settings, the study extends the PACT model into the school and household settings. It provides strong support for the idea that multidisciplinary, context-based interventions can be implemented to achieve success in the UK education and healthcare systems (Green *et al.*, 2022).

Randell *et al.* (2022) demonstrated intensive interdisciplinary collaboration among therapists, educators, and families in the provision of sensory interventions across NHS and educational settings. The research shows that the consistency of interventions and the integration of services are enhanced by coordinated professional practice, which strengthens the role of team-based practices in early ASD support (Randell *et al.*, 2022).

Besides, new research in the UK and other countries indicates that multidisciplinary collaboration not only enhances the outcomes of the interventions but also encourages professional learning and reflective practice. Joint planning among educators, speech and language therapists, occupational therapists, and psychologists improves therapists' understanding of children's developmental profiles. The co-assessment and shared observation techniques make the goals holistic and child-centred, minimising duplication and fragmentation of services (**Green *et al.*, 2022**).

This co-operation has recently been formalised through frameworks such as the Integrated Care.

Systems (NHS England, 2023), which connect health, education, and social care providers through local networks. This framework facilitates more efficient referral routes and the timely availability of neurodevelopmental requirements. Also, the practice of colocating services in schools and community hubs can enable multidisciplinary teams to access families in a single location, minimising obstacles to participation and enhancing continuity of care. Collectively, these models demonstrate how integrated professional ecosystems improve service delivery and family trust in early intervention systems.

4.2.4 Theme 4: Systemic Barriers and Policy Gaps

Themes	Description	Key Sources
Systemic Barriers and Policy Gaps	Key barriers exist in the UK health system for early intervention for targeted therapies , involving disparities in resources, long diagnosis waiting times, and unequal access to early interventions services.	Pickles (2016) Crane et al. (2021) Pellicanno (2021)

Interpretation:

According to the study by **Pickles et al. (2016)**, the six-year follow-up of the Preschool Autism Communication Trial (PACT) revealed that the benefits of early intervention, including positive social-communication outcomes, were long-lasting. Still, many families experienced challenges in sustaining these outcomes due to inconsistent post-trial support and service fragmentation. The paper has identified one major systemic challenge in the UK: the restricted long-term provision and unequal resources of local authorities, which act as a barrier to implementing research-based interventions in routine practice. This fact supports the need for policy structures that guarantee the continuity of care and equal access to early intervention services throughout the country (Pickles *et al.*, 2016). Despite the UK's achievements in implementing early intervention strategies, systemic and policy limitations remain. According to **Crane et al. (2021)**, the obstacle to timely access support includes delays in diagnostic pathways and differences in service provision across local authorities (Crane *et al.*, 2021). **Pellicano et al. (2021)** provided one of the most comprehensive analyses of the persistent gaps between autism policy intentions and their implementation within public services in England. The research used qualitative methods to examine how autistic people, their families, and professionals experience the current system, revealing that national strategies have not solved the problems of broken services, insufficient funding, and weak connections between organisations. The research indicates that diagnostic and resource issues alone do not fully explain all inequalities, as local authorities lack sufficient transparency and accountability systems. The research participants found that official statements about inclusion and early support services do not translate into actual service delivery, particularly in low-income communities. The research indicates that the UK requires policy changes to create uniform, accessible, sustainable systems that would provide ongoing early intervention support to families, rather than the current short-term, fragmented

assistance (Pellicano *et al.* 2021).

The National Autistic Society (2023) and APPGA (2022) show that diagnostic waiting times and post-diagnostic support are still uneven. Diagnostic waiting times are longer in rural areas. Post-diagnostic support is weaker in deprived and rural areas. The NICE NG170 recommendations call for care. Workforce shortages, limited funding, and varying regional policies keep the NICE NG170 guidance from being applied the same way everywhere. The recent NHS Long Term Plan pilots have built autism hubs. I think the autism hubs are trying to fill the gaps. Early evaluations indicate that the NHS Long Term Plan pilots need funding and cross-sector collaboration to enable a rollout that makes the support fair and on time (NHS England, 2024).

4.2.5 Theme 5: Cultural Adaptation and Inclusion in Early Intervention

Theme	Description	Key Sources
Cultural Adaptation and Inclusion in Early Intervention	Early intervention programs need to recognize cultural and linguistic differences because this approach leads to better family participation and child development outcomes and higher participation rates.	Pickles <i>et al.</i> (2016) Green <i>et al.</i> (2017) Crane <i>et al.</i> (2021) Leadbitter <i>et al.</i> (2022)

Interpretation:

Research conducted in the UK demonstrates that cultural adaptation is a key factor that enhances the success rates of early intervention programs for autistic children. The studies by **Green *et al.* (2017)** and **Pickles *et al.* (2016)** show that when parent-mediated programs are adapted to match family cultural values, language requirements, and communication methods, parents become more consistent in their involvement and show greater confidence in using strategies. **Leadbitter *et al.* (2022)** demonstrate that minority family members achieve lower parental stress levels and improved therapy participation through culturally suitable psychoeducation. However, studies including **Crane *et al.* (2021)** demonstrate that autism diagnosis and service access remain challenging in the UK because of cultural differences and social prejudices and insufficient knowledge about autism. The research shows that intervention models which honour cultural differences will reduce social inequalities, increase family involvement, and provide early intervention services to all communities.

4.2.6 Theme 6: The Impact of early intervention strategies and frameworks on results

Theme	Description	Key sources
The Impact of early intervention strategies and frameworks on results	The implementation of early intervention programs becomes more effective when they follow established national guidelines and use structured approaches with consistent methods and family-centered approaches.	Green <i>et al.</i> (2017); NHS Long Term Plan (2019); NICE (2021); Hasson (2022); Leadbitter <i>et al.</i> (2022);

Interpretation:

Research shows that early intervention success depends on the organisation of intervention methods and their backing by national guidelines. Evidence from **Green et al. (2017)** and **Leadbitter et al. (2022)** demonstrates that structured parent-mediated programs create quantifiable enhancements in communication skills and behavioural development and parent-child relationships when parents receive consistent delivery of these programs. **Grahame et al. (2021)** also demonstrate that community-based group interventions produce positive behavioural outcomes when they follow clear, standardised frameworks. **The NICE** clinical guidelines, together with the **NHS Long Term Plan (2019)**, function as key policy frameworks which direct service delivery throughout the UK. The documents focus on three main points, which include early detection, multidisciplinary teamwork and standardised treatment protocols. The frameworks produce different results across different areas because funding amounts and staff numbers between regions differ, and program delivery approaches differ from one area to another. The degree to which early intervention helps children and families depends on this variation, which shows the requirement for standardised national implementation and enduring support systems.

4.5.7 Theme 7: Challenges, financial effects and Need for Further long-term research (geographic challenge)

Theme	Description	Key souces
Challenges, financial effects and Need for Further long-term research	Early intervention in the UK is affected geographic inequality, resource limitations, and inconsistent funding. Research studies need to continue for an extended period to determine both long-term results and the economic value of this intervention.	Crane <i>et al.</i> (2021); Pellicano(2021) NICE(2021); Hasson (2022) Pollard et al. (2022)

Interpretation:

Research evidence shows that the UK system faces multiple obstacles which prevent early intervention programs from achieving their established positive outcomes. **Crane et al.'s (2021)** study shows that families experience longer than expected service delays and inconsistent service availability, which prevents them from getting recommended early developmental support. The study shows that where people live determines how fast and how intensely emergency services respond, which leads to unequal treatment between different communities across the country. Financial and resource-related constraints also create barriers. **Pollard et al. (2022), NICE (2021)** report from the Royal College of Psychiatrists show that the UK faces three main issues: a shortage of trained staff, insufficient specialist services and funding that varies between local authorities. The obstacles mentioned in the text reduce service organisations' capacity to deliver continuous multidisciplinary early intervention, which remains essential for children's long-term development. The research period of autistic-informed studies faces a significant obstacle because of insufficient extended study durations (**Pellicano, 2021**). The majority of evaluation methods concentrate on immediate outcomes, which results in major knowledge deficits about how early intervention affects children from preschool through adolescence and into their adult years. The research shows that ongoing financial support is needed to understand the complete long-term effects of early intervention techniques used in the UK. The research shows that early intervention works well, but structural barriers, together with financial constraints, prevent its widespread access and create problems for sustaining continuous delivery and long-term stability across the UK.

4.6 Discussion

The systematic literature review reveals that early intervention methods deliver substantial benefits for children with Autism Spectrum Disorder (ASD) between 0–8 years old in the UK by enhancing their developmental progress, behavioural management and family stability. The research shows that early intervention programs with organised delivery systems produce major positive effects on social communication, adaptive functioning, and emotional development (Pickles et al. 2016; Randell et al. 2022). The research results validate the first research goal because they demonstrate that early developmental results achieve their best improvement during the most critical neurodevelopmental periods.

Family involvement proved to be the main factor which led to successful intervention outcomes. The research by Green et al. (2017), Leadbitter et al. (2022) and Koller et al. (2022) shows that when parents receive training to work as co-therapists with their children, it leads to better child communication and lower parental stress, which results in a better home learning environment. The second objective is supported by this section because it demonstrates how family and community structures maintain early intervention results. The delivery of programs through community-based and group initiatives shows evidence of being cost-efficient, according to Grahame et al. The National Institute for Health and Care Excellence (NICE) of the UK published a 2021 report, which emphasised that practice models in the UK require both scalability and sustainability.

The review also highlights the importance of multidisciplinary collaboration. Studies such as Green et al. (2022) and Pollard et al. (2022) show that when health, education, and social care professionals coordinate strategies, intervention becomes more consistent across home, school, and clinical settings. This supports the third objective by demonstrating that professional integration enhances both quality and continuity of services, improving developmental outcomes and family satisfaction.

Despite clear evidence supporting early intervention, several systemic barriers persist in the UK. Long waiting times, inconsistent regional service availability, and fragmented post-diagnostic support continue to delay access to essential services (Crane et al., 2021; Pellicano et al., 2021). These inequalities indicate gaps between national policy intentions, such as the NHS Long Term Plan (2019) and actual service implementation. This aligns with the third and fourth objectives by showing that geographic and socioeconomic disparities reduce the effectiveness of early intervention strategies across the country.

The process of cultural and linguistic inclusion has not achieved its full potential. Research

by Leadbitter et al. (2010) and others demonstrates that culturally sensitive approaches can be beneficial (Leadbitter et al., 2010). The research by Crane et al. (2022) indicates that minority families experience discrimination and face barriers to information access, and they join at reduced levels. 2021). The case shows that intervention systems need to understand cultural differences to reduce social inequality and prevent family social isolation. The research shows a significant lack of studies that follow up on results over long periods. Research studies mainly focus on short-term results, but there is limited investigation into how these outcomes develop throughout adolescence and into adulthood. The researchers cannot determine the complete financial value and lasting effects of the program because they did not collect enough data (Pellicano, 2021). Future UK-based research should focus on longitudinal studies to build a better understanding of developmental patterns, which will then guide national service development.

The research findings show that early intervention programs reach their highest success rates through full system coordination, which requires equal attention to cultural sensitivity, early parent involvement, and specific intervention methods.

4.7 Strengths of This Research

The research presents multiple solid results which confirm the exactness and importance of its experimental findings. It also employs systematic literature review methods, including specific search protocols and particular inclusion and exclusion criteria, to achieve methodological rigour and transparency. The review used peer-reviewed UK studies and national guidelines and policy documents to establish evidence credibility and enhance its applicability for UK early-intervention practice. Braun and Clarke's (2006) Thematic Analysis method was developed to identify patterns in studies through a structured analysis process. The study combined behavioural and cognitive theories with ecological and sociocultural approaches to study different intervention models across various settings. The literature review achieves its main strength through its examination of current problems, including social and geographic disparities, family involvement, team-based work, and extended program effects. The research delivers a comprehensive assessment by examining current national priorities and service delivery obstacles. The study followed ethical standards and academic protocols through its use of secondary data sources, complete Harvard UWTSD style citations, and protection of participant confidentiality.

4.8 Limitations of the research

This review has several limitations and considers only UK-based peer-reviewed articles, limiting the number of studies available and potentially omitting significant international findings. The majority of the reviewed studies focused on short-term outcomes, preventing researchers from assessing the long-term effects of early intervention programs. The studies used different research approaches, sample sizes, and intervention methods, which made direct analysis across them difficult. The review relies on published evidence, which makes it susceptible to publication bias, as studies with positive results tend to be published more frequently.

CHAPTER 5: RECOMMENDATIONS AND CONCLUSION

The review presents its main results in Chapter 5, which includes practice-based recommendations, and ends with policy and service implications for early intervention and future research needs in the UK.

5.1 Summary of the main points

The study investigates how early intervention methods affect children with Autism Spectrum Disorder (ASD) between 0 and 8 years old in the United Kingdom. Research shows that early intervention achieves its best results through evidence-based family-centred programs which use structured methods.

The studies by Green et al. (2017), Leadbitter et al. (2022), and Pickles et al. (Research from 2016) show that children who join intervention programs with their parents achieve better results in communication, social skills, and behavioural development.

The study showed that early support access remained unevenly distributed across population groups. The UK struggles to deliver effective early intervention services due to delayed service delivery, inconsistent service quality, and insufficiently trained professionals working across different areas of the country. The way families interact with early support services depends on their cultural background and language, which requires service providers to adopt culturally sensitive approaches.

The NICE guidelines (2021) and SEND Code of Practice (2015) serve as policy frameworks which establish specific guidelines for early detection and team-based work. Local authorities achieve service quality through their different operational methods for program execution.

The research findings demonstrated that early intervention success depends on delivering services consistently and in sync, with adequate financial support, trained staff, and

extended assessment periods.

5.2 Recommendations

5.2.1 Recommendations based on Practice

Strengthen multidisciplinary collaboration.

The health sector requires partnership with education and social care institutions to achieve complete early intervention support through unified action (NHS Long Term Plan, 2019; NICE, 2021)

The system needs to reduce patient wait times and provide preliminary diagnostic assistance.

The system needs to offer families early access to guidance and support services before they begin their official assessment process. (Crane et al., 2021; Han et al., 2023)

Increase funding and workforce capacity.

The healthcare system requires two main objectives to solve specialist staff shortages and service availability gaps between different regions (Pollard et al.2022; NICE, 2021)

Enhance professional training.

The program requires training about autism intervention methods and cultural sensitivity education to create an environment which welcomes early intervention services for all (Pollard et al.,2022; NICE, 2021)

The programs need to concentrate on family-based and parent-led intervention methods.

The program should expand its reach to provide PACT and REACH-ASD and other evidence-based parent-focused interventions to more families(Leadbitter,2022; Crane et al., 2021)

The national guidelines need to be followed consistently

Align early intervention services with NICE standards and the SEND Code of Practice across all UK regions (NICE,2021)

Improve the cultural adaptation of services

The organisation needs to provide language support and culturally sensitive materials and flexible learning approaches to help families from diverse cultural backgrounds (Pickles et al. 2016; Crane et al. 2021)

The community needs more support programs which should run their operations from within family homes.

Local communities should offer more drop-in sessions, parenting workshops, support groups and play-based early-years programmes that are easily accessible without referral.

Community-based support enables families to participate from the beginning, reducing their stress levels and helping them identify developmental needs before they become severe.

The availability of universal early-years and community resources enables families to access support services before their child receives a formal diagnosis or specialist care (Autism Education Trust, 2022).

The organisation requires better accessibility through clear communication channels and support resources.

Early-intervention services need to provide families with information that is both understandable and accessible, using visual aids, translated materials, plain-language summaries, and parent-friendly guidance. Early intervention becomes more accessible to families when systems become simpler to understand, and parents receive essential help from key workers who manage their information and enable them to make decisions (NHS England, 2023).

5.3 CONCLUSION

The research shows that early intervention methods help children with Autism Spectrum Disorder in the UK to achieve better developmental, behavioural, and social results. Evidence consistently shows that structured, family-centred and collaborative approaches can significantly improve communication and adaptive functioning. The advantages of early intervention programs become available to all families at the same time.

The delivery of adequate support continues to face challenges due to systemic issues, including extended wait times, uneven service delivery, insufficient staffing, and cultural differences. The research shows that national unity requires improvement. Still, funding and longer research periods need to be increased to create enduring early intervention programs which will reach all communities on an equal basis.

The UK will achieve better early intervention effectiveness through enhanced coordination and improved practitioner training, and inclusive practice implementation. The support system for autistic children needs to be both immediate and of high quality because it produces better developmental results and long-term health advantages for families and their communities.

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APPENDICES

The appendices include additional methodological information that supports the systematic review and thematic analysis through visual aids. The supplementary materials ensure transparency while allowing for replication and understanding, but they do not influence the main content of the dissertation.

Appendix A: detailed search strategy

("Autism Spectrum Disorder" OR "ASD") AND ("early intervention" OR "early support" OR "early childhood") AND ("UK" OR "United Kingdom")

("Autism" AND "0–8 years" AND "intervention strategies")

("ASD" AND "multidisciplinary approach" AND "family involvement")

Keywords

Autism, spectrum, disorder, ASD, frameworks, family, strategies, community support, early intervention, multidisciplinary approach, health inequalities, UK, outcomes, support.

Appendix B: Inclusion and exclusion criteria

Inclusion criteria:

- Studies on children aged 0–8 years diagnosed with ASD.
- Publications between 2015 to 2025.
- Conducted in the UK.
- Peer-reviewed journal articles, government reports, or policy documents.
- English language only.

Exclusion criteria:

- Studies focused on adolescents or adults.
- Articles published before 2015.
- Non-academic or non-peer-reviewed sources (e.g., blogs, magazines).
- Publications in languages other than English.

Appendix C: Prisma Flow Diagram

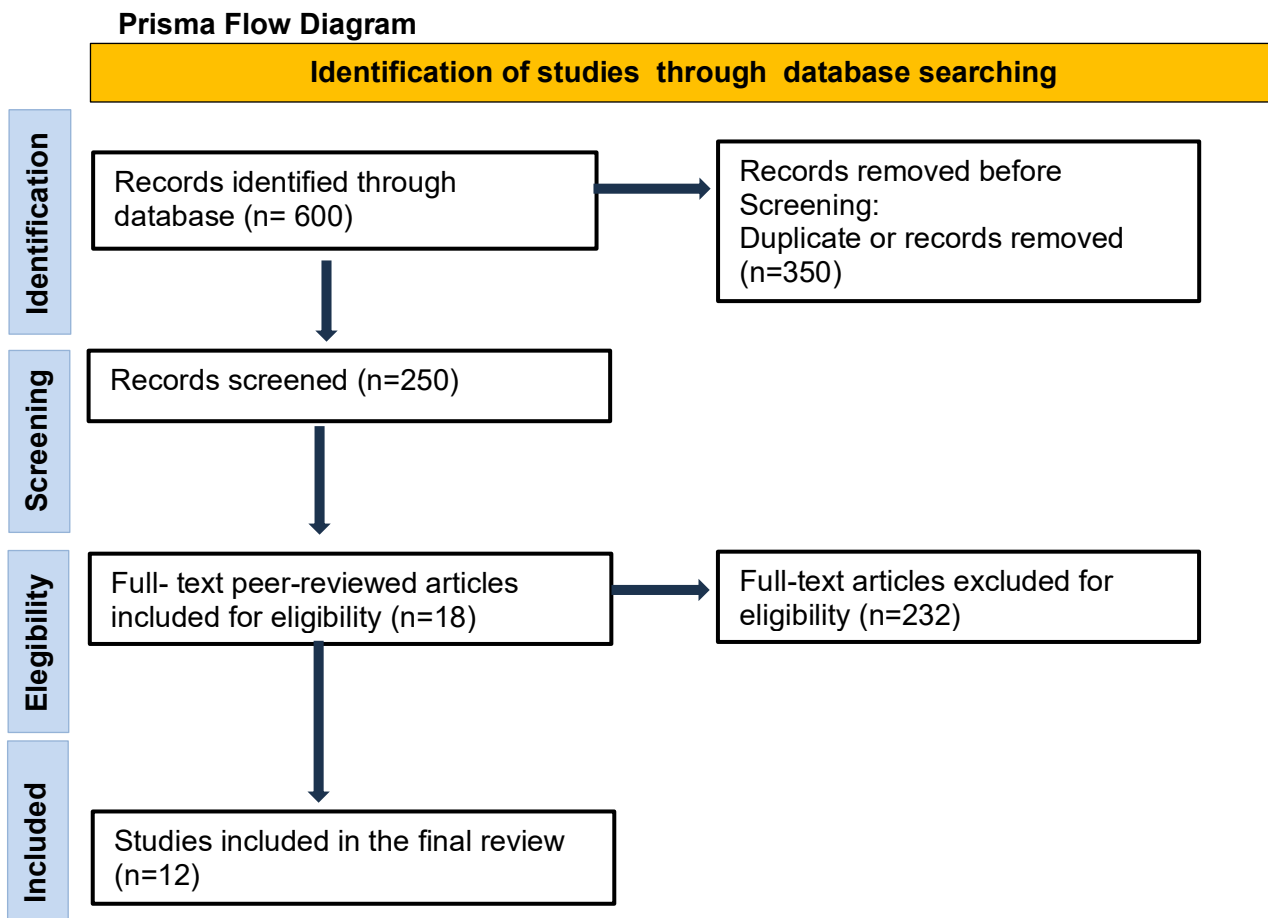


Figure 4. Prisma Flow Diagram illustrating the selection process of studies included in the literature review (developed by me,2025).

Appendix C: Thematic Analysis Diagram

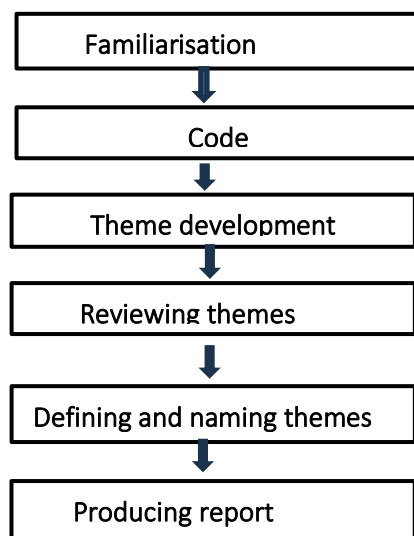


Figure 5. Thematic Analysis diagram, following Braun and Clarke's (2006) six-step process (created by the author).

Appendix C: Summary of Selected Studies included in the Review

Article Citation	Aim of study	Methods sample size and characteristics	Summary of main finding
Pickles <i>et al.</i> (2016)	Examine the long-term results of (PACT) Paediatric Autism Communication Therapy intervention	Longitudinal randomised controlled trial,(n=152) Children 2-4 Years in UK	Showed the significant impact on social communication growth and autism symptom reduction that continued for six years following the intervention
Green <i>et al.</i> (2017)	The evaluation process for early parent-mediated communication training needs assessment.	Randomised controlled trial; 146 children aged 2–6 years with ASD.	Indicated that parental training improved adaptive communication and reduced parental stress.
Grahame <i>et al.</i> (2021)	The evaluation system examines parent group interventions that follow a structured approach to treat restricted and repetitive behaviors.	Randomised controlled trial; 250 children aged 3-9 years and their families,UK-based	The program produced beneficial behavioral outcomes and economic efficiency during its operation in community environments.
Hasson (2022)	To explore how multidisciplinary collaboration within UK early years and educational settings influences the delivery and quality of early intervention for children with ASD	Qualitative study; interviews around UK in educational and early years professionals	The research demonstrates that the success of early intervention requires a solid multidisciplinary team approach but UK services face two main challenges which prevent sustained support delivery because of poor coordination and unequal service distribution.
Hodgson <i>et al.</i> (2022)	To evaluate the cost-effectiveness of early intensive (ABA)-based interventions for	Economic modelling study with a 15.5-year	The early intensive ABA interventions led to better results in adaptive behavior

	preschool autistic children compared with treatment as usual	time horizon; based on an individual-patient-data meta-analysis; compared early intensive ABA programmes vs treatment as usual (TAU) from a UK public sector perspective	and cognitive ability. The research indicates these interventions lack cost-effectiveness in the UK because they have not demonstrated enduring positive results.
Leadbitter <i>et al.</i> (2022)	To examine the effectiveness and cost-effectiveness of the Empower-Autism intervention compared to treatment-as-usual	Randomised controlled trial;196 parents of autistic children aged 2-15 years,based in UK	Findings show that structured, post-diagnostic support enhances family wellbeing and strengthens early-intervention pathways.
NICE (2021;2022)	To evaluated the updated national clinical guidelines which will help UK healthcare providers assess and diagnose autism in children and provide early support through evidence-based methods that maintain service consistency.	Evidence-based guideline developed through systematic review of research. No sample size. The project incorporates feedback from NHS medical staff and teaching professionals as well as social care workers and autistic people and their parents.	The UK faces three major obstacles to early intervention according to NICE which include extended waiting periods and uneven service distribution and insufficient staff numbers. The guidelines support family-centered care through evidence-based practices from multiple disciplines which focus on early detection and provide assistance during waiting periods and guarantee that health and education and social care services collaborate effectively.
Pollard <i>et</i>	To examine how local	Mixed-methods	The study demonstrates

<i>al. (2022)</i>	authority funding decisions and resource distribution and service organization affect autistic children's access to early intervention and support services throughout the UK.	study involving analysis of local authority policies and funding data, surveys and interviews with UK service providers.	that different local authority funding patterns result in varying early-intervention results throughout the United Kingdom. The regions with limited financial support and insufficient trained staff experienced longer delays for services and restricted access to care and inadequate support systems.
Randell <i>et al.</i> (2022)	To examines how well sensory integration therapy (SIT) works in terms of both medical results and monetary value when used instead of typical treatment methods for children with Autism Spectrum Disorder (ASD) and sensory processing disorders in the United Kingdom.	Randomised controlled trial (RCT) in the UK (Wales & England). Children aged approx. 4–11 years with a diagnosis of ASD and sensory processing difficulties.	The therapy failed to demonstrate better results than standard care in treating behavioral and functional issues and improving quality of life while its cost-effectiveness for broad UK early intervention service use remains uncertain.
Crane <i>et al.</i> (2021)	To explore the experiences of autistic children and their families when accessing autism assessment and early support services in the UK, and to identify key barriers within the diagnostic and early-intervention pathway.	Sample: +1,500 parents, caregivers and autistic individuals. Mixed-methods design: quantitative survey + qualitative open responses.	The research demonstrates that UK services deliver services with inconsistent quality and limited accessibility which prevents autistic children from receiving timely support.
NHS Long Term Plan 2019	To examine the document outlines national priorities for enhancing English healthcare services through	National policy document developed by NHS England. The	The plan implements methods to decrease diagnosis delays and enhance early intervention

	a 10-year plan which focuses on early detection and diagnosis and support systems for children with autism and neurodevelopmental disorders.	research draws its information from professional consultations with clinicians and policymakers and service leaders and families and advocacy organizations. No sample size.	routes and boost funding for community-based services and enhance NHS and education and social care system connectivity. The implementation of these programs faces challenges because worker shortages together with different local funding levels result in varying outcomes between different areas.
Pellicanno (2021)	The research on autism needs to transition toward a neurodiversity-based method which involves autistic people as active participants to determine research directions	Narrative research review; no sample size; analysis of UK and international autism literature.	Highlights the need for autistic-led, long-term and participatory research. The author criticizes deficit-based models while demonstrating how current systems produce social inequalities.

Table 2 Presentation of Selected Studies Included in the Review. (made by oneself)

Appendix F: The integrated Ecosystem model of early intervention effectiveness

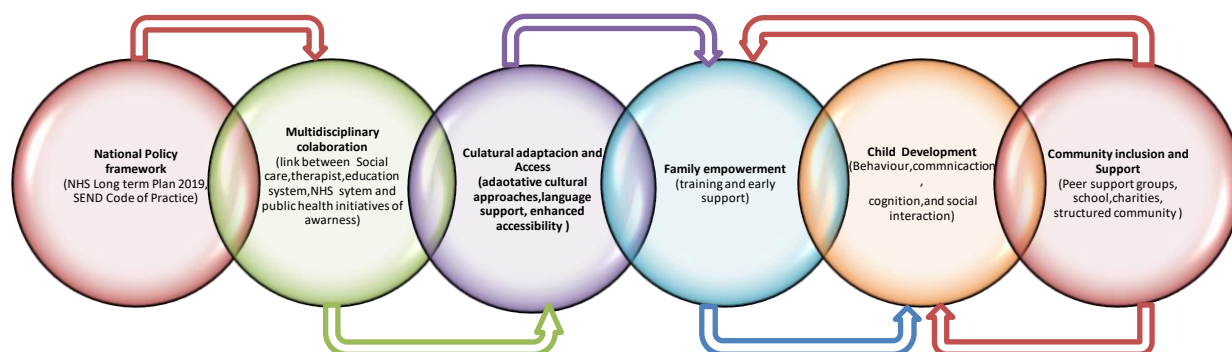


Figure 6 Integrated Ecosystem Model of Early Intervention Effectiveness in the UK (made by own, 2025)

The Integrated Ecosystem Model of Early Intervention Effectiveness in the UK (Author, 2025) is shown in Figure F and was developed from this systematic review. The model shows how early intervention results emerge from the combination of national policy guidelines with team-based work, culturally appropriate service entry, family participation, and community participation that surrounds the child receiving care. The model shows that successful early intervention requires more than individual therapeutic methods; it requires a coordinated system among health services, education services, and social care services to provide uniform support that focuses on families and achieves optimal developmental outcomes for autistic children.