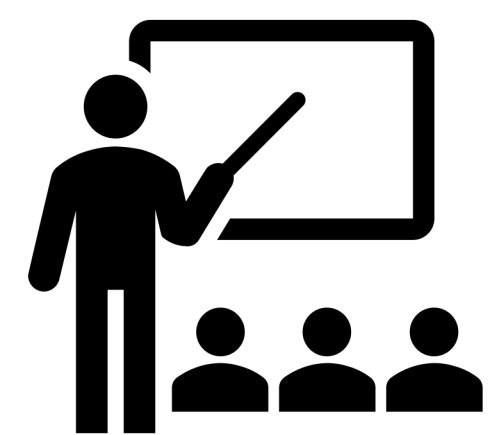


# Comparing the efficacy of motivational versus educational interventions on vaccination uptake: A systematic review and meta-analysis

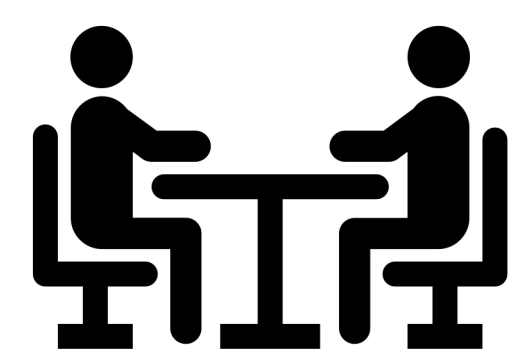
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## Background



Educational intervention is the traditional approach to increase vaccination



Motivational intervention (MI) approach shown to improve various health behaviors



Efficacy of MI and traditional educative interventions on vaccination rates remains unknown

## Methods

- Systematic review was conducted to identify educational and MI interventions impact on vaccination rates (Pubmed, PsycINFO, and Cochrane trials databases)
- Meta-analyses were conducted among randomized controlled trials (RCTs)
- Assessed vaccination rates post patient education or MI/MC vaccine counseling in context of adult or child vaccination
- Study screening, data extraction and study quality were assessed by multiples reviewers

## Results

### Identification of studies via databases and registers

Records identified from: Medline: 25,398; PsycInfo: 2,008; Cochrane trials: 2,171; Total : 29,577

Records removed *before screening*: Duplicate records removed: 2,653

Records screened: 26,924

Reports excluded: 26,706

Reports sought for retrieval: 218

Reports not retrieved: 5

Reports assessed for eligibility: 213

### Reports excluded:

Campaign or populational study (n = 8 )  
Intervention (n = 75 e.g., no educational or MI component)  
Outcome (n = 12)

Studies with educational intervention included in review: 108\*  
Studies with MI intervention included in review: 10\*

\*2 studies has MI and educational experimental arms, therefore are in both categories

## Results

Meta-analyses of post intervention prevalence of vaccine uptake and Risk Ratio of interventions (RCTs) compared to the control group

Outcomes	Group	Number of arms	Pooled effect size
Post intervention prevalence of vaccine uptake	Education	177	0.52 (95% CI: 0.48-0.56)
	MI or MC	11	0.45 (95% CI: 0.29-0.62)
	Control (education)	75	0.39 (95% CI: 0.34-0.45)
	Control (MI or MC)	4	0.56 (95% CI: 0.34-0.76)
Risk Ratio of interventions compared to the control group (RCTs only)	Education	93	1.10 (95% CI: 1.03-1.16)*
	MI or MC	5	1.07 (95% CI: 0.78-1.45)

\*p<0.005

- Majority of RCTs (n=32) provided only short description of control group and 19 did not provide any description
- Description of MI/MC training was poor among 9/10 MI studies
- Fidelity assessment of MI delivering was present in 2/10 MI studies

Subgroup analyses according to the type of population: significant superiority when interventions delivered to caregivers (child vaccination) as compared to adult population

Education	Adult	119	0.44 (95% CI: 0.40-0.49)	28.13	<0.001
	Caregiver	58	0.68 (95% CI: 0.61-0.75)		
MI or MC	Adult	7	0.28 (95% CI: 0.12-0.53)	12.19	<0.001
	Caregiver	4	0.73 (95% CI: 0.67-0.78)		

## Conclusions

- Superiority of educational interventions compared to control group.
- Poor quality of the studies, including lack of fidelity assessments, was identified among MI/MC studies, which limit their interpretation.
- Better quality intervention trials examining the efficacy of MI/MC for vaccine uptake are needed.