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Parental Beliefs Linking Vaccines to Autism: A Narrative Review of Prevalence, Drivers, and Responses

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ABSTRACT

Background: Large studies show no link between childhood vaccines and autism. Yet many parents still believe in a link, and since 2025 senior U.S. officials have repeated the claim. Objective: Using the 5C model and the attitude roots account, this narrative review examined who holds the belief, what predicts it, how it affects vaccination, and what corrects it, with attention to Pakistan. **Method:** We searched PubMed/MEDLINE, Consensus, the Wiley Scholar Gateway, and grey literature up to November 2026 and reported the review against SANRA. **Results:** The belief is held by a small and uncertain minority. In 2025, 9% of U.S. parents agreed with it and about half were unsure, and Gulf studies report 10% to 27%. It is more common among parents of autistic children, whose odds of hesitancy are more than twice those of other parents, and their younger children are three times as likely to be under-vaccinated. Conspiracy thinking, reactance, overconfidence, social media use, and a child's regression predict the belief better than education. Correcting the myth lowers belief but not intention to vaccinate. Messages about disease risk, trusted providers, and presumptive communication work better. No study has measured the belief in Pakistan, where refusals center on infertility and religion. **Conclusions:** The belief rests on motives and experiences that facts alone do not reach. Official support for the claim may enlarge the group of unsure parents. Pakistan first needs basic prevalence data.

1. Introduction

The claim that childhood vaccines cause autism has been tested more often than almost any other health claim, and it has failed every time. It became popular after a 1998 report on 12 children. In that report the parents of eight children linked behavioral symptoms to the measles, mumps, and rubella (MMR) vaccine (Wakefield et al., 1998). The study had no control group. It was retracted (The Editors of The Lancet, 2010) and was later found to be fraudulent (Godlee et al., 2011).

The evidence collected since then is very large. Two Danish cohorts of 537,303 and 657,461 children found no rise in autism risk after MMR vaccination. This held even for children who had an autistic sibling (Hviid et al., 2019; Madsen et al., 2002). A meta-analysis of more than 1.2 million children found no link between vaccines and autism (Taylor et al., 2014). Later versions

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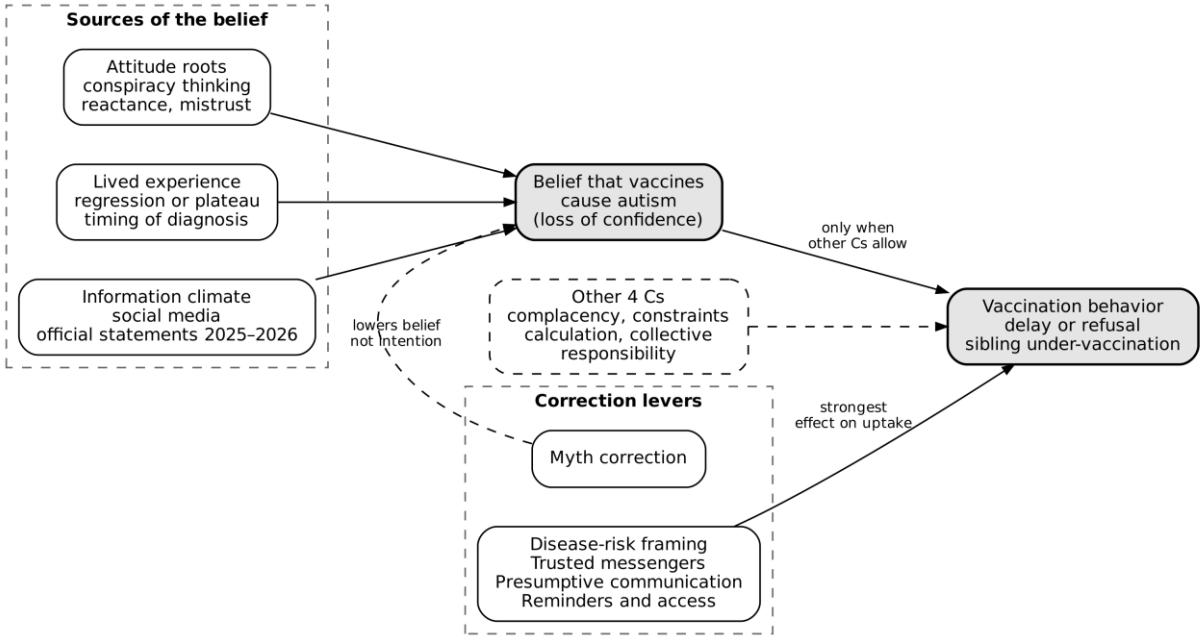
of the claim blamed thimerosal, the number of antigens, and aluminum adjuvants. Each of these was also tested and rejected (Andersson et al., 2025; DeStefano et al., 2013; Gerber & Offit, 2009; Hviid et al., 2003).

Even so, many parents still hold the belief. Since 2025 it has also come back into official speech in the United States, where senior health officials have questioned the evidence in public (Associated Press, 2025; Autism Science Foundation, 2025). The science is settled. The psychology and the politics are not.

Two frameworks guide this review (Figure 1). The 5C model sees a vaccination decision as the result of five factors: confidence, complacency, constraints, calculation, and collective responsibility (Betsch et al., 2018). The vaccine–autism belief is a specific loss of confidence. The attitude roots account explains why the belief is hard to correct. It rests on deeper motives such as conspiracy thinking, reactance, and mistrust, not on a simple lack of facts (Hornsey et al., 2018). Together they predict that the belief will be strongest where these motives meet personal experience of autism, that it will become refusal only when the other four Cs allow it, and that facts alone will correct it poorly.

Figure 1: Conceptual Model of the Vaccine–Autism Belief and Its Path to Vaccination Behavior



Note. Built from the 5C model (Betsch et al., 2018) and the attitude roots account (Hornsey et al., 2018). Solid arrows show direct paths. Dashed lines show conditional or weak effects.

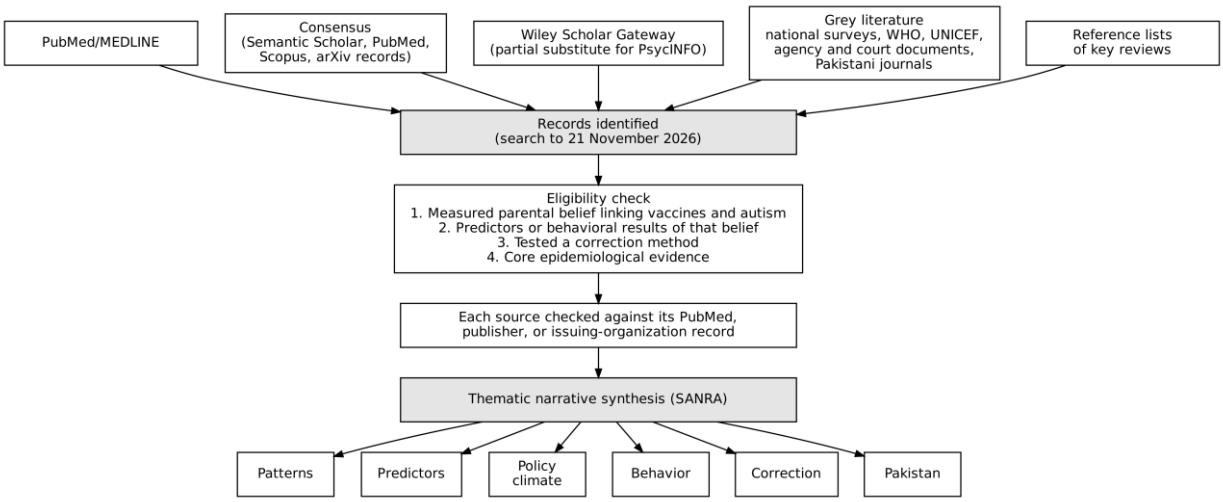
Vaccine hesitancy means delaying or refusing vaccines even when services are available (MacDonald & SAGE Working Group on Vaccine Hesitancy, 2015). Most reviews deal with hesitancy in general (Larson et al., 2014). The autism belief needs its own review for two reasons. It has been unusually hard to correct (Nyhan et al., 2014), and it is held most strongly by the families who use autism services. This review asks five questions. Who holds the belief? What predicts it? How has the 2025–2026 information climate affected it? How does it change behavior? Which correction methods work? It then looks at what is known in Pakistan, where data are scarce and the vaccination setting is different.

2. Method

We planned and reported the review using the six SANRA criteria for narrative reviews (Baethge et al., 2019). We chose a narrative design because the evidence comes from cohorts, surveys, qualitative studies, and experiments that cannot be pooled in a meta-analysis.

We searched PubMed/MEDLINE, the Consensus engine (which covers Semantic Scholar, PubMed, Scopus, and arXiv records), and the Wiley Scholar Gateway up to 21 November 2026 (Figure 2). We used the Wiley Scholar Gateway as a partial substitute for PsycINFO because we could not access PsycINFO directly. Search strings combined vaccine terms, autism terms, and belief terms, with regional terms for Pakistan, South Asia, and the Gulf. Full search strings are available from the authors on request. We also checked the reference lists of key reviews (Brewer et al., 2017; Dubé et al., 2013).

Figure 2: Literature Search and Synthesis Process



Note. Record counts were not tracked because the review used a narrative rather than a systematic design. Full search strings are available from the authors on request.

We also searched the web for grey literature such as national surveys, agency and court documents, and Pakistani journals that PubMed does not index. We used news reports only to date recent events that have not yet reached peer-reviewed journals. We did not use them as evidence of effects.

Studies were included if they measured the belief, its predictors or effects, or a way to correct it, or if they gave the core epidemiological evidence. We checked every source against its original record and grouped findings by theme. We did not pool estimates or rate risk of bias.

2.1. Patterns of Belief

A minority of the general public holds the belief. A larger share of parents of autistic children hold it. The pattern repeats across countries with very different health systems (Table 1).

Table 1: Studies Measuring Beliefs Linking Vaccines to Autism

Study	Setting	Sample	Key finding on vaccine–autism belief
Freed et al. (2010)	United States	National online sample of parents (62% response)	Women and Hispanic parents more likely to believe some vaccines cause autism; 11.5% had refused at least one vaccine
Mitchell & Locke (2015)	United States and Canada	823 public; 176 childcare workers	10% named vaccines among the two main causes of autism
Alshammari et al. (2021)	Riyadh, Saudi Arabia	1,200 parents	Around 10% stated immunization can cause autism
Ismayl et al. (2020)	United Arab Emirates	391 adult residents	Married participants held more misconceptions about the measles vaccine–autism link
Balbir Singh et al. (2019)	Malaysia	200 postnatal mothers	Fear of autism and religious misconception identified as main sources of vaccine resistance
Alamer et al. (2022)	Riyadh, Saudi Arabia	344 health care providers	8% associated the measles vaccine with autism
Mercer et al. (2006)	Canada	41 parents of autistic children	40.0% considered vaccines a significant contributing factor
Fischbach et al. (2016)	United States	502 parents of autistic children; 60 scientists	Many parents named vaccines as the cause; scientists named genetics; 37% of parents hesitant to vaccinate

Study	Setting	Sample	Key finding on vaccine–autism belief
Chaidez et al. (2018)	California, United States	330 mothers of autistic children	Belief in vaccines and medications as causes associated with complementary-alternative medicine use
Fombonne et al. (2020)	United States (SPARK cohort)	Caregivers of 16,525 autistic children	16.5% endorsed immunizations as a cause; endorsement linked to regression in the second year and poorer language outcomes
Goin-Kochel et al. (2020)	United States (SPARK cohort)	225 caregivers of autistic children	28.8% vaccine hesitant; hesitancy tied to belief that immune deterioration caused autism
Pivetti et al. (2020)	Italy	18 mothers of autistic children (qualitative)	Vaccine link prevalent; often combined with birth-related or environmental causes
Chen et al. (2021)	Texas, United States	42 parents of autistic children (qualitative)	16.7% named vaccinations as a cause
Mensah-Bonsu et al. (2021)	Texas, United States	89 parents of children with ASD or other delays	28.4% of ASD parents vs. 5.0% of other parents endorsed vaccine toxins as cause
Anderson-Chavarria & Turner (2023)	Puerto Rico	35 parents of autistic children (ethnographic)	3 attributed autism entirely to vaccines; 14 saw vaccines as one possible "trigger" of genetic risk
Duale & Gele (2024)	Somalia and Somaliland	22 parents of autistic children (qualitative)	Most believed the measles vaccine caused their child's autism
Harmain et al. (2023)	Punjab, Pakistan	451 parents of children aged 5–18	Belief that COVID-19 vaccines may cause autism reported among reasons for refusing child vaccination; prevalence of this reason not reported in text
Samara et al. (2025)	United Arab Emirates	462 parents	11.5% believed the MMR vaccine can cause autism; 21.65% vaccine hesitant
Al Saad et al. (2023)	Saudi Arabia	158 parents of children with neurodevelopmental disorders	10.1% believed vaccines caused their child's disorder
Sahni et al. (2020)	Texas, United States	Parents in four groups (ASD, other developmental, rheumatologic, general pediatric)	28.9% of ASD parents vs. 15.7% of others attributed the condition to vaccine toxins; this attribution carried an adjusted *OR* of 20 for hesitancy
Kara-Aksay et al. (2026)	Izmir, Turkey	154 parents of children with ASD or other delays	Refusal rose from 3.9% before to 9.7% after diagnosis; belief that vaccines caused the condition was the main reason, though 88.3% disagreed that vaccines cause ASD
Christianson et al. (2020)	Minnesota, United States (Somali community)	300 families during a measles outbreak	71% named autism as their main MMR concern; 95% vaccinated because of fear of measles
Alghamdi & Alghamdi (2023)	Jeddah, Saudi Arabia	301 parents at primary care centers	26.6% agreed that vaccines can cause autism, although 94.4% agreed that vaccines protect children

Note. ASD = autism spectrum disorder; SPARK = Simons Foundation Powering Autism Research for Knowledge. Proportions are reported as given in the original studies.

2.2. A Small but Uncertain Minority

National surveys in the United States show how many people hold the belief and how loosely they hold it. In 2025, 9% of parents said it was true that the MMR vaccine can cause autism. About half of the rest said they were not sure (KFF, 2025). In 2026 the question allowed "probably" as well as "definitely." This time 36% of parents placed the claim on the true side, but most of them were unsure rather than convinced. Belief in this claim had not changed much since 2023 (KFF, 2026). In North America, Riyadh, and the United Arab Emirates, about 10% of people named vaccines as a cause of autism (Alshammari et al.,

2021; Mitchell & Locke, 2015; Samara et al., 2025). In a primary care sample in Jeddah the figure was 26.6% (Alghamdi & Alghamdi, 2023). Most people who hold it still accept vaccines in general (Freed et al., 2010).

2.3. Higher Among Parents of Autistic Children

The largest study included caregivers of 16,525 autistic children. Of these, 16.5% named vaccines as a cause of their child's autism (Fombonne et al., 2020). Two smaller studies reported 16.7% and 40.0%, but each had fewer than 45 parents (Chen et al., 2021; Mercer et al., 2006). In the 2025 U.S. survey, 16% of parents of autistic children believed the claim, compared with 9% of other parents (KFF, 2025). Parents of autistic children also blame "toxins in vaccines" far more often than parents of children with other conditions (Mensah-Bonsu et al., 2021; Sahni et al., 2020). A 2026 meta-analysis of 20 studies confirmed this pattern. Pooled hesitancy among caregivers of autistic children was 23.65%. Their odds of hesitancy or refusal were higher than those of caregivers of neurotypical children (*OR* = 2.31, 95% CI [1.66, 3.22]) and of children with other neurodevelopmental conditions (*OR* = 2.23, 95% CI [1.48, 3.35]; Gülle et al., 2026).

2.4. More Than One Cause

Parents rarely blame vaccines alone. Italian mothers combined vaccines with birth problems or environmental exposures in a single story (Pivetti et al., 2020). Most Puerto Rican parents saw autism as a genetic risk that something in the environment "triggered." Vaccines were one possible trigger among several (Anderson-Chavarria & Turner, 2023).

2.5. Health Workers and Low-Resource Settings

Eight percent of health workers at a Saudi children's hospital linked the measles vaccine to autism (Alamer et al., 2022). In Somalia most of 22 parents of autistic children blamed the measles vaccine, which is given just before signs of autism become visible (Duale & Gele, 2024).

2.6. Predictors of Belief

The best predictors of the belief are psychological motives and personal experience. Education matters much less. This challenges the common idea that hesitant parents simply lack information.

2.7. Psychological Motives

A study of 5,323 people in 24 countries found that conspiracy thinking was the strongest predictor of anti-vaccine attitudes. Reactance, disgust at blood and needles, and individualistic or hierarchical worldviews came next. Education explained almost nothing (Hornsey et al., 2018). Anti-vaccine beliefs group together with unrelated conspiracy beliefs (Goldberg & Richey, 2020). Among 1,050 Australian parents, conspiracy thinking, reactance, magical health beliefs, and low trust in government explained 42% of the variance in anti-vaccine attitudes (Wright & Rune, 2023). Reading anti-vaccine conspiracy material lowers the wish to vaccinate (Jolley & Douglas, 2014). These motives explain how the claim moved from MMR to thimerosal to the vaccine schedule each time one version was disproved (Gerber & Offit, 2009). Correcting the fact leaves the motive in place.

2.8. Knowledge and Information Sources

People who know the least about the causes of autism are the most likely to think they know as much as doctors (Motta et al., 2018). False information keeps shaping people's thinking even after they accept that it was withdrawn (Lewandowsky et al., 2012). The source of information matters. Anti-vaccine websites commonly mix safety fears with conspiracy claims and use the same tactics again and again, such as skewing the science and attacking critics (Kata, 2010, 2012). U.S. adults who used social media for health information at least once a week were more than twice as likely as non-users to rate the MMR–autism claim as probably or definitely true (37% vs. 16%). This difference remained after controlling for demographics and party (KFF, 2026). Such content can change behavior across a whole population. In 2012 an Italian court ruled that MMR had caused a child's autism. Regions with more broadband access, and so more exposure to the news, then saw larger drops in vaccination for all vaccines (Carrieri et al., 2019).

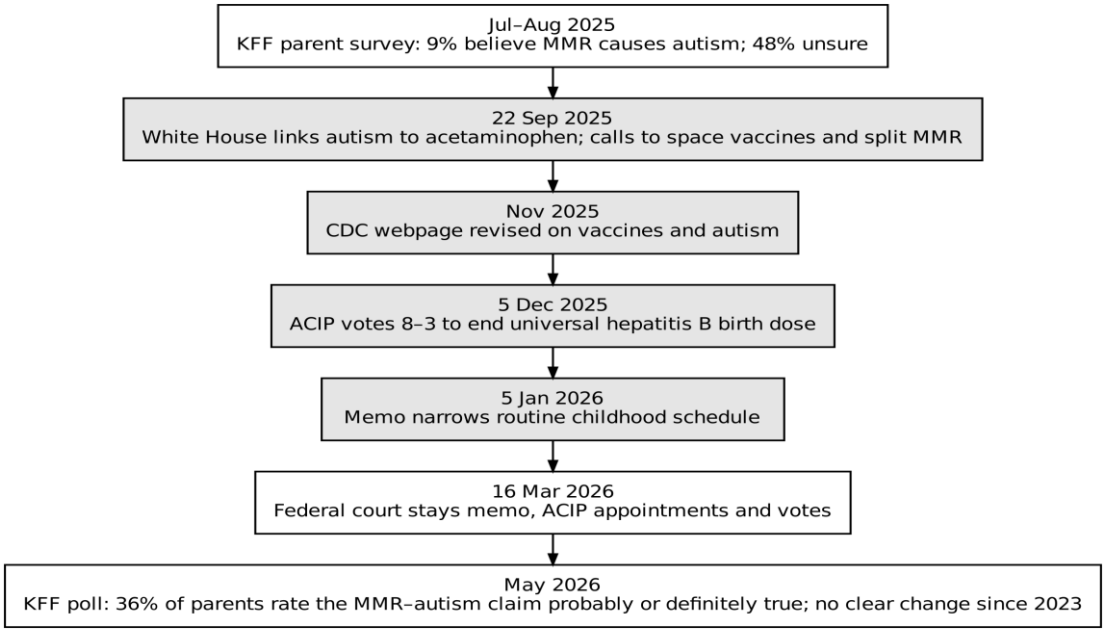
2.9. Personal Experience

For parents of autistic children, the belief is often tied to the child's own history. In the SPARK cohort, caregivers who blamed vaccines more often had children who lost skills in the second year of life. These children also had weaker language and adaptive skills (Fombonne et al., 2020). In a SPARK subsample, hesitancy was linked to a child's developmental plateau, lack of fluent speech, negative feelings about autism, and a belief that damage to the immune system had caused it (Goin-Kochel et al., 2020). The research does not support the parents' conclusion. Vaccine records do not differ by type of autism onset (Goin-Kochel et al., 2016). No cluster of diagnoses after MMR was found among more than 650,000 children (Hviid et al., 2019). The timing parents notice is a real experience but not evidence of cause, and a clinician who dismisses it can lose the parent's trust.

2.10. The Information and Policy Climate, 2025–2026

Since 2025 the claim has come from senior officials and not only from activists (Figure 3). On 22 September 2025, the U.S. President and the Secretary of Health and Human Services linked autism to acetaminophen use in pregnancy. They also called for childhood vaccines to be spaced out and for the MMR vaccine to be split into separate shots. Autism and science organizations said these claims had no evidence behind them (Autism Science Foundation, 2025). In November 2025, a Centers for Disease Control and Prevention (CDC) webpage was changed to say that the statement "vaccines do not cause autism" is not evidence-based (Associated Press, 2025). In December 2025, the newly appointed Advisory Committee on Immunization Practices voted 8 to 3 to end the universal hepatitis B birth dose for babies of mothers who test negative. It replaced it with individual decision-making (Centers for Disease Control and Prevention, 2025). A January 2026 memo then cut back the routine childhood schedule. On 16 March 2026, a federal court paused the memo, the new committee appointments, and the committee's votes. The earlier schedule returned while the case continues (Georgetown University Center for Children and Families, 2026).

Figure 3: Timeline of U.S. Policy Events and Parent Surveys, 2025–2026



Note. Shaded boxes are official actions. White boxes are surveys or court decisions. Sources: KFF (2025, 2026), Autism Science Foundation (2025), Associated Press (2025), Centers for Disease Control and Prevention (2025), and Georgetown University Center for Children and Families (2026).

We cannot yet measure what these events have done to parents' beliefs. U.S. data from 2026 show no clear change in the MMR–autism belief since 2023. They do show a large group of unsure parents. Nearly half of parents who had skipped or delayed vaccines gave mixed and uncertain answers across vaccine myths. Among these parents, 57% rated the MMR–autism claim as probably or definitely true, compared with 30% of parents whose children were up to date (KFF, 2026). In 2025, 41% of parents wrongly believed that spacing out vaccines is healthier for children (KFF, 2025). This was the practice officials had urged. These cross-sectional data cannot show cause and effect. Still, events that carry authority have changed vaccination rates before (Carrieri et al., 2019), and false information stays in memory after correction (Lewandowsky et al., 2012). Whether these U.S. statements reach parents in other countries, including Pakistan, through social media has not been studied. For now it is a question to test, not a finding.

2.11. Behavioral Consequences

The belief leads to measurable under-vaccination. This is clearest in autistic children and their younger siblings. But belief does not always become refusal.

Half of 197 parents in Los Angeles changed or stopped their autistic child's vaccines after diagnosis. This change was tied to the belief that vaccines had played a part (Bazzano et al., 2012). In a cohort of 3,729 autistic and 592,907 non-autistic children, autistic children were less likely to be fully vaccinated at ages 4 to 6 years (adjusted rate ratio 0.87, 95% CI [0.85, 0.88]). Their younger siblings were under-vaccinated at every age (Zerbo et al., 2018). MMR coverage at age 2 was 73% for children with an autistic older sibling and 84% for other children. MMR did not raise autism risk in either group (Jain et al., 2015). Across

studies, younger siblings in families with an autistic child were more than three times as likely to be under-vaccinated (*RR* = 3.20, 95% CI [2.59, 3.96]; Gülle et al., 2026). So the siblings that parents see as most at risk end up less protected, with no benefit in return.

Among 154 Turkish parents of children with autism or other developmental delays, refusal rose from 3.9% before diagnosis to 9.7% after it. The main reason was a belief that vaccines had caused the condition. Yet 88.3% of the same parents disagreed that vaccines cause autism or developmental disorders (Kara-Aksay et al., 2026). In a U.S. sample, past vaccine receipt did not differ between hesitant and non-hesitant parents of children with developmental conditions (Mensah-Bonsu et al., 2021). Hesitancy scores predict days of under-immunization (Opel et al., 2011). This means hesitant parents who still vaccinate can be identified and supported before they stop. A model estimated that a 5% fall in MMR coverage would roughly triple yearly measles cases among U.S. children (Lo & Hotez, 2017).

2.12. Correction Strategies

The belief can be reduced, but reducing it does not reliably change behavior. Methods that shape the vaccination visit itself work more consistently.

2.13. Correcting the Myth

In a randomized trial of 1,759 U.S. parents, a message that disproved the MMR–autism link lowered belief in the link. But it also lowered intention to vaccinate among parents with the most negative attitudes. Pictures of sick children increased belief in the link (Nyhan et al., 2014). Myth-versus-fact formats and fact boxes also failed to produce lasting correction over seven days (Pluviano et al., 2017). Backfire effects are not a reliable finding in general (Swire-Thompson et al., 2020). The point is narrower: lowering the false belief does not by itself raise intention to vaccinate.

2.14. Pointing to the Disease

Information about the dangers of measles, mumps, and rubella improved attitudes more than myth-busting did (Horne et al., 2015). Field evidence agrees. During a measles outbreak in Minnesota, 71% of Somali parents named autism as their main concern about MMR. Still, 95% vaccinated their children because they feared measles (Christianson et al., 2020). Their autism belief did not have to be corrected first.

2.15. Working With Motives and Trusted Messengers

If the belief rests on conspiracy thinking and reactance, messages that threaten a parent's sense of control are likely to meet resistance (Hornsey et al., 2018). Good corrections offer another explanation, avoid repeating the myth, and warn people in advance about misleading claims (Lewandowsky et al., 2012). For parents of autistic children, the other explanation is the strong hereditary part of autism (Campisi et al., 2018). It should be explained without any hint of blame. Who gives the message matters as much as what it says. In 2025, pediatricians were the most trusted source of vaccine information for U.S. parents, including those who had skipped or delayed vaccines (KFF, 2025). Adults who had a health care provider they trusted were less likely to accept vaccine myths. This held after controlling for demographics and party (KFF, 2026).

2.16. Provider Communication and Practical Support

Parents pushed back far more often when providers opened with a question ("What do you want to do about shots?") than with a statement that assumed vaccination (adjusted *OR* = 17.5, 95% CI [1.2, 253.5]). When providers held to their advice, 47% of parents who first resisted then accepted (Opel et al., 2013). A motivational interviewing session on the maternity ward raised infant coverage by 3.2 to 7.3 percentage points in a non-randomized controlled trial (Gagneur et al., 2018). Face-to-face education may improve vaccination status (*RR* = 1.20, 95% CI [1.04, 1.37]) even though it barely changes attitudes (Kaufman et al., 2018). Reminders, default appointments, and fewer practical barriers remain the most effective tools overall (Brewer et al., 2017).

2.17. Pakistan

We found no study that measured the belief that routine childhood vaccines cause autism among Pakistani parents. The only direct sign comes from a Punjab survey of 451 parents. There, the belief that COVID-19 vaccines may cause autism was one of the reasons parents gave for not vaccinating their children (Harmain et al., 2023). A Karachi survey found that 43.4% of parents were unsure whether autism is inherited. It did not ask about vaccines (Anwar et al., 2018).

2.17.1. What Drives Refusal in Pakistan

Refusal is common in some districts, and its reasons differ from those in Western studies. In Bannu, 27.9% of 610 parents had refused routine vaccination. Refusal was most common among mothers with no formal schooling (Khattak et al., 2021). In Karachi slums, use of alternative medicine and past side effects raised the odds of refusal four to five times (Khaliq et al., 2022). In another Karachi sample, 22.3% of parents believed that several vaccines given at once would harm their child (Saeed & Hashmi, 2021). This is the "too many, too soon" idea that the autism claim moved to in other countries (Gerber & Offit, 2009). From Swat to Swabi, the same fears return: birth control, pork or other non-halal ingredients, and foreign plots against Muslims (Murakami et al., 2014; Shah et al., 2022). In a qualitative study in Sialkot and Karachi East in 2024–2025, rumors centered on infertility and population control. Family members, including mothers-in-law, often decided whether a child was vaccinated (VillageReach, 2026). Autism did not appear among parents' reasons in either of these two reports.

2.17.2. The Current Situation, 2025–2026

Recent national events show the same pattern. Pakistan's first HPV vaccine campaign in September 2025 reached 75% coverage against a target of 90%. About 4.0 million refusals were recorded. Refusals centered on fears of infertility, non-halal ingredients, and a hidden plan to reduce the Muslim population. In some schools, teachers who believed the rumors refused to cooperate (Xia et al., 2026). Pakistan reported 31 wild polio cases in 2025 and is one of only two countries where polio is still endemic (World Health Organization, 2026). Measles has come back. There were 4,541 confirmed cases in the first quarter of 2026 and 71 child deaths in its first four months (Gulf News, 2026). None of these sources mention autism as a parental concern.

2.17.3. Why Pakistan May Be Different

In other Muslim-majority countries the belief appears at levels similar to Western samples (Alshammari et al., 2021; Balbir Singh et al., 2019; Samara et al., 2025), so it is probably present in Pakistan too. But it may work differently there. Religious, fertility, and political stories dominate refusal in Pakistan. An autism concern may therefore attach to existing stories of foreign harm rather than to the toxin fears common in Western studies. Trust does not behave as expected. In Karachi, distrust of the government went with lower, not higher, odds of refusal (Khaliq et al., 2022). A mother's level of schooling seems to matter more than in Western samples (Khattak et al., 2021). Autism services are few, and low awareness among families and front-line workers delays diagnosis (Minhas et al., 2015).

2.17.4. What This Means for Pakistan

In the Punjab survey, the most common reasons for refusal were low perceived risk to the child (61%) and fear of putting a foreign substance into the child's body (52.2%; Harmain et al., 2023). With measles now killing children, messages about disease risk have a strong and visible basis. Such messages have worked elsewhere (Christianson et al., 2020; Horne et al., 2015). Timing also matters. The measles vaccine is given at nine months, when parents know the schedule less well. In Kasur, 96.1% of parents knew about the birth dose but only 82.1% knew about the nine-month dose (Ghaffar et al., 2026). Reminders from the health system also fade at this point (VillageReach, 2026). Communication methods from pediatric clinics (Opel et al., 2013) would need to be adapted for vaccinators and Lady Health Workers.

3. Discussion

The evidence fits the predictions of the two frameworks. First, the belief is not mainly a knowledge problem. It is strongest among parents with direct experience of autism. It is predicted by conspiracy thinking, reactance, and overconfidence more than by education (Hornsey et al., 2018; Motta et al., 2018). Second, as the 5C model expects, belief turns into refusal only when other conditions allow it. Many parents who hold the belief still vaccinate (Kara-Aksay et al., 2026). The Pakistani evidence suggests that constraints and collective responsibility matter at least as much as confidence. Third, lowering the belief and changing behavior need different tools. Messages about disease risk, trusted messengers, presumptive communication, and practical support work better than myth correction (Brewer et al., 2017; Christianson et al., 2020; Opel et al., 2013). The 2025–2026 U.S. events add one more condition. When officials support the claim, the group of unsure parents that these methods target may grow.

3.1. Research Priorities

Pakistan first needs a prevalence survey at vaccination and child development clinics, using a validated scale such as the Parent Attitudes about Childhood Vaccines survey (Opel et al., 2011) with an added autism item. Studies should then compare parents of autistic and typically developing children and check younger siblings' vaccine records. Research should also test whether U.S. official statements reach Pakistani parents through social media. Finally, communication trials in Urdu and regional languages should measure actual vaccination and include the extended family.

3.2. Implications for Practice

Clinicians should open the conversation by assuming vaccination will go ahead (Opel et al., 2013), accept what parents saw while separating it from the claim about cause, and talk about measles rather than repeat the myth (Horne et al., 2015). Families with an autistic child need extra attention when a younger sibling is due. Psychologists in autism services are well placed for this work because they meet parents when questions of cause and guilt are strongest.

3.3. Limitations

This review did not follow a registered protocol, did not use double screening, and did not formally rate study quality. We could not search PsycINFO directly. We reached Scopus records only through a third-party engine. Pakistani studies in journals that are not online may have been missed. Most belief studies are cross-sectional and from the United States. Several samples were small, and some SPARK papers share participants. Surveys asked the question in different ways, so their figures cannot be compared directly. The policy events after 2025 are recent, partly recorded only in grey literature, and still under legal review. Most communication trials measured intention rather than actual vaccination.

4. Conclusion

The science on vaccines and autism is settled. The psychology, and now the politics, are not. The belief lasts because it meets needs for explanation and comfort that facts alone do not meet. Official support for the claim may widen the group of unsure parents in which it grows. Children are better protected by how the vaccination visit is run, with trusted messengers and a clear view of the disease, than by winning the argument. For Pakistan, the first step is to find out whether the belief exists and among whom.

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