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Parental attitudes and vaccine hesitancy related to the MMR vaccine in Sweden and the United Kingdom; a scoping review

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VÄSTRA GÖTALANDSREGIONEN

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VÄSTRA GÖTALANDSREGIONEN

Abstract

Background

Parental agency is a primary determinant of childhood immunisation trajectories. Despite a strong scientific consensus regarding vaccine safety, the measles-mumps-rubella (MMR) vaccine remains a focal point of sociopolitical controversy, with persistent concerns about a perceived association with autism shaping parent decision-making frameworks.

Aim

To conduct a scoping review to systematically map and synthesise the existing literature on parental attitudes and vaccine hesitancy towards MMR vaccine in Sweden and the United Kingdom, and to identify patterns, determinants, and gaps in the current research base.

Method

A scoping review was conducted to systematically map and synthesise literature examining parental attitudes and vaccine hesitancy related to MMR vaccination in Sweden and the United Kingdom. A total of seven studies, comprising of qualitative, mixed methods and survey-based designs were included using a narrative synthesis approach to identify cross national patterns and determinants of vaccine hesitancy.

Results

Five thematic clusters emerged: (1) perceived safety and risk belief calculus, (2) trust and mistrust in healthcare professionals and public institutions, (3) sociocultural and community norms, (4) information, media influence, and (5) structural/logistical barriers to vaccination access.

Conclusion

Parental decision-making regarding MMR vaccination is multifactorial and context-dependent. Addressing vaccine hesitancy requires multifaceted strategies that focus on trust building, effective and culturally sensitive communication, and the reduction of structural barriers to vaccination.

Keywords;

MMR vaccination, vaccine hesitancy, parental attitudes, decision-making, Sweden, United Kingdom.

Background

The measles, mumps and rubella (MMR) vaccine contains live, attenuated viruses that stimulate the immune system to produce protective antibodies against highly contagious diseases (1). Maintaining high vaccination coverage is essential to achieve herd immunity, with approximately 95% uptake required to prevent sustained measles transmission (2). When vaccination coverage falls below this threshold, the risk of outbreaks increases due to gaps in population immunity (3).

Sweden and the United Kingdom (UK) were selected because they represent two different vaccination contexts within Europe, with differences in vaccination coverage, public trust, and patterns of vaccine hesitancy. Despite the availability of effective vaccines, variations in vaccination coverage and increasing vaccine hesitancy remain a significant public health concern (4).

In both countries, national oversight of vaccination programmes is provided by public health authorities, including the UK Health Security Agency and Sweden's Public Health Agency (Folkhälsomyndigheten) (5,6). In the UK, immunisation guidance is outlined in the "Green Book", which provides detailed recommendations for vaccination practice (7). In Sweden, vaccination policies are guided by the national vaccination programme, which sets out recommendations for routine immunisation (8).

In the UK, vaccine hesitancy has been strongly influenced by the legacy of the 1998 Wakefield study (9), which suggested a possible association between the MMR vaccine and autism. Although subsequently discredited, this controversy continues to influence parental risk perceptions, with a persistent, though scientifically refuted, association between the MMR vaccine and autism remaining a central concern in vaccination decision-making as highlighted by Brown et al. (10).

In contrast, Sweden has maintained consistently high vaccination coverage and effective disease control (8), reflecting a context characterised by trust in public health systems (11). This contrast provides a valuable comparative lens through which to examine how differences in public health governance, institutional trust and sociocultural context influence parental attitudes towards vaccination.

Parental attitudes represent a critical determinant of childhood vaccination uptake as parents are responsible for making healthcare decisions on behalf of their children. Vaccine hesitancy, defined as the delay in acceptance or refusal of vaccination despite the availability of vaccination services, is a complex and context-specific phenomenon influenced by social, cultural and informational factors (12). Recent evidence suggests that vaccine hesitancy has increased globally, contributing to stagnant or declining vaccination coverage and the re-emergence of vaccine preventable diseases (13). Previous research has demonstrated that parental beliefs and attitudes play a key role in shaping vaccination intentions, as highlighted in the Immunisation Beliefs and Intentions Measure (IBIM) study (14).

The MMRV vaccine combines protection against measles, mumps, rubella and varicella (chickenpox) into a single immunisation. The inclusion of varicella is relevant, as varicella continues to contribute to disease burden in England (15),

which may add complexity to parental decision-making. While combination vaccines may improve convenience and uptake, they may also raise new concerns among parents regarding vaccine safety, effectiveness, and potential side effects.

Understanding the interplay between parental attitudes, trust in healthcare systems and sociocultural influences is essential for informing targeted public health strategies aimed at improving vaccination uptake and addressing vaccine hesitancy.

Aim

To conduct a scoping review to systematically map and synthesise the existing literature on parental attitudes and vaccine hesitancy towards MMR vaccine in Sweden and the United Kingdom, and to identify patterns, determinants, and gaps in the current research base.

Research question

What are the primary determinants of MMR vaccine hesitancy among parents in Sweden and the United Kingdom, and how do they compare between these two countries?

Method

Study design

This study was conducted as a scoping review to map and summarise existing literature on parental attitudes and vaccine hesitancy towards MMR vaccination in Sweden and the United Kingdom. Scoping reviews are used to explore the breadth of available literature and identify key concepts and research gaps, rather than critically appraising findings as in a systematic review. The methodology followed the framework for scoping reviews as proposed by Arksey and O'Malley (16).

Selection method

The PCC (Population, Concept, Context) framework was used to guide the development of the research question and selection criteria. This approach is commonly used in scoping reviews as it allows for a broader exploration of existing research compared to more restrictive frameworks such as PICO (Population, Intervention, Comparison and Outcome). In this review, PCC was appropriate as the aim was to explore factors influencing parental attitudes and vaccine hesitancy towards MMR vaccination, rather than evaluating a specific intervention. The framework helped to define the population, key concepts, and context whilst ensuring that relevant studies were identified in a structured and transparent way.

Population	Parents or guardians involved in decision-making regarding MMR vaccination for children.

Concept	Parental attitudes and vaccine hesitancy relating to the MMR vaccine, including beliefs, perceptions, determinants of vaccine uptake, and factors influencing decisions.
Context	Studies conducted in Sweden and the United Kingdom.

Inclusion criteria

- Studies examining parental attitudes, beliefs, or vaccine hesitancy towards MMR vaccination.
- Studies involving parents or guardians making decisions about MMR vaccination for children.
- Studies published in English or Swedish.
- Studies published between 2000 and 2026.
- Studies conducted in the UK or Sweden.
- All study designs were considered, including quantitative, qualitative, and mixed-methods studies.

Exclusion criteria

- Studies focusing on vaccines other than the MMR vaccine, such as COVID-19, HPV, or influenza vaccines (where MMR data cannot be isolated).
- Study protocols without reported results.
- Studies not involving parental populations.
- Studies not directly examining determinants of MMR vaccine hesitancy or uptake.
- Studies that did not provide country-specific data for Sweden or the UK.
- Studies with insufficient detail on parental attitudes or decision-making.

Search strategy

To identify relevant articles published between 2000 and 2026, a systematic database search was conducted in PubMed, Cochrane Library, and Embase on 28 February 2026. The year 2000 was selected as the starting point to capture the period of increased public and scientific attention regarding vaccine hesitancy following the publications of the now discredited Wakefield study (9). This event significantly shifted vaccination attitudes in the UK and internationally. This

timeframe ensures the inclusion of research reflecting modern vaccination programmes and evolving public perceptions.

All records retrieved from the database searches were imported into the reference management software Zotero, where duplicate records were identified and removed prior to screening. Search strings were developed using Medical Subject Headings (MeSH) and relevant free text terms. Boolean operators “AND” and “OR” were used to combine keywords related to the MMR vaccine, vaccination coverage, vaccine hesitancy, and the geographical contexts of Sweden and the UK. Following the database search, the identified studies were screened based on the predefined inclusion and exclusion criteria and the PCC framework. The findings of the included studies were analysed using a narrative synthesis approach. The results were summarised to identify parental attitudes and factors influencing vaccine hesitancy related to the MMR vaccine in Sweden and the UK.

PubMed search strategy

"Measles-Mumps-Rubella Vaccine"[MeSH Terms] OR ("MMR"[Title/Abstract] OR "measles mumps rubella*"[Title/Abstract]) AND "Vaccination Coverage"[MeSH Terms] OR "Vaccination"[MeSH Terms] OR ("Uptake"[Title/Abstract] OR "Coverage"[Title/Abstract] OR "decline*"[Title/Abstract] OR "reduce*"[Title/Abstract]) AND "Vaccination Hesitancy"[MeSH Terms] OR "health knowledge, attitudes, practice"[MeSH Terms] OR "Socioeconomic Factors"[MeSH Terms] OR "Health Services Accessibility"[MeSH Terms] OR "Social Media" [MeSH Terms] OR ("hesitan*"[Title/Abstract] OR "confidence"[Title/Abstract] OR "refusal"[Title/Abstract] OR "parental attitude*"[Title/Abstract] OR "misinformation"[Title/Abstract]) AND "Sweden"[MeSH Terms] OR "United Kingdom"[MeSH Terms] OR ("Sweden"[Title/Abstract] OR "United Kingdom"[Title/Abstract])

Embase search strategy

('measles mumps rubella vaccine'/exp OR (MMR OR 'measles mumps rubella'):ti,ab) AND ('vaccination coverage'/exp OR 'vaccination'/exp OR (uptake OR coverage OR decline* OR reduce*):ti,ab) AND ('vaccine hesitancy'/exp OR 'health knowledge, attitudes, practice'/exp OR 'socioeconomics'/exp OR 'health care access'/exp OR 'social media'/exp OR (hesitan* OR confidence OR refusal OR 'parental attitude*' OR misinformation):ti,ab) AND ('sweden'/exp OR 'united kingdom'/exp OR (sweden OR 'united kingdom' OR uk):ti,ab)

Cochrane library search strategy

MeSH descriptor: [Measles-Mumps-Rubella Vaccine] explode all trees OR (MMR OR measles mumps rubella*):ti,ab,kw AND MeSH descriptor: [Vaccination Coverage] explode all trees OR MeSH descriptor: [Vaccines] explode all trees OR (uptake OR coverage OR decline* OR reduce*):ti,ab,k AND MeSH descriptor: [Vaccination Hesitancy] explode all trees OR MeSH descriptor: [Health Knowledge, Attitudes, Practice] explode all trees OR MeSH descriptor: [Socioeconomic Factors] explode all

trees OR MeSH descriptor: [Health Services Accessibility] explode all trees OR MeSH descriptor: [Social Media] explode all trees OR (hesitan* OR confidence OR refusal OR parental attitude* OR misinformation):ti,ab,kw AND MeSH descriptor: [Sweden] explode all trees OR MeSH descriptor: [United Kingdom] explode all trees OR (Sweden OR "United Kingdom"):ti,ab,kw

Study selection

Titles and abstracts identified through the database searches were screened for relevance to the research question. Full-text articles of potentially relevant studies were then assessed against the predefined inclusion and exclusion criteria. Studies that met the eligibility criteria were included in the final review. Data were extracted from the included studies to summarise key characteristics, including author, year of publication, country, population demographics, and primary findings related to parental attitudes and vaccine hesitancy towards MMR vaccination in Sweden and the UK. The findings were analysed and synthesised to identify recurring themes and specific factors influencing vaccine decision-making.

Results

In this scoping review, a total of 282 records were identified through database searching in Embase, PubMed and the Cochrane Library. After removal of 67 duplicate records, 215 articles remained and were screened by title, resulting in 63 studies being retained for abstract review. Following abstract screening, 26 articles were excluded, leaving 37 studies eligible for full text retrieval. Of these 32 full text articles were successfully obtained and assessed for eligibility. After applying the inclusion and exclusion criteria, 25 studies were excluded as they did not meet the study requirements.

The included studies explored a variety of factors influencing vaccine hesitancy, including perceptions of vaccine safety, trust in healthcare professionals, and the influence of social and cultural contexts. Reasons for exclusion included studies involving non-parent populations, lack of direct assessment of parental attitudes or vaccine hesitancy, focus on vaccination uptake only, and study designs such as protocols without reported results. In total, seven studies met the inclusion criteria and were included in this scoping review. The selection process is illustrated in Figure 1.

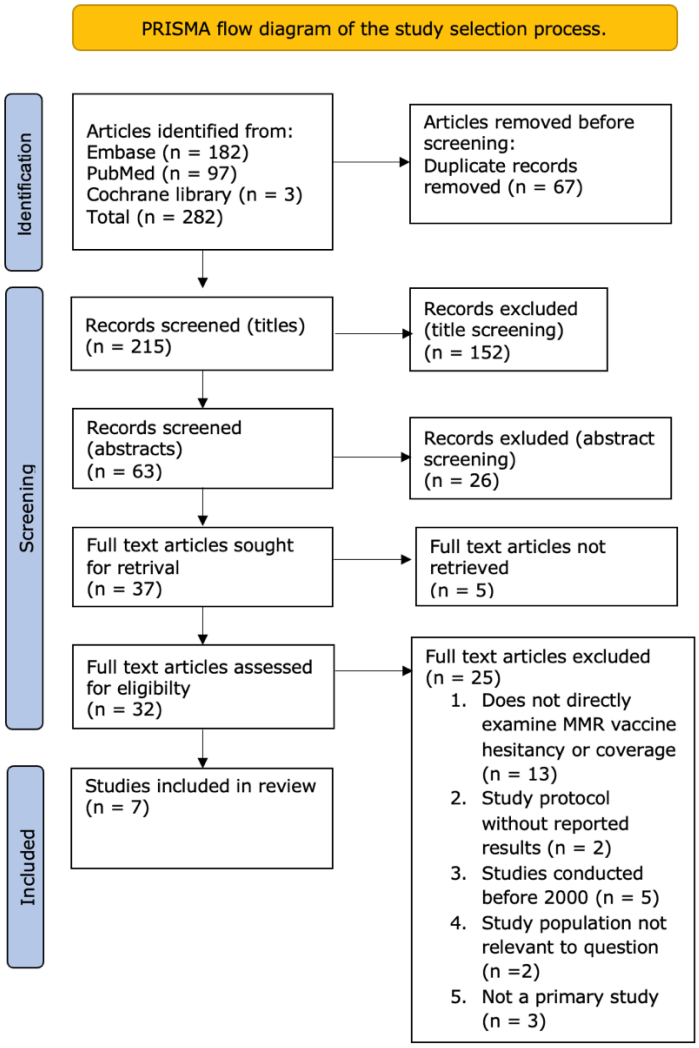

Figure 1. Flow diagram representation PRISMA (17),

A total of seven studies were included in this review, comprising qualitative (17,18,19,23), mixed-methods (20), and survey-based designs (21,22) conducted in the UK (17,19,20,22,23) and Sweden (18,21). Across these studies, several key themes were identified relating to parental decision-making regarding MMR vaccination.

Five key thematic clusters were identified: (1) perceived vaccine safety and risk benefit beliefs, (2) trust and mistrust in healthcare professionals and public health institutions, (3) sociocultural and community influences, (4) the role of information sources, including media, in shaping decision-making, (5) structural and logistical barriers to vaccination. The characteristics of the included studies are presented in Table 1.

Table 1: Characteristics of included studies

Study	Study design	Participants	Aim/Purpose	Main findings/results
Uk parents' decision-making about MMR vaccine 10 years after MMR autism controversy Brown et al. (2012) UK (10)	Qualitative study	Parents of young children. (n = 24 mothers)	To explore factors influencing parental decision-making regarding MMR vaccination 10 years after the autism controversy.	Included mothers who accepted, delayed or refused vaccination; children aged 11–36 months. Key influences: ongoing concern about the MMR-autism controversy despite Wakefield's study being discredited; trust or mistrust in healthcare professionals; beliefs about disease severity; and anticipated regret. Immune overload was not a major concern for parents choosing single vaccines. Parents rejecting MMR tended to hold general anti-vaccination views rather than MMR-specific concerns.
Parental attitudes and decision-making regarding MMR vaccine Byström et al. (2014) Sweden (18)	Qualitative study	Parents of young children (n = 20)	To examine determinants of parental decisions making about MMR vaccination	9 vaccinating parents; 11 non-vaccinating parents. Four parental groups identified: conformers (vaccinated on time, trusted experts), pragmatists (delayed due to safety concerns), attentive delayers (delayed to allow child to mature), and promoters of natural immunity (refused or long-delayed, believed measles strengthens child development). Decision-making influenced by beliefs about natural immunity, vaccine safety, child maturity, trust in health professionals, and holistic vs allopathic health views. All groups wanted unbiased information.
Uncertainty, decision-making and trust: lessons from the MMR controversy Casiday et al. (2006) UK (19)	Qualitative study (focus groups and interviews)	Parents of young children (n = 87)	To analyse factors related to trust and risk perceptions in parental MMR vaccinations decisions.	56 parents had vaccinated, 16 had delayed or chosen single vaccines, and 5 were undecided. Three decision-making strategies identified: reducing complexity through trust in experts; embracing ambivalence through compromise (e.g. delaying or opting for single vaccines); and identifying vulnerable groups of children. Decision-making shaped by uncertainty about risk of harm and trust in healthcare professionals. Mistrust in government, media, and medical authority contributed to hesitancy.

The cultural context of MMR rejection Cassell et al. (2006) UK (20)	Mixed-methods study (questionnaire survey linked to child health records)	Mothers of young children (n =452; response rate 39.8% of n =1135)	To examine social, cultural and demographic factors influencing MMR vaccinations decisions	57.2% vaccinated on time, 10.6% delayed, 17.5% chose single vaccines, 11.8% refused, 2.9% undecided. Homeopath use was the only independently significant predictor of non-compliance in the multivariate analysis. Hesitancy influenced by alternative health beliefs, reduced trust in government and healthcare professionals, and beliefs in natural immunity. Decision-making shaped by individual risk perceptions and a strong sense of personal responsibility.
Perspectives on measles, mumps and rubella vaccination among Somali mothers in Stockholm Jama et al (2018) Sweden (21)	Qualitative study, in depth interviews	Somali mothers of young children (n= 13)	To explore factors influencing Somali mother's decisions to accept or delay MMR vaccination	7 delayed vaccination and 6 vaccinated on time. Two main themes: 1. barriers to timely vaccination such as fear of speech delay/autism and negative experiences with healthcare services and 2. facilitating factors advice from vaccinating parents, trust in nurses, and trust in God. Peer pressure within the Somali community was a reported reason of delay. Timely vaccinators credited positive nurse interactions and community support as key enablers.
Reasons for measles cases not being vaccinated with MMR McHale et al. (2015) UK (22)	Qualitative (semi structured interviews)	Parents/carers of unvaccinated children aged 13 months –9 years (n = 47)	To investigate parents' and carers reasons for not vaccinating children with MMR following a measles outbreak.	Safety concerns were the most common reason (n = 28), with autism-related concerns cited by 23 respondents. Child illness at time of vaccination was second most common (n=11). Healthcare access barriers (n=4) and practical issues such as forgetting or relocation (n=5) also identified. Notably, 43% of participants had their child vaccinated after recovering from measles, indicating that direct disease experience participants reported as influencing attitude change. Over half felt more information or a discussion with a health professional would have aided their decision.
'MMR talk' and vaccination choices; An ethnographic study in Brighton, UK Poltorak et al. (2005) UK (23)	Qualitative (ethnographic study)	Mothers of young children. (n = 23)	To explore how parents make decisions about MMR vaccination within the social, cultural and personal context.	7 vaccinated on time, 2 delayed, 2 partially vaccinated, 3 intended to vaccinate, 9 refused or chose alternatives. 4 of 23 mothers expressed total confidence in MMR from the outset. A decision to vaccinate did not necessarily reflect acceptance of safety; some vaccinated due to inability to afford single vaccines or because a partner assumed responsibility. Decision-making embedded in personal history, birth experiences, family health history, and social relationships.

MMR = measles, mumps and rubella; UK = United Kingdom; n = number of participants.

Safety concerns and the influence of the autism controversy

Concerns regarding vaccine safety, particularly the perceived link between the MMR vaccine and autism, were consistently reported across the included studies. Parents frequently identified the fear of autism as a primary driver for delaying or refusing vaccination. McHale et al. (22) reported that safety concerns were the most frequently cited reason for non-vaccination, with autism-related anxiety being especially prominent. Similarly, Jama et al. (21) found that the fear of autism was a major factor influencing delayed vaccination among Somali mothers in Stockholm, with the timing of the MMR dose at 18 months, coinciding with normal speech development, which led many mothers to associate the vaccine with "children 'stopping talking'". The persistence of these concerns, despite strong scientific evidence refuting a causal link, was further highlighted by Brown et al. (10), who demonstrated that the legacy of the autism controversy continued to shape parental attitudes over a decade later. In addition, Casiday et al. (19) emphasised that risk perceptions were shaped by uncertainty, with parents balancing the perceived risks of vaccination against the perceived risks of the disease itself.

Trust and mistrust in healthcare professionals and institutions

Trust in healthcare professionals (HCPs) emerged as a central determinant of vaccination decisions, although this varied considerably across parental groups and cultural contexts. Higher levels of trust were associated with vaccine acceptance, while systemic mistrust contributed to hesitancy. Byström et al. (18) found that trust in HCPs differed between parental typologies, directly influencing whether parents accepted, delayed, or refused vaccination.

Similarly, Casiday et al. (19) reported that while parents relied on expert advice, they often balanced this against conflicting information from unofficial sources. Conversely, mistrust in health authorities and government institutions was associated with increased hesitancy. Cassell et al. (20) identified lower trust in HCPs and government as a significant factor linked to MMR rejection. Notably, consulting a homeopath was the only independently significant predictor of non-compliance in their multivariate analysis, suggesting the engagement with alternative healthcare systems reflects a broader orientation away from conventional medicine. Negative encounters with healthcare professionals were shown to undermine confidence directly as highlighted by Jama et al. (21), where Somali mothers described feeling judged and dismissed at child healthcare centres, which led some to delay vaccination or change clinics entirely.

Social, cultural and community influences

Vaccination decision-making was strongly shaped by social and cultural contexts, with informal networks often exerting more influence than official information sources. Poltorak et al. (23) described how "MMR talk" within social networks functioned as a social phenomenon, with mothers drawing on shared personal experiences and informal discussions rather than scientific evidence. Importantly,

they found that only four of 23 mothers expressed total confidence in the MMR vaccine from the outset, and that a decision to vaccinate did not necessarily reflect acceptance of its safety. Some mothers vaccinated due to inability to afford single vaccines or because a partner assumed responsibility for the decision, rather than from genuine conviction. Jama et al. (21), similarly found that peer influence within the Somali community was a powerful driver of delay. Unusually, Jama et al (21) also identified trust in God as a facilitating factor among timely vaccinators, who framed their acceptance of the vaccination within religious belief. Cultural practices and alternative health beliefs also played a significant role. Cassell et al. (20) reported that rejection of vitamin K at birth was strongly associated with MMR non-compliance, suggesting a broader pattern of precautionary health behaviour. This was further supported by Byström et al. (18), where parents expressed preferences for holistic health approaches and perceived natural infection as superior to artificial immunization, viewing measles as strengthening rather than threatening to the child.

Information, media influence and decision-making complexity

Exposure to conflicting information contributed to uncertainty and complexity in the decision-making process. Brown et al. (10) highlighted the enduring influence of media coverage surrounding the autism controversy, which continued to shape parental risk perceptions. Casiday et al. (19) found that parents actively sought and evaluated various sources of information, which often led to ambivalence rather than clarity. They identified three coping strategies: reliance on expert trust, compromise approaches such as delaying vaccination, and focusing on perceived individual vulnerability. The ethnographic findings from Poltorak et al. (23) demonstrated that decision-making was not a purely rational clinical choice but was deeply embedded within social interactions and personal narratives, with the process of research often deepening uncertainty rather than resolving it.

Practical barriers and access to vaccination

In addition to attitudinal factors, practical barriers influenced uptake. McHale et al. (22) identified child illness at the time of appointment and difficulties accessing services, as a key reason for non-vaccination, with some parents making the decision without consulting HCPs. Access issues, including difficulty arranging appointments and limited clinic availability, were also reported. Notably McHale et al. (22) found that nearly half of the participants had their children vaccinated following recovery from measles.

Overall synthesis

Across the included studies, parental decision-making regarding the MMR vaccine was shown to be multifactorial and deeply contextual. Decisions were shaped by safety concerns rooted in the autism controversy, levels of trust in healthcare systems and HCPs, social networks, cultural and religious beliefs, access to balanced information and practical barriers. While the autism vaccine concerns remained the most consistent theme across both UK and Sweden contexts, the findings also highlighted the importance of broader contextual factors. These included the quality

of interactions with healthcare providers, community-specific belief systems, and the social dynamics of vaccination discourse, which are equally critical in determining whether a parent ultimately accepts or refuses the vaccine. Importantly, parental positions were not always clearly defined, with many parents vaccinating under conditions of ongoing uncertainty, delayed decision-making, or external pressures rather than complete confidence in their choice.

Discussion

This scoping review mapped and synthesised existing literature regarding parental attitudes and decision-making for MMR vaccination in Sweden and the UK. The findings underscore that vaccine hesitancy is a complex, multifactorial phenomenon driven by a dynamic interplay of safety concerns, systemic trust, social networks, and structural barriers.

Summary and comparison of findings

Across all included studies, safety concerns, specifically the perceived association between the MMR vaccine and autism emerged as the primary factor influencing parental decisions. This concern was consistently identified in both UK and Swedish contexts and remains influential despite overwhelming scientific evidence refuting such a link. However, methodological variations between studies provided different layers of insight. Qualitative research highlighted the critical role of social processes, such as informal "MMR talk," personal anecdotes, and community influence. In contrast, quantitative studies identified broader associations between hesitancy and demographic or behavioural factors, such as the use of alternative medicine and lower trust in institutional healthcare. Culturally specific influences were particularly prominent among Somali mothers in Sweden, where vaccination decisions were uniquely shaped by close-knit social networks, religious beliefs, and previous negative healthcare encounters.

These findings align with existing literature emphasising that risk perception and trust are central to parental decision-making. The persistence of autism-related anxiety reflects the profound and long-term legacy of the discredited Wakefield controversy (9). Furthermore, the significance of social context supports the theory that vaccination decisions are socially constructed rather than purely biomedical choices (13). These findings are further supported by the Immunisation Beliefs and Intentions Measure (IBIM) study conducted by Tickner et al. (14), which, using the Theory of Planned Behaviour, demonstrated that parental attitudes towards vaccination were the strongest predictor of intention to immunise with MMR, accounting for 48–64% of the variance in intention. Parents with lower intentions to vaccinate were significantly more likely to express concerns regarding vaccine side effects and reduced confidence in immunisation services. These findings support this literature study’s conclusion that safety concerns and perceived behavioural control are central components of parental MMR decision-making.

More broadly, vaccine hesitancy has continued to increase internationally following the COVID-19 pandemic, with misinformation, declining institutional trust, and heightened concerns regarding vaccine safety contributing to reduced vaccine confidence across multiple vaccination programmes, not limited to MMR vaccination

(24). Similarly, Le Menach et al. (25) demonstrated that MMR uptake increased during a measles outbreak within a vaccine-reluctant community in England, suggesting that direct exposure to disease risk may alter parental perceptions regarding vaccine safety and susceptibility to infection. The study further highlighted the influence of social norms, trust, and previous vaccination behaviour on parental decision-making (26).

Ramsay et al. (27) further demonstrated that despite increasing public concern surrounding MMR vaccine safety following negative media coverage, most parents continued to seek advice from healthcare professionals and remained willing to vaccinate future children, highlighting the ongoing importance of professional trust in parental decision-making. Recent research conducted during the COVID-19 pandemic further demonstrated that parental vaccination decisions continued to be strongly influenced by concerns regarding vaccine safety, trust in healthcare systems, and perceived risks, highlighting that vaccine hesitancy extends beyond MMR vaccination alone (28).

Strengths and limitations

A further methodological consideration relates to the search strategy and study selection process. Although multiple databases (PubMed, Embase, and the Cochrane Library) were used to enhance the breadth of the search, relevant studies may still have been missed. In addition, the review was conducted by a single researcher, meaning the study selection, data extraction, and thematic analysis were performed without independent verification. This may introduce a degree of subjectivity and potential selection bias. Involving multiple reviewers could have strengthened the reliability and transparency of the review process through independent screening and cross validation of findings.

A major strength of the included studies is the depth of parental perspective captured, particularly through qualitative approaches. However, several limitations must be acknowledged. Many studies utilized small, localized sample sizes, which may limit the generalisability of the findings to broader or more diverse populations. Additionally, the heterogeneity in study designs makes direct comparison challenging.

As a scoping review, the primary objective was to map the breadth of available research rather than to critically appraise study quality or establish causal relationships. This inclusive approach provided a comprehensive overview of the field but means that no formal quality assessment was conducted, which may influence the weight of the conclusions. Furthermore, while including Swedish and English literature was a strength, the exclusion of other languages may have omitted relevant data from other migrant communities within these countries. These studies also span two decades, and parental attitudes toward the MMR may have shifted over this period, particularly in the wake of the COVID-19 pandemic and its impact on public trust in vaccines and health institutions more broadly.

Methodological considerations

The use of the Arksey and O'Malley framework (16) allowed for the inclusion of a wide range of study designs, providing a holistic view of the landscape. While the lack of a formal quality appraisal is a standard characteristic of scoping reviews, it remains a methodological limitation. However, the high degree of consistency across different study designs and geographic settings reinforces the credibility of the identified themes.

Implications for Clinical Practice and Policy

The findings are likely transferable to other high-income countries with established vaccination programmes, though cultural and contextual nuances must be respected. For HCP's, these results suggest that addressing parental concerns requires an empathetic approach that prioritizes building trust over simply repeating scientific data. Communication should be tailored to individual beliefs and lived experiences. Community-based interventions, including engagement with social networks and trusted community leaders, are essential for countering misinformation in specific populations.

Public health strategies should focus on three pillars; (1) Trust building such as strengthening the relationship between parents and healthcare providers; (2) Communication by providing clear, consistent, and culturally sensitive information; (3) Access by minimising practical barriers such as appointment availability and logistical challenges.

Future research

Further research is required to evaluate the efficacy of interventions designed to reduce hesitancy within culturally specific communities. Longitudinal studies would provide valuable insight into how parental attitudes evolve over time, particularly in the post-pandemic landscape. Additionally, research focusing on the specific communication strategies used by healthcare professionals during clinical encounters could help identify the most effective methods for improving vaccine confidence.

Conclusion

This scoping review provides a comprehensive overview of the evidence regarding parental attitudes and vaccine hesitancy toward MMR vaccination in Sweden and the United Kingdom. The findings demonstrate that parental decision-making is a complex process influenced by a dynamic interplay of factors, including safety concerns, trust in healthcare professionals, socio-cultural influences, information access, and practical barriers. Despite strong scientific evidence refuting any causal link, concerns regarding a perceived association between the MMR vaccine and autism remain a primary driver of vaccine hesitancy in both nations. This review further highlights that broader contextual factors, specifically systemic trust, peer social networks, and community-specific cultural beliefs. These factors play a decisive role in shaping parental attitudes and final vaccination choices.

These findings underscore the necessity of addressing vaccine hesitancy through multifaceted, evidence-based approaches. Strategies prioritizing the cultivation of trust, the improvement of clinical communication, and active community engagement are essential for supporting informed parental decision-making and increasing MMR vaccine uptake. Future research should focus on the development and rigorous evaluation of targeted interventions designed to address specific parental concerns and rebuild long-term vaccine confidence within the public health landscape.

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