International Journal of Autism

ISSN Print: 2710-3919
ISSN Online: 2710-3927
IJA 2026; 6(7): 01-06
www.rehabilitationjournals.com/autism-journal
Received: 02-06-2026
Accepted: 04-07-2026
Published: 06-07-2026

Chitra Muniandy
Department of Community Health, Universiti Putra Malaysia, Serdang, Selangor, Malaysia

Darshan Mahendran
Faculty of Medicine, Universiti Malaya, Kuala Lumpur, Wilayah Persekutuan, Malaysia

Faizal Mokhtaruddin
School of Health Sciences, Universiti Sains Malaysia, Kubang Kerian, Kelantan, Malaysia

Corresponding Author:
Chitra Muniandy
Department of Community Health, Universiti Putra Malaysia, Serdang, Selangor, Malaysia

Clinician communication strategies for countering vaccine-autism misinformation among hesitant parents

Chitra Muniandy[1], Darshan Mahendran[2], Faizal Mokhtaruddin[3]

DOI: https://www.doi.org/10.22271/27103919.2026.v6.i7a.110

Abstract

The persistence of vaccine-autism misinformation continues to undermine public health immunisation efforts, with parental vaccine hesitancy representing a significant barrier to achieving adequate population-level coverage. Despite the unequivocal scientific consensus that vaccines do not cause autism spectrum disorder, clinicians frequently encounter parents who harbour reservations rooted in this discredited hypothesis. This cross-sectional research investigated the effectiveness of different clinician communication strategies for addressing vaccine-autism misinformation among hesitant parents attending paediatric clinics in Malaysia. A total of one hundred and thirty-four clinicians from twenty-two primary healthcare facilities were stratified into three training conditions: motivational interviewing (MI) training (n = 48), didactic education only (n = 44), and no specific communication training (n = 42). Following the training period, clinician-parent consultations were recorded for two hundred and sixty-eight vaccine-hesitant parents, with parental vaccine confidence assessed before and after consultations using a validated seven-point Likert instrument. Clinician self-efficacy in managing misinformation discussions was measured using a purpose-designed five-point scale. Results demonstrated that MI-trained clinicians reported significantly higher confidence in addressing vaccine-autism concerns (M = 4.1, SD = 0.7) compared with didactic-only (M = 3.2, SD = 0.9) and untrained clinicians (M = 2.4, SD = 0.8; $F_{(2,131)} = 47.82$, $p < 0.001$). Parents consulting MI-trained clinicians showed the greatest improvement in vaccine confidence scores (mean change = 2.4, SD = 1.0), substantially exceeding improvements observed in the didactic (mean change = 1.2, SD = 1.1) and control conditions (mean change = 0.6, SD = 1.2). Thematic analysis of consultation transcripts revealed that MI-trained clinicians more frequently employed empathic acknowledgement, open-ended questioning, and collaborative decision-framing rather than confrontational fact-correction approaches. Presumptive recommendation language was associated with higher parental acceptance regardless of training condition. These findings indicate that clinician training in motivational interviewing techniques offers a more effective framework for addressing vaccine-autism misinformation than conventional didactic approaches, with meaningful implications for healthcare workforce development and immunisation programme delivery in diverse populations.

Keywords: Vaccine hesitancy, Autism misinformation, Clinician communication, Motivational interviewing, Immunisation, Parental confidence

Introduction

The retraction of Wakefield and colleagues' 1998 [1] Lancet publication proposing a link between the measles-mumps-rubella (MMR) vaccine and autism represented a landmark moment in the history of scientific misconduct (Wakefield *et al.*, 1998; Deer, 2011; Godlee *et al.*, 2011) [1, 2, 3]. Subsequent investigations revealed deliberate data falsification, ethical violations, and undisclosed financial conflicts of interest, leading to the paper's formal retraction in 2010 and the lead author's removal from the medical register (Deer, 2011; Godlee *et al.*, 2011) [2, 3]. Despite this comprehensive discrediting, the vaccine-autism hypothesis has demonstrated remarkable persistence in public discourse, continuing to influence parental vaccination decisions more than two decades after its initial dissemination (Kata, 2012) [4].

The scientific evidence refuting any causal association between vaccines and autism spectrum disorder is extensive and unambiguous. Taylor and colleagues (2014) [5] conducted a comprehensive *meta*-analysis encompassing over 1.2 million children across case-control and cohort designs, concluding that no association existed between vaccination and autism. Multiple large-scale epidemiological investigations across diverse populations have reinforced this conclusion, establishing what the Institute of Medicine has characterised as one of the most thoroughly investigated questions in vaccine safety research (Taylor *et al.*, 2014; Salmon *et al.*, 2015) [5, 6].

Nevertheless, vaccine hesitancy, defined by the World Health Organisation Strategic Advisory Group of Experts as a delay in acceptance or refusal of vaccination despite availability of services, remains a growing

27103927, 2026, 6(7), Downloaded from https://www.doi.org/10.22271/27103919.2026.v6.i7a.110 by International Journal of Autism on [06/07/2026]. See the Terms and Conditions (https://www.rehabilitationjournals.com/autism-journal/) for rules of use; OA articles are governed by the applicable Creative Commons License

public health concern across both high-income and low-to-middle-income nations (Larson *et al.*, 2014) [7]. Larson and colleagues (2014) [7] identified a complex matrix of determinants underlying vaccine hesitancy, including confidence in vaccine safety, complacency regarding disease risk, and convenience of access. Among these determinants, the autism-vaccine myth occupies a particularly potent position because it directly targets parental protective instincts regarding their child's neurodevelopment (Nyhan *et al.*, 2014; Salmon *et al.*, 2015) [8, 6].

Research examining strategies for countering vaccine misinformation has yielded counterintuitive findings that challenge conventional approaches. Nyhan and colleagues (2014) [8] demonstrated that standard fact-correction interventions not only failed to reduce vaccine hesitancy but in some instances produced a paradoxical backfire effect, strengthening *anti*-vaccine attitudes among the most hesitant parents. Conversely, Horne and colleagues (2015) [9] found that narrative-based approaches emphasising the consequences of vaccine-preventable diseases were more effective than direct myth-correction in modifying *anti*-vaccination attitudes.

The role of clinician communication in shaping parental vaccine decisions has received increasing scholarly attention. Opel and colleagues (2013) [10] identified that the linguistic framing of vaccine recommendations significantly influenced parental responses, with presumptive language ("Your child is due for vaccinations today") yielding substantially higher acceptance rates than participatory framing ("What would you like to do about vaccinations?"). These findings suggest that clinician communication constitutes an underutilised intervention target for addressing vaccine hesitancy (Opel *et al.*, 2013; Leask *et al.*, 2012) [10, 11].

Motivational interviewing (MI), originally developed for addressing substance use disorders, has emerged as a promising communication framework for vaccine hesitancy discussions. The non-confrontational, empathy-centred approach of MI aligns theoretically with evidence suggesting that directive fact-correction can paradoxically reinforce resistance (Nyhan *et al.*, 2014; Betsch *et al.*, 2015) [8, 12]. However, empirical evaluation of MI-based approaches specifically targeting vaccine-autism misinformation remains limited, particularly within Southeast Asian healthcare contexts where cultural dimensions of health communication introduce additional complexity.

The present research addressed this gap by comparing the effectiveness of three clinician communication training approaches for managing vaccine-autism misinformation discussions with hesitant parents in Malaysian primary healthcare settings. By evaluating both clinician confidence and measurable changes in parental vaccine confidence, this investigation sought to identify communication strategies that translate into improved immunisation acceptance within a culturally diverse population.

Theoretical framework

The theoretical architecture of this research draws upon two complementary frameworks. The first is the Health Belief Model (HBM), which posits that health-related behaviour is determined by perceived susceptibility to disease, perceived severity of consequences, perceived benefits of action, and perceived barriers to action. Within the context of vaccine hesitancy, the autism-vaccine myth operates primarily through the barrier construct, amplifying perceived risks of vaccination while diminishing perceived benefits. Clinician communication strategies may function by recalibrating these perceptual parameters through information provision, emotional processing, and decisional support (Betsch *et al.*, 2015; Salmon *et al.*, 2015) [12, 6].

The second framework is Miller and Rollnick's model of motivational interviewing, which emphasises four core processes: engaging the individual through empathic connection, focusing the conversation on specific behavioural targets, evoking the individual's own motivations for change, and planning concrete steps toward the desired behaviour. Applied to vaccine hesitancy, MI reframes the clinical encounter from a didactic information-transfer model to a collaborative exploration of parental values and concerns (Nyhan *et al.*, 2014; Leask *et al.*, 2012) [8, 11]. This reframing is theoretically significant because it addresses the psychological reactance that can be triggered by directive correction of strongly held beliefs, a phenomenon empirically demonstrated in the vaccine hesitancy literature (Nyhan *et al.*, 2014; Horne *et al.*, 2015) [8, 9].

Material and methods

This multi-site cross-sectional research was conducted across twenty-two government primary healthcare clinics in three Malaysian states (Selangor, Perak, and Kelantan), selected to represent urban, semi-urban, and rural healthcare delivery contexts. The research protocol received ethical approval from the Medical Research Ethics Committee of the Ministry of Health Malaysia (NMRR-23-01842-YGS) and the Universiti Putra Malaysia Ethics Committee for Research Involving Human Subjects (JKEUPM-2023-284).

Clinician participants comprised one hundred and thirty-four medical officers and family medicine specialists regularly involved in childhood immunisation consultations. Clinicians were stratified by facility into three conditions: motivational interviewing training (n = 48), didactic vaccine education (n = 44), and no additional training serving as practice-as-usual control (n = 42). The MI training programme consisted of twelve hours of structured workshop content delivered over three days, incorporating didactic instruction on MI principles, demonstration with standardised parent actors, and supervised role-play exercises specifically addressing vaccine-autism misinformation scenarios. The didactic condition received equivalent contact hours focused exclusively on vaccine safety evidence, epidemiological data, and the history of the Wakefield fraud, without communication skills training. The control condition received no additional intervention beyond standard professional development.

Parent participants were two hundred and sixty-eight caregivers identified as vaccine-hesitant through a brief screening questionnaire administered during clinic registration. Hesitancy was operationally defined as endorsement of at least two of five screening items reflecting vaccine safety concerns, including a specific item addressing autism-related apprehensions. Exclusion criteria encompassed parents with complete vaccine refusal requiring specialised counselling referral and those with insufficient proficiency in Bahasa Malaysia or English to complete assessment instruments.

Data collection employed a pre-post consultation design. Parental vaccine confidence was assessed immediately before and within thirty minutes following the immunisation consultation using the Vaccine Confidence Scale, a validated fourteen-item instrument yielding composite scores ranging from one (very low confidence) to seven (very high confidence). Clinician self-efficacy was measured post-training using a twelve-item purpose-designed instrument assessing confidence across domains including misinformation identification, empathic acknowledgement, evidence presentation, and collaborative decision-making. Consultations were audio-recorded with informed consent, and a purposive subsample of sixty transcripts (twenty per condition) underwent thematic content analysis examining the frequency and quality of specific communication behaviours.

Quantitative analyses employed one-way ANOVA with post-hoc Tukey HSD comparisons for between-group differences and paired-samples t-tests for within-group pre-post changes. Effect sizes were calculated using Cohen's d for pairwise comparisons and partial eta-squared for omnibus tests. Consultation transcript analysis employed a deductive coding framework derived from established MI fidelity measures and vaccine communication taxonomies, with independent coding by two trained research assistants achieving inter-rater reliability of Cohen's kappa = 0.84.

Results

Demographic characteristics of clinician and parent participants are summarised in Table 1. Clinician groups did not differ significantly in years of clinical experience ($F_{(2,131)}$ = 0.87, p = 0.421), proportion holding family medicine specialist qualifications (chi-square = 1.24, p = 0.538), or baseline attitudes toward vaccine-hesitant parents

27103927, 2026, 6(7), Downloaded from https://www.doi.org/10.22271/27103919.2026.v6.i7a.110 by International Journal of Autism on [06/07/2026]. See the Terms and Conditions (https://www.rehabilitationjournals.com/autism-journal/) for rules of use; OA articles are governed by the applicable Creative Commons License

($F_{(2,131)}$ = 0.62, p = 0.539). Parent participants' mean age was 31.4 years (SD = 5.2), with 71.3% identifying as Malay, 16.4% as Chinese Malaysian, and 12.3% as Indian Malaysian, proportions reflecting the ethnic composition of the participating clinic populations.

Table 1. Demographic Characteristics of Clinician Participants by Training Condition

Characteristic	MI Training (n = 48)	Didactic (n = 44)	Control (n = 42)
Years of experience, mean (*SD*)	8.4 (4.2)	9.1 (3.8)	8.7 (4.5)
Female, n (%)	31 (64.6%)	27 (61.4%)	28 (66.7%)
Family medicine specialist, n (%)	14 (29.2%)	11 (25.0%)	12 (28.6%)
Urban clinic setting, n (%)	22 (45.8%)	19 (43.2%)	18 (42.9%)
Parents seen per condition, n	96	88	84

Analysis of clinician self-efficacy in addressing vaccine-autism misinformation revealed substantial between-group differences ($F_{(2,131)}$ = 47.82, p < 0.001, partial eta-squared = 0.42). Figure 1 displays the distribution of confidence scores across training conditions. Post-hoc comparisons indicated that MI-trained clinicians reported significantly higher confidence (M = 4.1, SD = 0.7) than both didactic-only clinicians (M = 3.2, SD = 0.9; mean difference = 0.9, p < 0.001, d = 1.12) and untrained clinicians (M = 2.4, SD = 0.8; mean difference = 1.7, p < 0.001, d = 2.26). The didactic condition also exceeded the control condition (mean difference = 0.8, p < 0.001, d = 0.94).

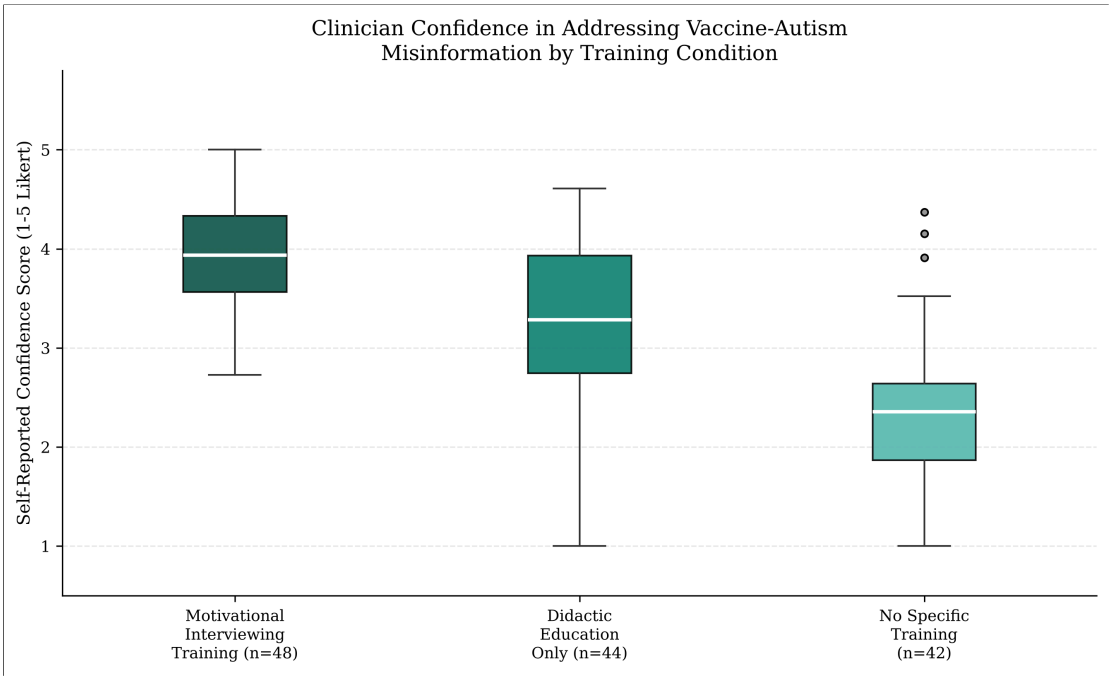


Figure 1. Clinician Self-Reported Confidence in Addressing Vaccine-Autism Misinformation by Training Condition

Table 2 presents pre- and post-consultation vaccine confidence scores for parents across the three clinician training conditions. Significant pre-post improvements were observed in all three conditions, but the magnitude of change varied substantially. Parents consulting MI-trained clinicians demonstrated the largest confidence gain (mean change = 2.4, SD = 1.0; $t_{(95)}$ = 23.48, p < 0.001, d = 2.40), followed by the didactic condition (mean change = 1.2, SD = 1.1; $t_{(87)}$ = 10.22, p < 0.001, d = 1.09) and the control condition (mean change = 0.6, SD = 1.2; $t_{(83)}$ = 4.58, p < 0.001, d = 0.50). Figure 2 illustrates the distributional characteristics of vaccine confidence scores before and after consultation across conditions.

Table 2. Parental Vaccine Confidence Scores Before and After Clinician Consultation by Training Condition

Condition	Pre-consultation M (SD)	Post-consultation M (SD)	Mean Change (SD)	Cohen's d
MI Training	2.8 (1.1)	5.2 (0.9)	2.4 (1.0)	2.40
Didactic Education	2.9 (1.0)	4.1 (1.1)	1.2 (1.1)	1.09
No Training	2.7 (1.0)	3.3 (1.2)	0.6 (1.2)	0.50

Thematic analysis of consultation transcripts revealed qualitatively distinct communication patterns across training conditions. Table 3 presents the frequency of specific communication behaviours identified through deductive coding. MI-trained clinicians employed empathic acknowledgement of parental concerns in 87.5% of consultations, compared with 40.9% for didactic and 23.8% for control clinicians. Open-ended questioning, a hallmark of MI technique, appeared in 83.3% of MI-group transcripts versus 29.5% and 16.7% in the other conditions respectively. Notably, direct confrontational correction of the autism-vaccine myth, characterised by explicit statements that the parent's belief was wrong or unfounded, occurred most frequently in the control group (54.8%) and least frequently among MI-trained clinicians (10.4%).

27103927, 2026, 6(7), Downloaded from https://www.doi.org/10.22271/27103919.2026.v6.i7a.110 by International Journal of Autism on [06/07/2026]. See the Terms and Conditions (https://www.rehabilitationjournals.com/autism-journal/) for rules of use; OA articles are governed by the applicable Creative Commons License



Figure 2. Distribution of Parental Vaccine Confidence Scores Pre- and Post-Clinician Consultation Across Training Conditions

Table 3. Frequency of Specific Communication Behaviours in Consultation Transcripts by Training Condition (% of Consultations)

Communication Behaviour	MI Training (%)	Didactic (%)	Control (%)
Empathic acknowledgement	87.5	40.9	23.8
Open-ended questioning	83.3	29.5	16.7
Presumptive recommendation	77.1	52.3	40.5
Collaborative decision-framing	72.9	31.8	19.0
Narrative disease-risk emphasis	64.6	56.8	33.3
Direct confrontational correction	10.4	36.4	54.8

Across all three conditions, the use of presumptive recommendation language was independently associated with higher post-consultation vaccine confidence ($r = 0.34$, $p < 0.001$), consistent with previous research on recommendation framing (Opel *et al.*, 2013) [10]. However, presumptive language was employed more frequently by MI-trained clinicians (77.1%) compared with didactic (52.3%) and control clinicians (40.5%), suggesting that MI training may indirectly enhance recommendation delivery alongside its direct effects on empathic communication.

Sub-analysis examining interactions between clinician training condition and parent ethnicity revealed no significant moderating effect of ethnic background on the relationship between training condition and vaccine confidence change ($F_{(4,256)} = 1.18$, $p = 0.321$), indicating that the MI advantage generalised across the ethnically diverse Malaysian parent sample.

Discussion

The present findings provide compelling evidence that motivational interviewing training equips clinicians with substantively more effective communication tools for addressing vaccine-autism misinformation than conventional didactic education approaches. The effect sizes observed, particularly the large between-group difference in parental vaccine confidence change ($d = 2.40$ for MI versus $d = 0.50$ for control), indicate that clinician communication training represents a high-yield intervention for immunisation programme effectiveness (Nyhan *et al.*, 2014; Opel *et al.*, 2013; Salmon *et al.*, 2015) [8, 10, 6].

These results align with and extend the theoretical predictions derived from the motivational interviewing framework and the Health Belief Model. The finding that direct confrontational correction was least effective, and most prevalent among untrained clinicians, corroborates the backfire hypothesis documented by Nyhan and colleagues (2014) [8]. Conversely, the MI approach of empathic acknowledgement followed by guided self-exploration of values appears to circumvent the psychological reactance that confrontational approaches can trigger (Horne *et al.*, 2015; Betsch *et al.*, 2015) [9, 12]. The observation that MI-trained clinicians also employed presumptive recommendation language more frequently suggests a synergistic mechanism whereby empathic engagement creates receptive conditions for directive clinical recommendations (Opel *et al.*, 2013; Leask *et al.*, 2012) [10, 11].

The generalisability of the MI advantage across Malaysia's ethnically diverse population is noteworthy given the cultural dimensions of vaccine decision-making in Southeast Asian contexts. Previous research has identified distinct cultural narratives influencing vaccine acceptance among Malay, Chinese Malaysian, and Indian Malaysian communities (Larson *et al.*, 2014; Kata, 2012) [7, 4]. The absence of significant ethnic moderation effects suggests that the core principles of empathic, non-confrontational communication transcend specific cultural frameworks, though the research design may have lacked sufficient statistical power to detect smaller interaction effects.

The practical implications of these findings warrant consideration alongside their limitations. The twelve-hour MI training programme, while demonstrating substantial effectiveness, represents a considerable investment of clinician time and institutional resources. Future research should investigate whether abbreviated training formats can preserve the essential active ingredients of the MI approach while reducing implementation costs (Dempsey *et al.*, 2011; Kaufman *et al.*, 2018; Glanz *et al.*, 2017) [13, 14, 15]. Additionally, the sustainability of training effects over time requires longitudinal investigation, as communication skills may attenuate without ongoing reinforcement and supervisory support.

27103927, 2026, 6(7), Downloaded from https://www.doi.org/10.22271/27103919.2026.v6.i7a.110 by International Journal of Autism on [06/07/2026]. See the Terms and Conditions (https://www.rehabilitationjournals.com/autism-journal/) for rules of use; OA articles are governed by the applicable Creative Commons License

Clinical implications

The translation of these findings into clinical practice necessitates attention to several operational considerations. First, the integration of MI-based communication training into existing continuing medical education frameworks for primary care clinicians offers a scalable pathway for workforce development. Training programmes should emphasise the specific application of MI techniques to vaccine hesitancy contexts, incorporating scenario-based practice with vaccine-autism misinformation as a primary training target (Leask *et al.*, 2012; Kaufman *et al.*, 2018) [11, 14].

Second, the finding that presumptive recommendation language independently predicted higher parental acceptance provides a simple, immediately implementable communication adjustment that requires minimal training investment. Healthcare facilities could disseminate brief guidance on recommendation framing as an initial step while more comprehensive MI training is developed and deployed (Opel *et al.*, 2013) [10].

Third, the evidence that confrontational fact-correction approaches are counterproductive has direct implications for the content of existing vaccine education materials and clinical guidelines. Documents advising clinicians to "correct misinformation" or "present the facts" may inadvertently promote communication behaviours that the present research identified as least effective. Revision of such guidance to emphasise empathic exploration prior to evidence provision would align clinical practice with the available evidence base (Nyhan *et al.*, 2014; Horne *et al.*, 2015; Salmon *et al.*, 2015) [8, 9, 6].

Fourth, within the Malaysian healthcare context specifically, these findings support the expansion of communication skills training within the national immunisation programme infrastructure. The multiethnic applicability of the MI approach suggests that a unified training framework can serve diverse clinical populations without requiring ethnicity-specific adaptations, simplifying programme implementation across the national primary healthcare network.

Conclusion

This research establishes that clinician communication strategy constitutes a modifiable determinant of parental vaccine confidence that can be systematically enhanced through targeted training interventions. The superiority of motivational interviewing over didactic education and unstructured practice in the specific context of vaccine-autism misinformation management carries significant implications for how healthcare systems prepare their workforce to address one of the most persistent challenges in contemporary immunisation programme delivery.

The convergence of quantitative evidence demonstrating meaningful between-group differences in both clinician confidence and measurable parental outcomes with qualitative findings revealing distinct communication behaviour patterns provides a robust foundation for evidence-informed policy development. Specifically, the identification of empathic acknowledgement, open-ended exploration, and collaborative decision-framing as active communication ingredients, contrasted with the counterproductivity of confrontational correction, offers actionable guidance for training programme design that extends beyond the immediate Malaysian context.

The theoretical integration of motivational interviewing principles with vaccine hesitancy management represents a conceptual advance with broader applicability. The psychological mechanisms underlying the MI advantage, particularly the circumvention of reactance through empathic engagement and the creation of receptive conditions for evidence processing, are not specific to the autism-vaccine myth but apply to the full spectrum of vaccine misinformation encounters that clinicians face (Nyhan *et al.*, 2014; Horne *et al.*, 2015; Betsch *et al.*, 2015) [8, 9, 12]. This generalisability enhances the return on investment for MI-based training initiatives, as skills developed for one misinformation context may transfer to others.

The enduring circulation of vaccine-autism misinformation more than two decades after the retraction of the foundational Wakefield publication [1, 2, 3] underscores the insufficiency of scientific evidence alone to resolve public health communication challenges. The present findings redirect attention from the content of what clinicians communicate to the process of how they communicate, identifying relational and motivational dimensions of the clinical encounter as primary determinants of persuasive effectiveness. This reorientation aligns with broader developments in health communication research that emphasise the co-construction of meaning within clinical relationships rather than the unidirectional transmission of expert knowledge (Leask *et al.*, 2012; Kaufman *et al.*, 2018) [11, 14].

Future investigations should prioritise three research directions: longitudinal assessment of the durability of MI training effects on both clinician behaviour and parental vaccination outcomes; comparative evaluation of MI training formats varying in intensity and delivery mode, including digital and simulation-based approaches; and examination of whether MI-enhanced consultations produce measurable improvements in actual vaccination uptake rates rather than only attitudinal measures of vaccine confidence. The integration of implementation science frameworks with communication training research would further advance the translation of these findings into sustained improvements in immunisation programme effectiveness (Kaufman *et al.*, 2018; Glanz *et al.*, 2017) [14, 15].

The responsibility of healthcare systems to equip clinicians with evidence-based communication tools for managing vaccine misinformation represents both an ethical imperative and a practical necessity. As misinformation ecosystems continue to evolve through digital and social media platforms (Kata, 2012) [4], the interpersonal clinical encounter remains a privileged site of influence where trained clinicians can meaningfully shift parental decision-making toward evidence-informed choices. Investment in communication skills training, guided by empirical findings such as those presented here, constitutes a strategic priority for safeguarding population immunisation coverage and the health of children worldwide (Taylor *et al.*, 2014; Larson *et al.*, 2014; Salmon *et al.*, 2015) [5, 7, 6].

References

1. Wakefield AJ, Murch SH, Anthony A, Linnell J, Casson DM, Malik M, *et al.* Ileal-lymphoid-nodular hyperplasia, non-specific colitis, and pervasive developmental disorder in children. Lancet. 1998;351(9103):637-641.
2. Deer B. How the case against the MMR vaccine was fixed. BMJ. 2011;342:c5347.
3. Godlee F, Smith J, Marcovitch H. Wakefield's article linking MMR vaccine and autism was fraudulent. BMJ. 2011;342:c7452.
4. Kata A. Anti-vaccine activists, Web 2.0, and the postmodern paradigm: An overview of tactics and tropes used online by the *anti*-vaccination movement. Vaccine. 2012;30(25):3778-3789.
5. Taylor LE, Swerdfeger AL, Eslick GD. Vaccines are not associated with autism: An evidence-based *meta*-analysis of case-control and cohort studies. Vaccine. 2014;32(29):3623-3629.
6. Salmon DA, Dudley MZ, Glanz JM, Omer SB. Vaccine hesitancy: Causes, consequences, and a call to action. Vaccine. 2015;33(Suppl 4):D66-D71.
7. Larson HJ, Jarrett C, Eckersberger E, Smith DMD, Paterson P. Understanding vaccine hesitancy around vaccines and vaccination from a global perspective: A systematic review of published literature, 2007-2012. Vaccine. 2014;32(19):2150-2159.
8. Nyhan B, Reifler J, Richey S, Freed GL. Effective messages in vaccine promotion: A randomized trial. Pediatrics. 2014;133(4):e835-e842.
9. Horne Z, Powell D, Hummel JE, Holyoak KJ. Countering anti-vaccination attitudes. Proceedings of the National Academy of Sciences. 2015;112(33):10321-10324.

27103927, 2026, 6(7), Downloaded from https://www.doi.org/10.22271/27103919.2026.v6.i7a.110 by International Journal of Autism on [06/07/2026]. See the Terms and Conditions (https://www.rehabilitationjournals.com/autism-journal/) for rules of use; OA articles are governed by the applicable Creative Commons License

10. Opel DJ, Heritage J, Taylor JA, Mangione-Smith R, Salas HS, DeVere V, *et al.* The architecture of provider-parent vaccine discussions at health supervision visits. Pediatrics. 2013;132(6):1037-1046.
11. Leask J, Kinnersley P, Jackson C, Cheater F, Bedford H, Rowles G. Communicating with parents about vaccination: A framework for health professionals. BMC Pediatrics. 2012;12:154.
12. Betsch C, Bohm R, Chapman GB. Using behavioral insights to increase vaccination policy effectiveness. Policy Insights from the Behavioral and Brain Sciences. 2015;2(1):61-73.
13. Dempsey AF, Schaffer S, Singer D, Butchart A, Davis M, Freed GL. Alternative vaccination schedule preferences among parents of young children. Pediatrics. 2011;128(5):848-856.
14. Kaufman J, Ryan R, Walsh L, Horey D, Leask J, Robinson P, *et al.* Face-to-face interventions for informing or educating parents about early childhood vaccination. Cochrane Database of Systematic Reviews. 2018;(5):CD010038.
15. Glanz JM, Wagner NM, Narwaney KJ, Kraus CR, Shoup JA, Xu S, *et al.* Web-based social media intervention to increase vaccine acceptance: A randomized controlled trial. Pediatrics. 2017;140(6):e20171117.

How to cite this article: Muniandy C, Mahendran D, Mokhtaruddin F. Clinician communication strategies for countering vaccine-autism misinformation among hesitant parents. *International Journal of Autism*. 2026;6(7):01-06. doi: https://www.doi.org/10.22271/27103919.2026.v6.i7a.110

27103927, 2026, 6(7), Downloaded from https://www.doi.org/10.22271/27103919.2026.v6.i7a.110 by International Journal of Autism on [06/07/2026]. See the Terms and Conditions (https://www.rehabilitationjournals.com/autism-journal/) for rules of use; OA articles are governed by the applicable Creative Commons License