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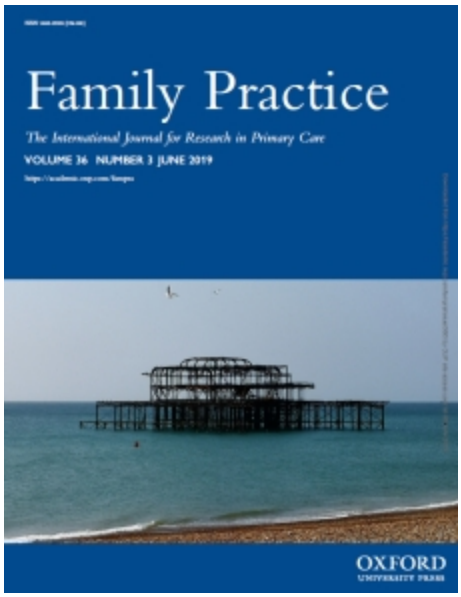

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Nudging healthcare workers toward a flu shot: reminders are accepted but not necessarily effective. A randomized controlled study among residents in general practice in France.

Running head: REMINDER NUDGE: EFFECTIVENESS AND ACCEPTABILITY

Article Category: Health Service Research

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Key messages

Nudging is considered as one of the most efficient techniques for changing behavior.

Changing the choice architecture may improve influenza vaccination coverage.

To be effective, a nudge has to match healthcare workers' needs.

Reminders are accepted but not necessarily effective in promoting vaccination.

Prior exposure to a nudge increases its acceptability.

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ABSTRACT

Background: A nudge corresponds to any procedure that influences choice architecture, without using persuasion or financial incentives. Nudges are effective in increasing vaccination with heterogeneous levels of acceptability.

Objective: To evaluate the effectiveness and acceptability of a nudge promoting influenza vaccination for general practice trainees, also called residents.

Methods: The hypothesis was that a reminder would be efficient and accepted and that prior exposure to a nudge increases its acceptability. Residents were randomly divided into three parallel experimental arms: a nudge group, a no-nudge group and a control group in order to evaluate the hawthorne effect. The nudge consisted in providing a paper form for the free delivery of the vaccine and contacts for occupational health services.

Results: The analysis included 161 residents. There was a strong consensus among the residents that it is very acceptable to nudge their peers and patients. Acceptability was better with residents exposed to the nudge and with residents included in step one (Hawthorne effect). The nudge did not increase vaccination coverage.

Conclusion: The failure of this nudge highlights the importance of matching an intervention to the population's needs. The experimental approach is innovative in this context and deserves further attention.

ClinicalTrials.gov pre-registration: NCT03768596

Keywords: Acceptability, Behavior change, Efficacy, Influenza, Nudge, Vaccination promotion.

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Background

Influenza affects two to eight million people every year in France and is responsible for 8,000 to 20,000 deaths, with a total estimated annual cost between one hundred million and one billion euros[1–4]. Healthcare workers are a key vector for the transmission of the virus and are also in contact with those who are most at risk of severe influenza (the elderly or patients with multiple diseases)[5]. Vaccination of healthcare workers contributes to influenza prevention, limiting the use of care, and reducing pneumonia deaths in health facilities[6–8]. Despite extensive data on vaccination effectiveness and safety, recommendations, and promotion campaigns, vaccination coverage rates of European healthcare workers are between 6.4% and 30%[9]. These data led us to reflect: how can we encourage healthcare worker vaccination, both in their own interest and in the interest of the population?

Most public health policies use education programs to change healthcare workers' knowledges and attitudes towards vaccination[10,11]. These programs showed limited impact, suggesting that approaches based exclusively on the provision of information are not enough. Thaler and Sunstein proposed an effective and inexpensive method to increase people's adoption of healthy behavior without persuasion or financial incentive: nudges. A "nudge" refers to any change in choice architecture that aims at influencing people's behavior in a predictable way without denying them any options or changing their motivations[12]. It consists of a gentle incentive whereas respecting freedom of choice. Nudging is considered as one of the most efficient techniques for changing simple behavior without the need to change one's opinion toward the behavior[12]. This process has been studied for years in social psychology and has received renewed attention since Richard Thaler was awarded the Nobel Prize in Economics in 2017 for his work on the application of nudges to the economy. In the health field, several studies have shown the effectiveness of a nudge in increasing vaccination coverage[13–19].

A nudge relates to people's well-being and must be transparent and publicly defensible[12]. However, the operationalization of nudges varies and is based on cognitive bias. They can be

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implicit or unclear to varying degrees[20] and can even be regarded as manipulation attempts[21,22] because persons exposed to a nudge do not have access to the intentions and operations underlying the nudge. Previous studies described a generally positive but variable acceptability: nudges were judged acceptable by 40 to 87% of participants[23]. Previous research showed that effective nudges tend to be quite well accepted if the nudge is transparent and can be controlled: people more easily accept a nudge involving reflection than one involving unconscious processes (e.g., a nudge consisting of the display of nutritional content on food will be more accepted than another one that places unhealthy food in an inconvenient location)[24]. However, to our knowledge, no experimental studies focused on the acceptability of nudges.

The present experiment has a dual objective: to test the effectiveness of a nudge to promote vaccination to general practice trainees (i.e., general practice residents or GP residents) and to examine their acceptance of this approach, especially after having been confronted with a nudge. Residents were approached because of their relevance to the context studied and their representativeness of other healthcare workers, particularly regarding the inadequacy of their vaccination coverage[25].

It was hypothesized that the vaccination rate would be higher in the condition exposed to the nudge than in the unexposed condition (H1a), and that inclusion in the study would increase the vaccination coverage because of the Hawthorne effect (H1b)[26]. The second hypothesis was that the acceptability of the nudge would be higher in the condition exposed to the nudge than in the unexposed condition (H2a), and that inclusion in the study would increase the nudge's acceptability (H2b) (Hawthorne effect)[26].

Methods

Setting, participants, design and procedure

This unicentric, three arm parallel trial was designed to control for the Hawthorne effect. A simple and equal randomization (1:1:1 for three groups) was used. The criteria for inclusion were to be a GP resident at a university from the south of France and to have attended courses

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given in November and December 2018. The exclusion criteria were the absence of a response to one questionnaire or the presence of obvious inconsistencies in the responses.

The study was conducted in two steps that were spaced one month apart in order to control for the Hawthorne effect. In step 1, residents assigned to the nudge group received a questionnaire about their opinions on vaccination and their professional experience. The questionnaire was distributed by the main investigator (LB) and self-administrated by residents during mandatory courses at the university. It was accompanied by a nudge formulated as follows: "If you have not been vaccinated against influenza, please remove the form attached to this questionnaire; it will allow you to obtain the vaccine at the pharmacy. On the back, you will also find practical information about vaccination services at your internship site". The residents in the no-nudge group received the same questionnaire, without the form or practical information. The control group was not solicited at that time and was included directly in step 2 in order to control for the Hawthorne effect. In Step 2, the three groups received an explanation of the nudge procedure and completed a questionnaire about participants' vaccination status and the nudge's acceptability.

Acceptability was assessed for the residents and for the patients. The acceptability was assessed via a series of seven-point Likert scales, formulated as follows: "What do you think about the use of this type of method on patients?" on a scale from 1 (not at all) to 7 (absolutely) and applied to the following eight adjectives: relevant, legitimate, unfair, immoral, ethical, inappropriate, acceptable, abusive. For this second set of Likert scales, the adjectives were presented in reverse order to prevent participants from copying the answers from the previous questionnaire. Half of the participants received a questionnaire starting with the residents and the other half starting with the patients.

The questionnaires specified the legal context for collecting data (anonymous, computerized processing, no obligation to reply, possibility of leaving the study at any time).

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In order to obtain a statistical power of 90% with a tolerated alpha risk of 5%, 46 residents per group were required for the effectiveness study, assuming 60% vaccinated residents in the nudge group against 30% in the no-nudge group. To obtain the same power for the acceptability study, 22 people were needed per group by providing an acceptability of 5 points on a Likert scale of 7 in the nudge group versus 4 in the unexposed group.

Data analysis

The effectiveness of the nudge and the Hawthorne effect on vaccination rates were evaluated by Chi^2 tests. The consistencies of the nudge acceptability scales were tested using Cronbach's alpha.

The hypotheses addressing the acceptability of the nudge were tested by linear regressions and contrast calculations. Since the independent variable group had three levels, it was broken down into two orthogonal contrasts[27].

All statistical analyses were performed using JASP® software[28].

Regulatory and ethical aspects

The study was classified out of scope of the Jardé law by the CPP Ile De France IV (ID-RCB: 2018-A02939-46, Ref. 2018/101). A favorable opinion was issued by the Ethics Committee of the French National College of Generalist Teachers (n°-17011961B). This work has been the subject of a declaration of compliance with the MR004 to the National Commission of Liberty and Computing "CNIL" n° 2211449v0. Protocol was pre-registered on ClinicalTrials.gov (NCT03768596).

Results

Descriptive statistics

Step 1 (inclusion) took place between November 7 and 29, 2018 and step 2 (data collection) between December 5 and 20, 2018. Of the 218 residents enrolled at the university,

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20 did not attend the relevant class and 22 were absent in step 2. Of the participants in both steps, 15 were excluded as outliers because they pretended to be younger in step two than they pretended in step one or because they pretended to be vaccinated in step one but not in step two. Flow chart is available in Figure 1. The final analysis included 161 participants distributed as follows: 59 participants in the nudged group, 36 in the non-nudged group and 66 in the control group. Participants' age ranged from 23 to 35 years ($M = 26.33$, $SD = 1.75$); 102 were women (67.5%), 58 were men (36.5%), and two did not report age and sex.

INSERT Figure 1

Of the 95 participants included in step 1, 56 (59%) were already vaccinated at the time of inclusion. In step 2, 117 participants reported being vaccinated (72.7%). Table 1 presents the number of vaccinated (or not) participants per group and percentages among 161 residents.

INSERT Table 1

Nudge effectiveness

The first hypothesis (H1a: residents exposed to the nudge were more likely to be vaccinated than unexposed residents) was not verified, $\chi^2(1, N = 39) = 0.21$, *ns*. Similarly, the Hawthorne effect (H1b), which assumed a higher vaccination rate in step 1 groups than in the control group included in step 2, was not demonstrated, $\chi^2(1, N = 161) = 0.50$, *ns*.

Nudge acceptability

We observed a high level of acceptability for the nudge regardless of the experimental condition the residents were included in (see Table 2). Participants rated the nudging procedure acceptable for both patients ($M = 6.31$; $SD = .73$) and residents ($M = 6.34$; $SD = .81$). Only two residents considered the nudge procedure to be rather unacceptable when applied to residents (acceptability below the seven-point Likert-scale midpoint). Acceptability for residents and patients did not differ, $t(142) = 1.47$, $p = .15$.

INSERT Table 2

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Impact of nudge exposure on nudge acceptability for the residents (H2a). Residents were more accepting of the nudge as applied to themselves after previous exposure to the same nudge ($p < .05$). See figure 2 for a visual representation of these data and Table 3.

INSERT Figure 2

INSERT Table 3

Regarding the use of the nudge with patients as targets, regression analyses did not support the hypothesis that residents accept the nudge for patients to a greater extent after being exposed to the nudge ($p = .08$). However, the omnibus effect was significant ($p < .05$), suggesting a difference in acceptability between the 3 groups (nudge, no-nudge and control) as described below (H2b-patients: Hawthorne effect).

Impact of the Hawthorne effect on nudge acceptability (H2b). Compared to residents in the control group, residents rated the nudge as more acceptable for themselves when they were included in the study in step 1 ($p < .05$), regardless of whether they were nudged or not. Likewise, residents were more likely to rate the nudge as acceptable to target patients when they were included in the study in step 1 ($p < .01$), regardless of whether they were nudged or not.

A post hoc analysis was done in order to compare nudged residents' acceptability to control residents' acceptability (included in step 2). This difference was significant ($p < .01$) showing that residents in the nudge group rated the nudge as more acceptable than residents in the control group, suggesting a ceiling effect. In other words, since the Hawthorne effect led to a high degree of acceptability (close to the top of the scale), nudged residents could not rate the nudge as more acceptable, which might explain the lack of support for hypothesis H2a-patients.

Additional analyses

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Results of the multinomial linear regression are available online (table 4 and 5). Residents were more accepting of nudges targeting other residents when they approved vaccination recommendations. Residents were more accepting of the nudges targeting patients when they approved vaccination recommendations and when they were women or older.

Discussion

The objective of this experiment was to evaluate the effectiveness and acceptability of a nudge on residents' vaccination coverage. These data show that prior exposure to a nudge increases its acceptability, and that a reminder nudge promoting a desirable and valued behavior will be perceived as a soft and acceptable incentive to target both residents and patients.

Effectiveness

In this controlled, randomized experimental study, a nudge based on a reminder did not increase influenza vaccination coverage among residents. Whereas it is perhaps disappointing that this nudge was ineffective, we can ascribe this finding -or lack thereof- to the very high initial rate of vaccination in our sample, which may explain the ineffectiveness of the nudge. Previous studies showed that vaccination coverage is typically lower[9,25] among residents and that reminders can be effective[19]. Another explanation for the lack of effect of this nudge could be the mismatch between the type of nudge (a reminder) and the needs of the residents at the time of data collection. That is, residents' high vaccination rates can be ascribed to an ongoing vaccination campaigns implemented by the hospital during data collection. Indeed, residents informed us that the hospital had set up booths offering free vaccination. This intervention can explain why the vaccination rates were higher than expected. Thus, our reminder-based nudge might have been redundant for our sample of residents. Nevertheless, these data highlight the importance for policymakers to choose the right nudge for the right population. Further, despite Nobel prizes and meta-analyses extolling nudges[10,11], the latter are not necessarily effective. It

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is therefore crucial to publish null findings to avoid publication bias and contribute to current cumulative efforts for an open science[29].

Acceptability

According to our second hypothesis, this experiment revealed interesting results concerning the acceptability of such a nudge. First, the nudge was broadly accepted, to a greater extent than previous literature suggested[23,30]. Second, it is relevant to note that participants regarded the nudge as acceptable to target both residents and patients. Third, we found nudge exposure to have a positive impact on residents' acceptability of the nudge. Further, nudge acceptability was improved even for participants included in the control condition, thus supporting the presence of a Hawthorne effect.

Overall, we observed very little variability in participants' ratings of nudge acceptability, with the vast majority of residents accepting the nudge despite the embedded deception in the experimental design. Indeed, the intervention was originally presented as a simple questionnaire, and participants were subsequently informed of the presence of a nudge intended at modifying their vaccination behavior. This shift in the communication contract could have been perceived as a manipulation attempt[31] but was not interpreted as such by participants. The strong homogeneity in residents' responses suggests a broad consensus supporting vaccination and interventions to promote it. This massive acceptability was not found by Felsen et al.[24] whose participants judged the acceptability of various nudges to be 6 on a 9-point Likert scale, whereas our participants judged the nudge's acceptability to be 6.3 on a 7-point Likert scale. Hagman et al[23] also found a lower nudge acceptability: 20 to 60% of their participants declared nudges as unacceptable (i.e., scored below the scale's midpoint), whereas this was the case for only two of our 161 participants. This discrepancy can be explained by the sample and the behaviors studied. Indeed, despite vaccine hesitancy among healthcare workers[32], vaccination is widely acknowledged in the medical community as the most rational and best behavior for the health of people and society[33]. Residents may be more

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inclined to accept a nudge than Felsen and Hagman's samples (general, non-medical population), especially for a nudge about vaccination.

Strengths and limitations

One limitation concerns the already high rate of vaccination in our sample before the study, which may have contributed to the nudge's infectiveness. However, this type of nudge (i.e., reminders) may be relevant for other populations who have not been exposed to ongoing vaccination campaigns[34] such as the one we described. Patel et al. showed that nudging by automatically setting up a vaccination appointment unless individuals explicitly opt out can be more effective than reminders[35]. Therefore, it could be interesting to evaluate effectiveness and acceptability of a stronger nudge (i.e., opt-out) in a comparable sample.

In addition, the groups were not equal in size because of 20 individuals absent in step one that were not equally distributed among the groups. Attrition between step 1 and 2 also contributed to group imbalance with less individuals excluded in the control group. This size difference may have reduced the statistical power but is probably not a source of bias.

The originality and strength of this work resides in its interventional, controlled and randomized nature. Indeed, systematic reviews showed that, despite the numerous publications on nudges, only a few authors used the consort reporting guidelines and the public preregistration systems as we did[29,36,37]. Moreover, experimental studies conducted on the effectiveness and acceptability of a nudge are scarce. To our knowledge, this is the first attempt at studying the impact of exposure to a nudge on its acceptability, showing that prior exposure to a nudge plays a role in its acceptability of a nudge beyond conscious and rational choices.

Conclusion

These data highlight the importance of choosing the right nudge for the right population. Despite nudges' growing popularity, they are not necessarily effective, which stress the importance for policymakers to match an intervention to the population's needs. The social

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acceptability of a nudge can be increased by prior exposure to the same nudge. Nudge-based health promotion campaigns can be widely accepted but policymakers should use pilot studies to test the adequacy of planned nudges prior to large scale implementation.

This experimental approach is innovative in this context and deserves to be further considered because the potential benefits are a major political issue in terms of public health.

Data availability. The data underlying this article will be shared upon request to the corresponding author.

Ethical approval. As an interventional study in the human and social sciences applied to the field of health, the study was classified out of scope of the Jardé law by the CPP Ile De France IV (ID-RCB: 2018-A02939-46, Ref. du CPP: 2018/101). A favorable opinion was issued by the Ethics Committee of the French National College of Generalist Teachers (n°-17011961B).

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Conflicts of interest. The authors declare that they have no conflict of interest in relation to this work.

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Tables

Table 1

Number of vaccinated (or not) participants per group and percentages for GP resident at the university from a city in the south of France *in 2018 (N = 161)*

	Nudge Group (n = 59)	No-Nudge Group (n = 36)	Control Group (n = 66)	Total
Vaccinated at stage 1 (%)	36 (61%)	20 (56%)	----	56/95 (59%)
Vaccinated at stage 2 (%)	44 (75%)	27 (75%)	46 (70%)	117/161 (73%)
Not vaccinated at stage 2	15 (25%)	9 (25%)	20 (30%)	44/161 (27%)

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Table 2

Mean acceptability of the nudge when applied to residents or patients per group according to vaccination status for GP resident at the university from a city in the south of France *in 2018 (N = 161)*

	Nudge Group		No-Nudge Group		Control Group	
Acceptability	Vaccinated	Not	Vaccinated	Not	Vaccinated	Not
for residents	6.64 (0.41)	6.30 (0.85)	6.38 (0.89)	6.36 (1.03)	6.11 (0.96)	6.23 (0.72)
for patients	6.53 (0.50)	6.33 (0.83)	6.41 (0.70)	6.36 (1.02)	6.13 (0.80)	6.07 (0.74)

Legend. Values in brackets correspond to the SD

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Table 3

Average acceptability of the nudge when applied to residents or patients per group and per step for GP resident at the university from a city in the south of France *in 2018 (N = 161)*

Acceptability	Nudge group	No-nudge group	Control group (not nudged and included in step2)	Included in step1 (nudge + no-nudge)	Nudge-free (no-nudge + control)
for residents	6.55 (0.57) *	6.37 (0.91)	6.15 (0.89) †	6.48 (0.72) †	6.23 (0.90) *
for patients	6.47 (0.61)	6.40 (0.77)	6.11 (0.77) ††	6.44 (0.67) ††	6.21 (0.78)

Note. Values in brackets correspond to the SD. Results marked with a * were significant ($p < .05$) and correspond to H2a residents, results marked with a † and with †† were significant ($p < .05$ and $p < .01$) and correspond to H2b residents and patients, respectively.

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Figure captions

Figure 1. Flow chart

Figure 2. Mean acceptability of a nudge as applied to patients or to residents, among 161 residents from a city in the south of France in 2018 (error bars displays SE)

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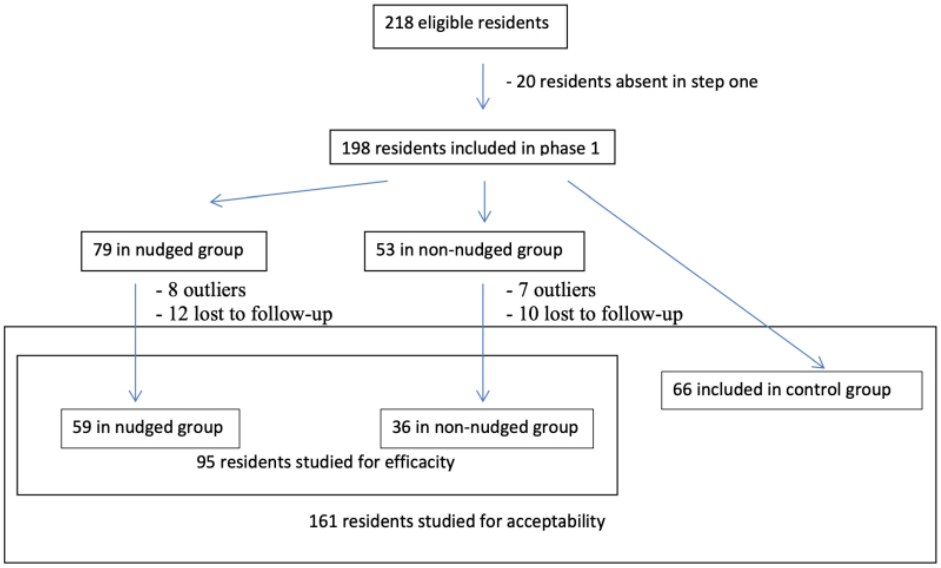

Figure 1. Flow chart

71x46mm (300 x 300 DPI)

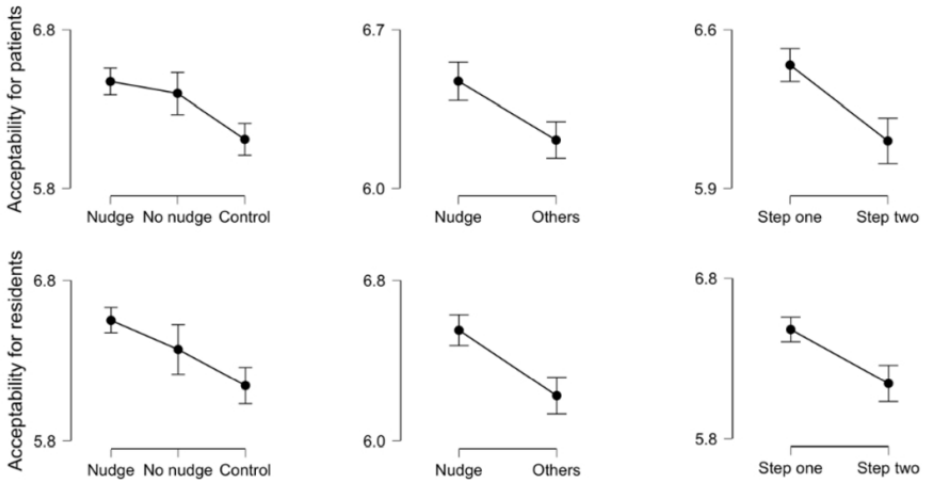

Figure 2. Mean acceptability of a nudge as applied to patients or to residents, among 161 residents from a city in the south of France in 2018 (error bars displays SE)

79x43mm (300 x 300 DPI)

Table 4 : supplementary material

Results of multinomial linear regression estimating the association between acceptability of the nudge as applied to patients and residents characteristics, among 161 residents from a city in the south of France in 2018.

Predictors	*r*	*SE*	*t*	*p*
Age	0.1158	0.0411	2.817	0.006
Sex (Male = 1)	-0.3405	0.1169	-2.914	0.004
Have been vaccinated	0.0787	0.1231	0.639	0.524
Agreed with recommendations	0.2118	0.0598	3.539	< .001
Contrast Control Vs Rest	-0.1150	0.0411	-2.799	0.006
Contrast no-nudge Vs Nudge	-0.0199	0.0768	-0.259	0.796

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Table 5 : supplementary material

Results of multinomial linear regression estimating the association between acceptability of the nudge as applied to other residents and residents characteristics, among 161 residents from a city in the south of France in 2018.

Predictors	*r*	*SE*	*t*	*p*
Age	0.0549	0.0401	1.366	0.174
Sex (Male = 1)	-0.0660	0.1331	-0.496	0.621
Have been vaccinated	0.0643	0.1421	0.452	0.652
Agreed with recommendations	0.1566	0.0676	2.317	0.022
Contrast control Vs rest	-0.0937	0.0464	-2.019	0.045
Contrast no-nudge Vs nudge	-0.0945	0.0877	-1.078	0.283

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Figure captions :

Figure 1. Flow chart

Figure 2. Acceptability of a nudge as applied to patients or to residents, among 161 residents from a city in the south of France in 2018 (error bars displays SE).

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CONSORT GUIDELINES :

1a. Title
Identification as a randomised trial in the title.
OK
1b. Abstract
Structured summary of trial design, methods, results, and conclusions
OK
INTRODUCTION :
2a : Reffer to previous systematic review
OK
2b: Provide adequate information about trial objectives and hypotheses
OK
METHOD :
3a: Description of trial design (such as parallel, factorial) including allocation ratio :
OK (multi-arm parallel trial, An equal randomization (1:1:1 for three groups) was used.)
3b : Important changes to methods after trial commencement (such as eligibility criteria), with reasons
we do not have any changes to method to declare.
4a : A comprehensive description of the eligibility criteria used to select the trial participants is needed to help readers interpret the study
OK
4b : information on the settings and locations is crucial to judge the applicability and generalisability of a trial. Were participants recruited from primary, secondary, or tertiary health care or from the community.
OK
5: The interventions for each group with sufficient details to allow replication, including how and when they were actually administered.
OK
6a. Outcomes
Completely defined pre-specified primary and secondary outcome measures, including how and when they were assessed.
OK
6b. Changes to outcomes
Any changes to trial outcomes after the trial commenced, with reasons.
Authors do not have any changes to outcomes to declare.
7a. Sample size
How sample size was determined.
OK
7b. Interim analyses and stopping guidelines
When applicable, explanation of any interim analyses and stopping guidelines.
Authors do not have any interim analyses and stopping guidelines to declare.
8b. Randomisation: type
Type of randomisation; details of any restriction (such as blocking and block size).
OK, simple randomization was used.
9. Randomisation: allocation concealment mechanism
Mechanism used to implement the random allocation sequence (such as sequentially numbered containers), describing any steps taken to conceal the sequence until interventions were assigned.

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The steps are well described. The allocation concealment was unnecessary since participants were not aware of the three-arm design of the study, the intervention was initially presented as "a questionnaire as part of a thesis in general practice".

10. Randomisation: implementation

Who generated the allocation sequence, who enrolled participants, and who assigned participants to interventions.

Not applicable to this trial.

11a. Blinding

If done, who was blinded after assignment to interventions (for example, participants, care providers, those assessing outcomes) and how.

Not applicable to this trial.

11b. Similarity of interventions

If relevant, description of the similarity of interventions.

The residents in the no nudge group received the same questionnaire, without the form or practical information. The control group was not solicited at that time and was included directly in step 2. Step 2 consisted of the three groups receiving an explanation of the nudge procedure and the completion of a questionnaire collecting the vaccination status and the nudge's social acceptability.

12a. Statistical methods

Statistical methods used to compare groups for primary and secondary outcomes.

OK

12b. Additional analyses

Methods for additional analyses, such as subgroup analyses and adjusted analyses

OK

13a. Participant Flow

For each group, the numbers of participants who were randomly assigned, received intended treatment, and were analysed for the primary outcome

OK

13b. Losses and exclusions

For each group, losses and exclusions after randomisation, together with reasons

OK

14a. Recruitment

Dates defining the periods of recruitment and follow-up

OK

14b. Reason for stopped trial

Why the trial ended or was stopped

The trial was not truncated.

15. Baseline Data

A table showing baseline demographic and clinical characteristics for each group

Demographic and clinical characteristics were described in the text. Authors decided to provided these informations in full text rather than in a table.

16. Numbers analysed

For each group, number of participants (denominator) included in each analysis and whether the analysis was by original assigned groups

OK

17a. Outcomes and estimation

For each primary and secondary outcome, results for each group, and the estimated effect size and its precision (such as 95% confidence interval)

OK

17b. Binary outcomes

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For binary outcomes, presentation of both absolute and relative effect sizes is recommended
Not applicable for this trial
18. Ancillary analyses
Results of any other analyses performed, including subgroup analyses and adjusted analyses, distinguishing pre-specified from exploratory
OK
19. Harms
All important harms or unintended effects in each group
Not applicable for this trial
20. Limitations
Trial limitations, addressing sources of potential bias, imprecision, and, if relevant, multiplicity of analyses
OK
21. Generalisability
Generalisability (external validity, applicability) of the trial findings
OK
22. Interpretation
Interpretation consistent with results, balancing benefits and harms, and considering other relevant evidence
OK
23. Registration
Registration number and name of trial registry
OK
24. Protocol
Where the full trial protocol can be accessed, if available
OK
25. Funding
Sources of funding and other support (such as supply of drugs), role of funders
OK

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