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A field test of empathetic refutational and motivational interviewing to address vaccine hesitancy among patients

Angelo Fasce ✉, Mirela Mustață, Alexandra Deliu, Dawn Holford, Linda Karlsson, Virginia Gould, Gheorghe Gindrovel Dumitra, Dana Farcasanu, Iulia Vișinescu, Pierre Verger & Stephan Lewandowsky

Abstract

Vaccine hesitancy is among the most concerning public health issues due to declining immunization rates worldwide. We report a mixed-methods field test of two conversational techniques that allow for an empathetic dialogue on vaccination between health care professionals and patients: Empathetic-refutational interviewing (ERI) and motivational interviewing (MI). Thirty Romanian general practitioners were assigned to an untrained control group and to two experimental groups in which they were trained in ERI or MI. After training, physicians had conversations on HPV and influenza vaccines with 334 patients who were hesitant to receive a vaccination. Patients of physicians in the ERI group demonstrated larger increases in positive attitudes toward vaccines and willingness to get vaccinated, while a greater proportion of patients in the MI group scheduled vaccination appointments. Interviews with participating physicians revealed overall satisfaction with the conversational techniques. Empathetic interpersonal communication can have a substantial positive impact on vaccination rates, especially for vaccines subject to mass misinformation campaigns.
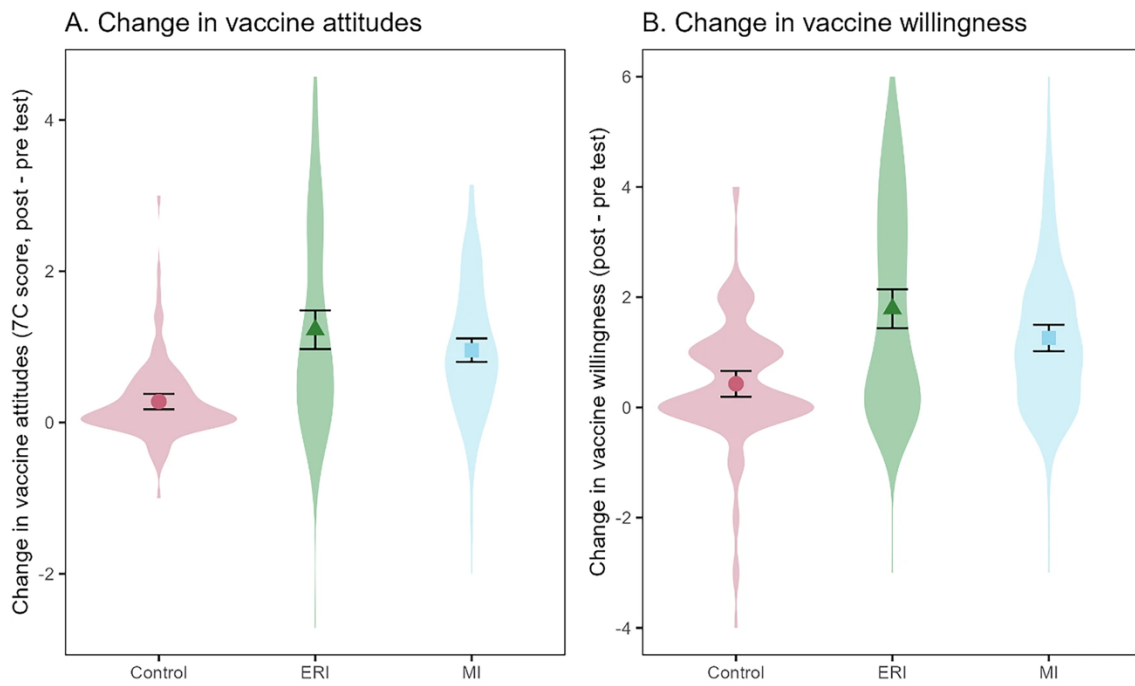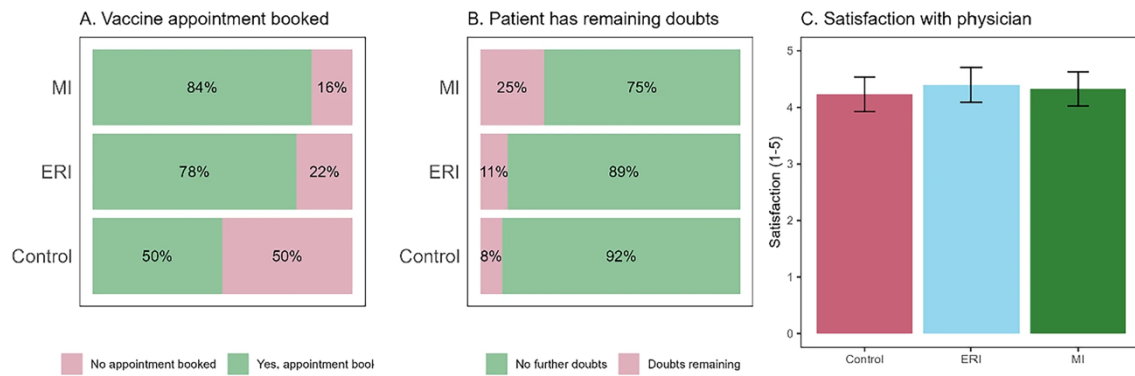
A. Change in vaccine attitudes

B. Change in vaccine willingness

Figure1

A. Vaccine appointment booked

B. Patient has remaining doubts

C. Satisfaction with physician

No appointment booked   Yes, appointment bool

No further doubts   Doubts remaining

Figure2

	ERI				MI			
	Pre-test M (SD)	Post-test M (SD)	t	Hedges' g	Pre-test M (SD)	Post-test M (SD)	t	Hedges' g
Confidence in vaccines	4.08 (0.33)	4 (0)	−0.709	−0.215	3.95 (0.37)	4.1 (0.32)	1.406	0.426
Proactive efficacy	4.5 (0.24)	4.85 (0.24)	4.583***	1.388	4.35 (0.24)	4.6 (0.32)	2.236	0.677
Trust in authorities	4.8 (0.42)	5 (0)	1.50	0.454	5 (0)	5 (0)	–	–
Openness to patients	4.3 (0.95)	4.7 (0.48)	1.809	0.548	3.6 (1.74)	4.1 (1.20)	1.342	0.406
Perceived constraints	2.50 (1.43)	2 (1.41)	−1.103	−0.334	2.7 (1.7)	2.5 (1.27)	−0.688	−0.208
Reluctant trust	3.11 (1.15)	3.67 (1.66)	−1.644	0.522	3.7 (1.34)	2.9 (1.85)	−1.309	−0.397
Knowledge about the technique	8.7 (2.26)	13.1 (1.29)	6.41***	1.941	4.1 (1.1)	7.1 (1.60)	5.031***	1.524
Behaviors related to the technique	–	–	–	–	3.88 (0.66)	4.64 (0.51)	3.389**	1.026
Difficulties in addressing arguments	2.33 (0.6)	1.45 (0.38)	−3.639**	−1.102	2.53 (0.69)	2.29 (0.92)	−0.89	−0.27

Note. Significant differences in bold. *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

Table1

	ERI M (SD)	MI M (SD)	t	Hedges' g
Confidence in vaccines	4.00 (0)	4.10 (0.32)	1.000	0.428
Proactive efficacy	4.85 (0.22)	4.60 (0.32)	−1.987	−0.851
Difficulties in addressing arguments	1.45 (0.38)	2.29 (0.92)	**2.647***	1.134
Perceived competence in the technique	9.47 (0.4)	7.90 (1.7)	**−2.626***	−1.211

Note. Significant differences in bold. *$p<0.05$, **$p<0.01$, ***$p<0.001$.

Table2

Outcome	Fixed effects	b	SE	t	p
Post-test vaccine attitudes	Intercept	−0.28	0.17	1.65	0.111
	Group: ERI	0.38	0.24	1.59	0.123
	Group: MI	0.36	0.24	1.55	0132
	Pre-test vaccine attitudes	**0.80**	**0.04**	**19.28**	**<0.001**
Post-test vaccination willingness	Intercept	**−0.31**	**0.15**	**2.15**	**0.040**
	Group: ERI	**0.50**	**0.21**	**2.40**	**0.023**
	Group: MI	0.38	0.20	1.88	0.070
	Pre-test vaccination willingness	**0.64**	**0.05**	**13.25**	**<0.001**

Note. Pre- and post-test variables were z-scored. Intercept represents the control group mean. Significant effects in bold.

Table3

Outcome	Fixed effects	b	SE	t	p
Satisfaction	Group: ERI	0.30	0.31	0.97	0.339
	Group: MI	0.17	0.30	0.56	0.579
	Vaccine attitudes	**0.35**	**0.06**	**5.95**	**<0.001**

Outcome	Fixed effects	b	SE	z	p
Doubts	Group: ERI	0.25	1.08	0.23	0.817
	Group: MI	1.31	0.92	1.42	0.157
	Vaccine attitudes	0.17	0.32	0.53	0.597
Appointments	Group: ERI	2.25	1.21	1.85	0.064
	Group: MI	**2.66**	**1.24**	**2.15**	**0.031**
	Vaccine attitudes	**1.19**	**0.26**	**4.63**	**<0.001**

Note. Significant effects in bold.

Table4

A field test of empathetic refutational and motivational interviewing to address vaccine hesitancy among patients

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抄読会 2025/07/15
湯尻顕伍

研究背景

- ワクチン躊躇は公衆衛生への脅威

- 医師と患者とのコミュニケーションが重要

- 効果的な介入手法の検証が必要

研究目的

医師・患者間でのコミュニケーション手法の効果検証：

1. 共感的反論的面接(ERI)

2. 動機づけ面接(MI)

3. 対照群(従来通りの対応)

共感的反論的面接
(empathetic-refutational interviewing:ERI)

1．懸念の引き出し

2．肯定   ただし、根底にある

3．個別の反論   不信感などは否定しない

4．事実情報の提供

動機づけ面接
(motivational interviewing:MI)

1．関係構築

2．理解：患者にとって何が一番重要？

3．情報提供

4．自立性の尊重

研究参加者

- 医師：ルーマニアの一般開業医30名

- 患者：ワクチン躊躇のある患者334名

- 対象ワクチン：HPV、インフルエンザワクチン

研究デザイン

3グループに分類

1. ERI群：共感的反証的面接訓練
2. MI群：動機づけ面接訓練
3. 対照群：訓練なし

主要評価項目

- ワクチンに対する態度

- 接種意欲

	ERI				MI			
	Pre-test M (SD)	Post-test M (SD)	*t*	Hedges' *g*	Pre-test M (SD)	Post-test M (SD)	*t*	Hedges' *g*
Confidence in vaccines	4.08 (0.33)	4 (0)	−0.709	−0.215	3.95 (0.37)	4.1 (0.32)	1.406	0.426
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Trust in authorities	4.8 (0.42)	5 (0)	1.50	0.454	5 (0)	5 (0)	–	–
Openness to patients	4.3 (0.95)	4.7 (0.48)	1.809	0.548	3.6 (1.74)	4.1 (1.20)	1.342	0.406
Perceived constraints	2.50 (1.43)	2 (1.41)	−1.103	−0.334	2.7 (1.7)	2.5 (1.27)	−0.688	−0.208
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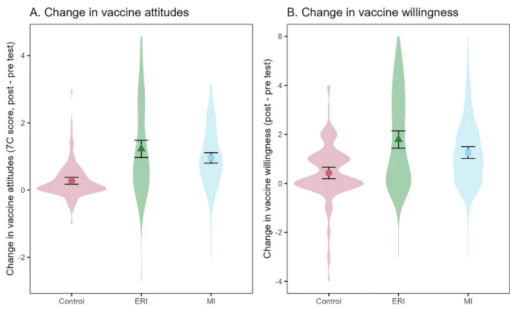**Fig. 1: Change in attitudes toward vaccines and willingness to get vaccinated by group.**

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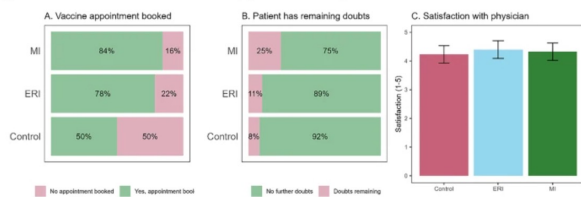Fig. 2: Effects of communication approaches on post-consultation outcomes.

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主要結果(1)　患者態度の改善

ERI/MI群ともに対照群より有意に改善

主要結果(2)医師への効果

ERI群:
反ワクチン論への対応困難感が低下
コミュニケーション技法への自信向上
MI群:
患者の予約取得率が最も高い

研究の限界

研究対象ワクチンが限定的
群間の初期差
長期的効果は不明

まとめ

ERIとMIはともにワクチン躊躇に有効

医師と患者双方の満足度が高い