

REPORT 30

Motivation for behavioral measures and vaccination readiness heading into the summer.

The Motivation Barometer

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Reference: Motivation Barometer (May 10, 2021). Motivation for behavioral measures and vaccination readiness heading into the summer. Ghent University & UCLouvain, Belgium.



We are in a crucial transition phase in this pandemic. Although several relaxations have been announced and will be implemented in the coming weeks, the pressure on intensive care remains quite high, even if it decreased somewhat in recent weeks. It therefore remains of the utmost importance that we remain adherent to the current measures. At the same time, an increasing number of people will be invited to get vaccinated in May and June. Does the motivation to be vaccinated predict whether people will respond to a vaccination invitation? Are vaccinated people still willing to adhere to the measures or does the realm of freedom beckon too strongly for them? In which direction have doubting persons tilted in recent months and which persons can convince them to be vaccinated after all? Given these various evolutions, an update on vaccination readiness, motivation and adherence is timely. This report presents a number of hopeful trends, along with a number of worrying findings based on the latest waves within the Motivation Barometer and a longitudinal follow-up sample¹. Based on these results, we formulate a number of policy recommendations.

¹ The samples collected are not representative of the socio-demographic distribution of the population. Nevertheless, both Dutch- and French-speaking participants were recruited since December and the presented findings are weighted for age, region, level of education and gender to (partially) correct for the non-representative nature of the samples.

Take home shopping

Vaccination

- Voluntary, prosocially oriented motivation for vaccination predicts actual **behavior**, including vaccination status, enrollment in QVAX, and willingness to delay a second injection so more people can get their first vaccine sooner. Vaccination distrust and greater perceived effort are negatively related to these behavioral indicators.
- Although the **vaccination readiness** remains quite high among non-vaccinated persons (66% in Belgium), a decline can be observed since February. At this time, additional efforts are needed to motivate especially French-speaking citizens, lower educated and middle-aged persons. Additional data from the “Psychology and Corona”-group (regarding higher education students) show that persons with a migrant background may also require specific attention.
- 74% of those who **were doubtful about vaccination** in December-January were willing or very willing to accept a vaccine in April. This suggests that a large proportion of doubters have become convinced of the importance of vaccination. This change was more pronounced among those who are convinced that vaccination has a societal health benefit. Hesitant individuals indicated that their family doctor, a nurse, or pharmacist had the strongest stimulating influence on them, while testimonials from well-known people, peers, or politicians had little or no influence.

Motivation and compliance.

- **Voluntary motivation** to adhere to the measures increased slightly in May compared to April, with 37% now *fully* and 27% *somewhat* motivated to continue adhering to the measures. Young adults remain less motivated to adhere to the measures, as do French speakers. Vaccinated individuals remain at least as motivated to adhere to the measures.
- The **steady increase in the number of close contacts** since January leveled off in May: 38% of participants stated that they adhered to the recommended number of close contacts (i.e., 0 or 1).
- People state that they **adapt their behavior to the vaccination status** of the people with whom they have contact (or plan to do so). They state that they will adhere (more) when interacting with unvaccinated people, and will do so less when interacting with people who have been vaccinated. Regardless of the vaccination status of the interaction partner, people who wish to be vaccinated for prosocial reasons plan to adhere more than people who do it to gain personal freedom. These findings again illustrate the central role of prosocial motivation.

Recommendations

- Take advantage of the 15-minute waiting period during vaccination to communicate the remaining risks of infection and the risk of virus transmission after a first and second dose. Increasing risk awareness will increase the motivation to voluntarily adhere to the measures.
- Clearly indicate what behavioral guidelines vaccinated individuals still need to follow depending on the setting (i.e., private contacts vs. public space) and the vaccination status of interaction partners (i.e., vaccinated vs. unvaccinated individuals). If not, everyone is at risk of arbitrarily completing this on his or her own.
- Achieve a collective, prosocial mindset by indicating that adherence to the measures will ensure that crucial goals in the corona numbers (e.g. number of persons on intensive care) are reached more quickly. Thus, everyone, including unvaccinated individuals, can then enjoy new relaxations and thus regain freedom.
- Engage plenty of health professionals (family physicians, pharmacists) to proactively contact citizens and provide them with relevant information about vaccination in a motivating way.
- Present the percentage of vaccinated individuals by age group. If vaccinating becomes the norm within an age group then this encourages reluctant individuals to follow their immediate peers. An age-specific overview more convincingly indicates that we are making progress and have already reached our vaccination goal in certain age groups.
- Encourage vaccinated individuals to testify about their prosocial motivation to get vaccinated. This may encourage peers to also get vaccinated.

Table 1. Description of the data files.

- Cross-sectional waves
 - Cross-sectional data waves since March 2020
 - N since December = 128.331
 - Average age = 49.54 years (64% female; 67% Dutch speaking; 25% Master's degree)
 - N vaccinated people: steady increase over the months, going from 0% in December to 38%* in May.
 - Work Status: 44% employed full time, 15% part time, 8% unemployed, 7% student, and 26% retired
- Longitudinal sample
 - Two phases, with Phase 1 taking place in November-January and Phase 2 in April (with an interval of 4-5 months)
 - N = 84,675 at baseline, of which 20,295 (24%) unique participants were re-contacted and 8,422 (41%) participated at Phase 2
 - Average age = 53 years (61% female; 84% Dutch-speaking; 31% highly educated)
 - N vaccinated people = 32 participants at T1 and 1,960 at T2, with 83% of vaccinated people working in the health sector
 - Work status: 37.5% employed full time, 15% employed part time, 10.2% unemployed, 4.3% student, and 33% retired

*At this time (May 11, 2021), 31.6% is partially vaccinated and 9.6% is fully vaccinated in Belgium

THEME 1: VACCINATION

Question 1: Does vaccination motivation predict actual behavior?

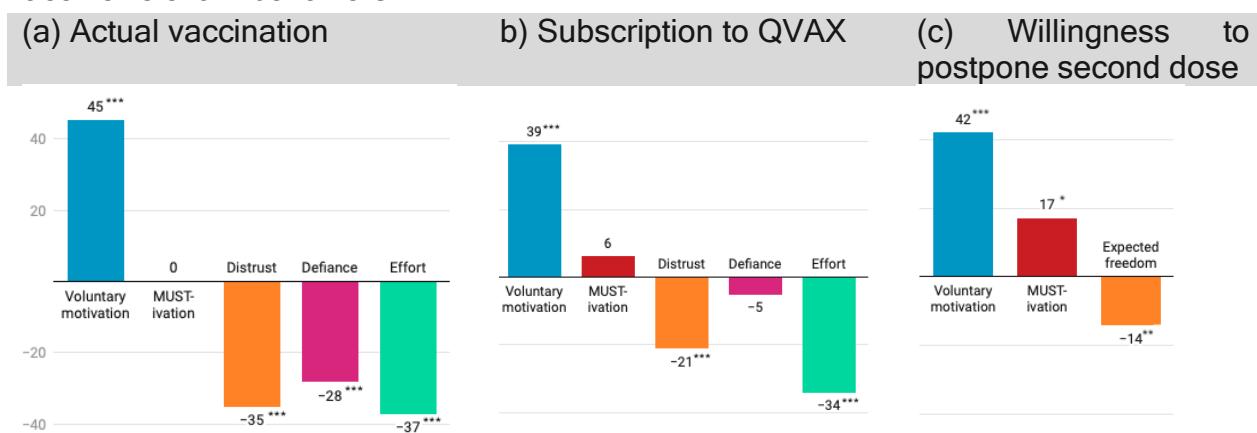
- *Vaccination status:* In the longitudinal sample, different motives for vaccination (or lack thereof) were assessed during a baseline measurement (Phase 1) (see Table 2). At follow-up (Phase 2), individuals' vaccination status was predicted in a subgroup of citizens who were currently eligible for vaccination (i.e., priority groups; $N_{subsample} = 5,005$). After controlling for various sociodemographic variables (i.e., gender, education level, marital status, age) and covariates (i.e., corona infection, co-morbidity), individuals who were convinced of the social benefits of vaccination during baseline (i.e., voluntary motivation) were more likely to be vaccinated at follow-up. Those who distrusted the vaccine or for whom vaccination was too much effort or opposed vaccination during baseline, were less likely to be vaccinated at follow-up (see Figure 1, left panel).
- *Enrollment in QVAX:* Voluntary motivation for vaccination also predicts another behavioral indicator, that is, having enrolled in the waiting list (QVAX). Voluntary motivation for vaccination increased the likelihood of enrollment in this waiting list, whereas distrust and especially effort were associated with a lower likelihood of enrollment (see Figure 1, middle panel).
- *Waiting for a second dose:* One question assessed people's willingness to postpone their second dose so that unvaccinated people could receive their first vaccine more quickly. 54% of the unvaccinated participants, who expressed a (very) strong intention to get vaccinated, were willing to delay their second dose. While both voluntary motivation and external pressure to get vaccinated increased the likelihood of delaying the second dose, the expectation of increased personal freedom predicted a decreased willingness to delay a second dose (see Figure 1, right panel).
- *Role of sociodemographic data:* Greater vaccination coverage was observed among older individuals, women, and individuals with comorbidities. These differences reflect priorities in vaccination policy. A higher proportion of younger people, men, and persons with a life partner had enrolled in the waiting list.

Table 2: Vaccination motivation and behavioral indicators.

- **Voluntary or autonomous motivation:** indicates the extent to which a person is fully convinced of the added value and necessity of vaccination, for example, because it offers protection for him/herself, for his/her loved ones, or for the population.
- **'Must' motivation:** indicates the extent to which one feels obligated to be vaccinated, for example, because others want us to do it or to avoid criticism.
- **Distrust** expresses the degree to which people distrust the effectiveness of the vaccine or the person recommending the vaccination.
- **Difficulty (effort)** indicates how much effort or difficulty it takes to get vaccinated.
- **Resistance (opposition)** expresses the degree of opposition to the authorities, who are seen as a source of interference with individual freedom. This distrust is based on the idea that the measures they take are excessive.

Figure 1.

Relationship between (lack of) motivation for vaccination and the likelihood of various vaccine-relevant behaviors



Question 2: How does individuals' vaccination motivation and behavioral intention shift over time?

Given the crucial role of individuals' motivation for vaccination, a crucial question is how individuals' motivation for vaccination and their intention to be vaccinated have evolved since December.

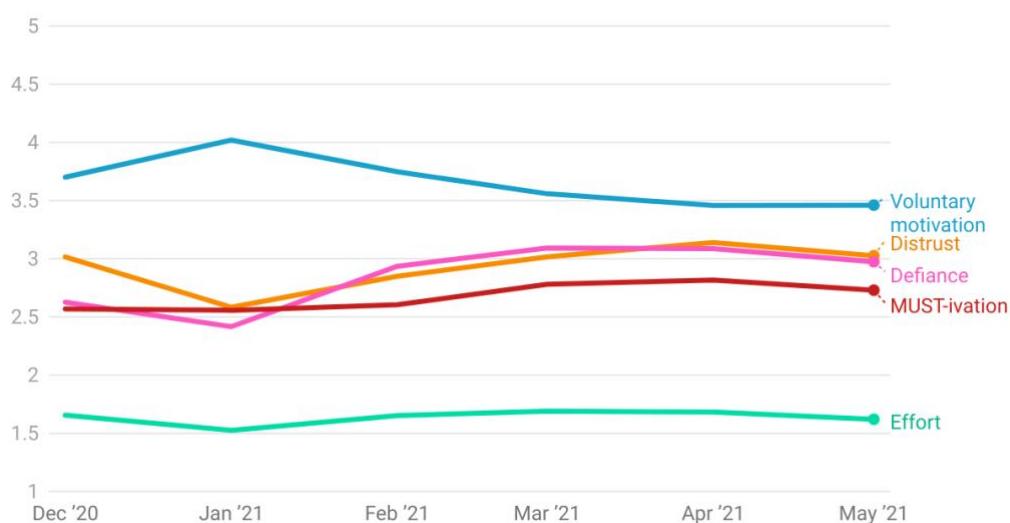
- *Shifts in motivation:* As seen in Figure 2, the different types of motivation of non-vaccinated individuals have remained stable over time, with the exception of a peak in voluntary motivation and a slight decrease in distrust and resistance in January. Overall, people are more motivated than demotivated to get the vaccine.

Figure 2.

Evolution in (lack of) motivation for vaccination over time

Motivation for vaccination over time

The Motivation Barometer



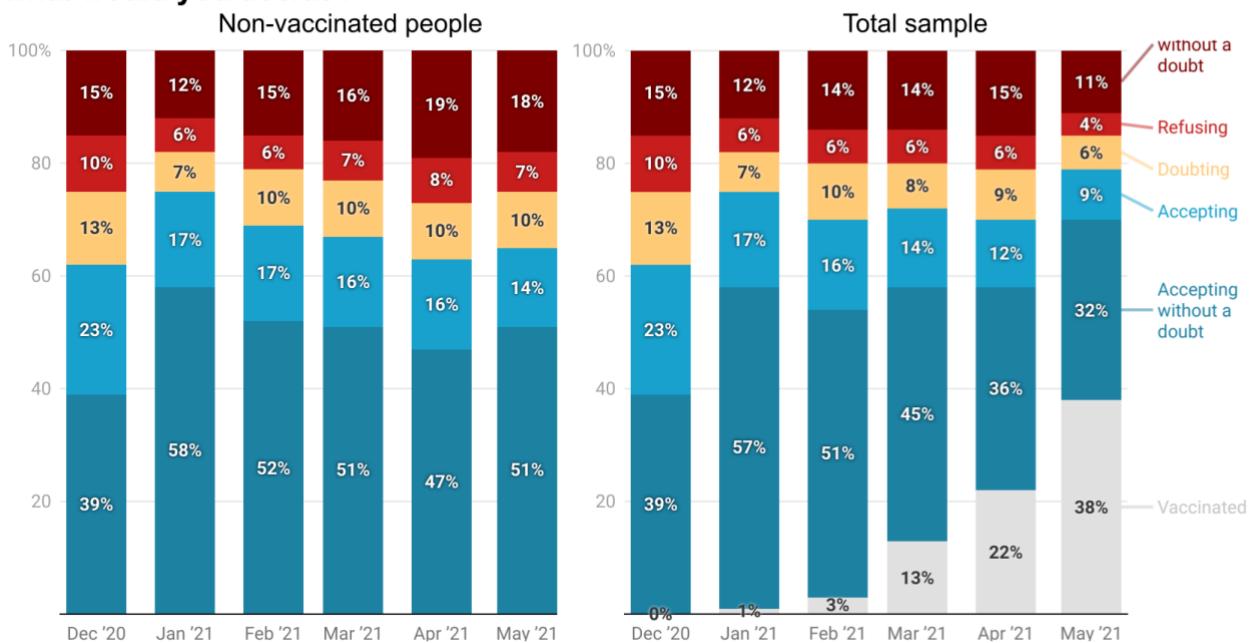
- *Vaccination readiness:* An increase could also be observed in vaccination readiness from December to January (Figure 3, left panel). Nevertheless, since January, the number of unvaccinated people who would (without hesitation) accept a vaccine has steadily decreased: from 75% in January to 65% in May. When the increasing number of vaccinated people is taken into account (Figure 3, right panel), the figures are "rosier": 79% of participants have been vaccinated or plan to take a vaccine (without hesitation)*. This percentage may be an overestimate, as typically a larger percentage of vaccinated people participate in the Motivation Barometer than the percentage of vaccinated people at the population level.

*At this time (May 11, 2021), 31.6% is partially vaccinated and 9.6% is fully vaccinated in Belgium

Figure 3.

Evolution of intention to vaccinate excluding (left panel) and including (right panel) unvaccinated individuals

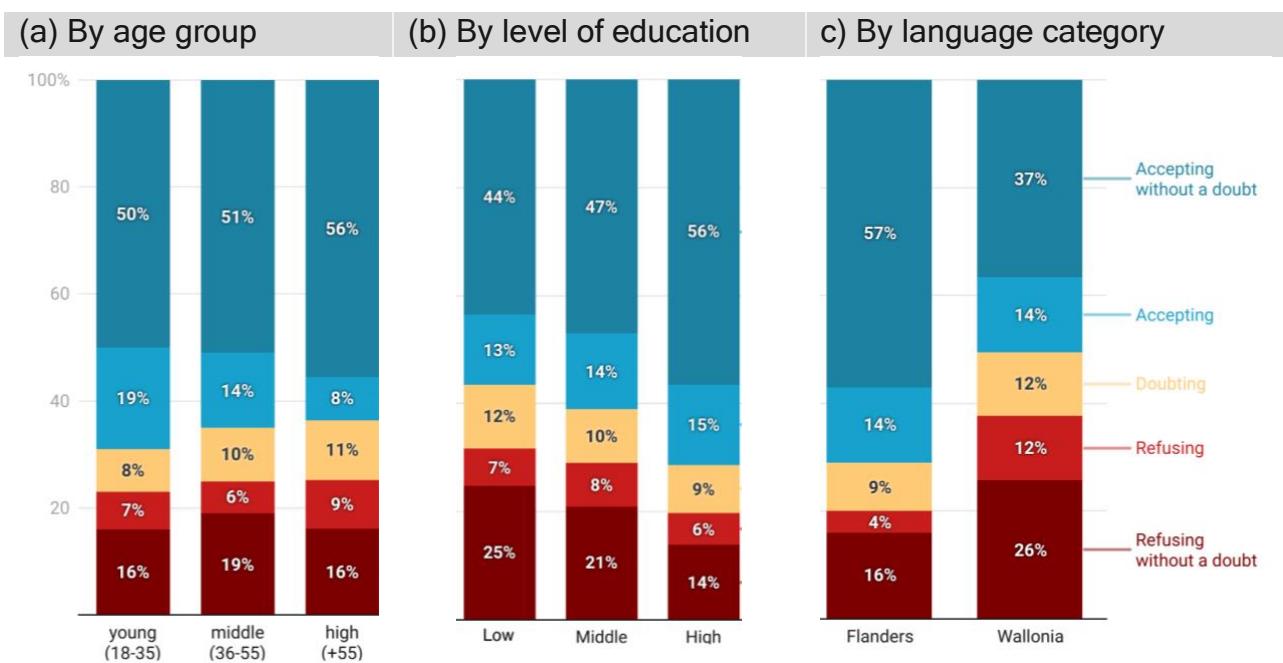
**If you had the opportunity to be vaccinated next week,
what would you decide?**



- *The role of sociodemographic data:* In the pattern of findings, age (Figure 4, left panel), level of education (Figure 4, middle panel) and region (Figure 4, right panel) play a role. In May, middle-aged (25%), low-educated (32%), and French-speaking (38%) unvaccinated people were less likely to accept a vaccine. Of particular concern is the lower prevalence of vaccination intentions among French-speaking participants.

Figure 4.

Socio-demographic distribution of vaccination intentions in May 2021



Question 3: How do individuals who are hesitant to vaccinate change over time?

- *Changes in hesitant participants:* How do initially hesitant participants change over time? Do they report increasing vaccination intentions over time or instead become even more reluctant over time? Indeed, this category of citizens may be critical to achieving the collective goal of group immunity.

Figure 5 is a cross tabulation of vaccination willingness in unvaccinated individuals during baseline and at follow-up. As can be seen, 39% of those who were hesitant at baseline was more inclined to accept a vaccine at follow-up and 35% indicated that they were very inclined to accept the vaccine. Thus, in total, 74% underwent a positive shift over time. The likelihood of a positive shift depended on the increase in voluntary motivation of hesitant individuals over time. A decrease in distrust was also associated with a greater likelihood of moving from the "doubters" category to the "convinced" category. Remarkably, this positive shift occurred at a time when it was unclear whether vaccination would be associated with relaxations of behavioral measures for vaccinated individuals that would not be granted to unvaccinated individuals.

Even a significant percentage of those who initially refused a vaccine, adopted a more positive attitude over time: up to 44% would accept a vaccine (probably, or without doubt). The extreme groups appear to be the most stable (see diagonal): 47%

of those who initially refused a vaccine and 92% of those who accepted it without doubt, still belong to the same category several months later. Yet the stability in the desired category is much more evident (compared to the refuse-category): once people are certain they want a vaccine they will not reconsider their opinion.

Figure 5.

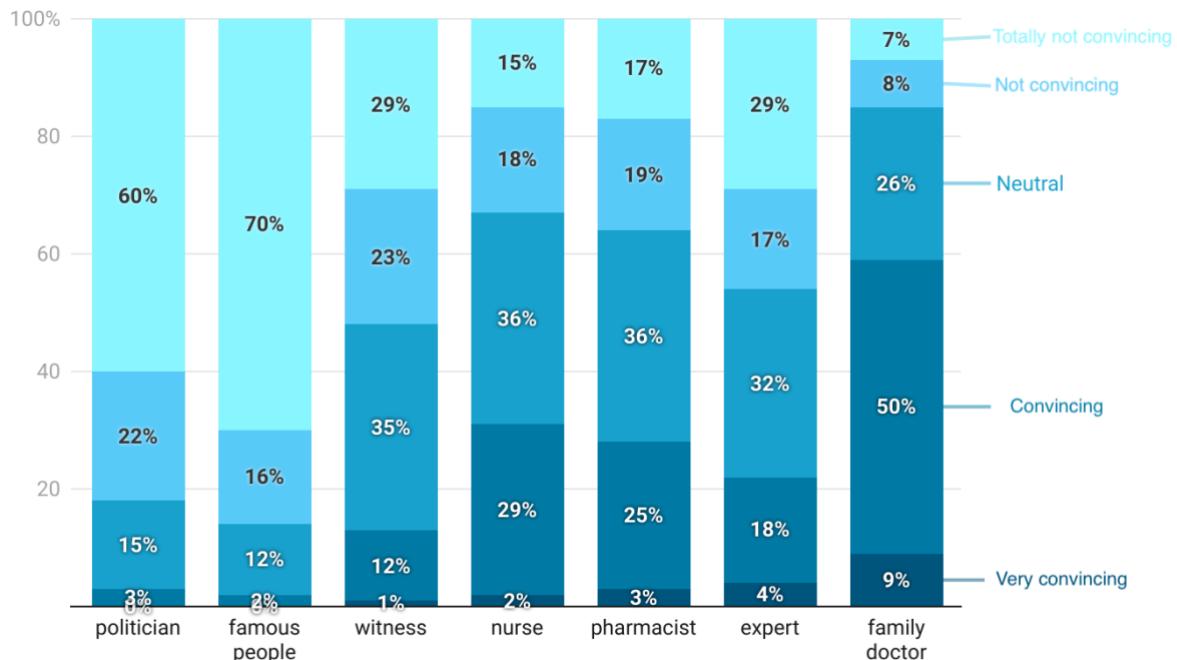
Transition in vaccination intentions through time

		April 2021				
		Refuse without question	Refuse	Doubting	Accepting	Accept without question
Baseline	Refuse without doubt	47%	19%	12%	8%	14%
	Refuse	9%	23%	24%	26%	18%
	Doubting	3%	4%	19%	39%	35%
	Accepting	1%	1%	5%	27%	65%
	Accepting undoubtedly	1%	0%	1%	6%	92%

- **Motivational sources:** Hesitant participants at follow-up indicated that GPs, nurses and pharmacists in particular would be able to convince them to get vaccinated (Figure 6), highlighting the crucial role of these health professionals as a source of confidence.

Figure 6.

Motivational sources in persons with vaccination doubts



THEME 2: MOTIVATION FOR AND ADHERENCE TO THE MEASURES.

Question 4: Has the motivation to adhere changed after the announcement of the exit plan?

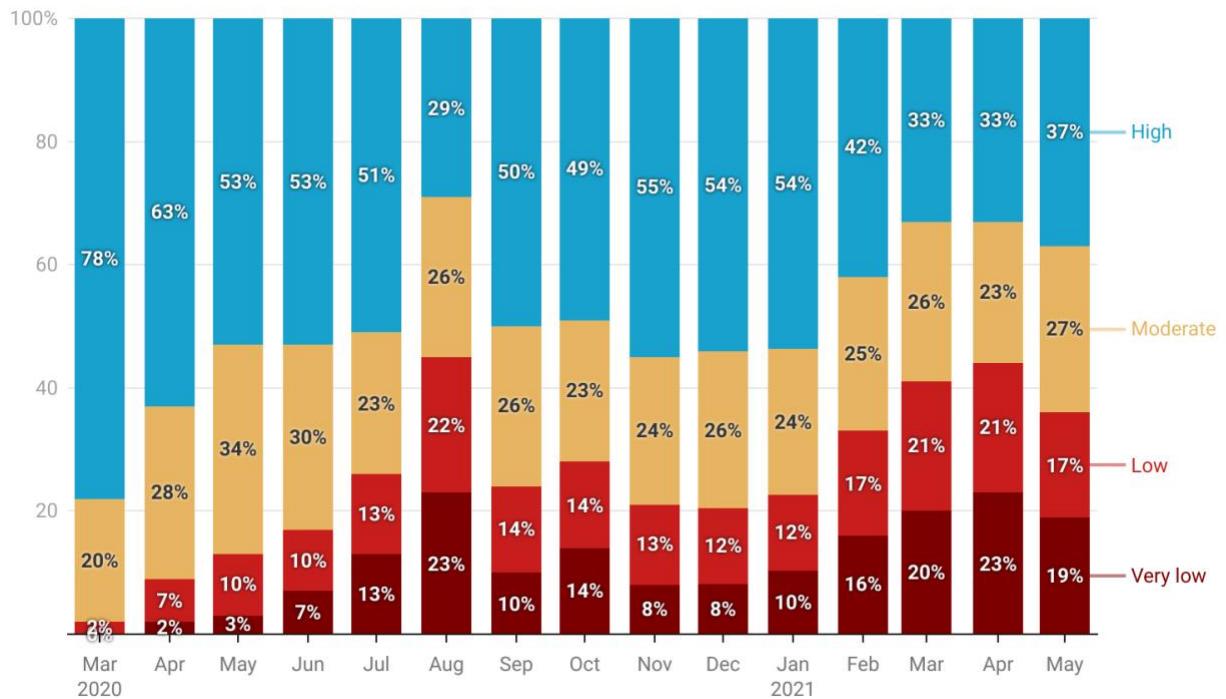
- *General shift:* Not only increasing vaccination coverage but also reaching critical epidemiological thresholds (infections, hospitalizations) would allow us to enjoy increasing relaxations over time. Therefore, motivation for and adherence to the current corona measures remain critical. Figure 7 shows changes in voluntary motivation (i.e., autonomous motivation) to the measures over time since the start in March 2020.

Two findings are noteworthy. First, a slight increase in motivation can be observed in May compared to April 2021: 37% (vs. 33%) were fully and 27% (vs. 23%) somewhat motivated to remain adherent. Second, compared to other months of the pandemic, motivation was lower (e.g. August 2020) but also higher (e.g. July 2020). Like last year, a further increase in motivation can be expected, as less strict measures are easier to comply with and allow people to meet their psychological needs for autonomy and relatedness.

- *The role of vaccination:* Vaccinated individuals are more voluntarily motivated to adhere than unvaccinated individuals.
- *The role of other sociodemographic characteristics:* older individuals, women, Dutch-speaking individuals, individuals with co-morbidities, and individuals with a partner are more motivated to adhere to the measures.

Figure 7.

Motivation to adhere to the measures during the pandemic



Question 5: Do we adhere to the recommended number of close contacts?

- *Compliance with the recommended number of close contacts:* The percentage of individuals who say they adhere to the recommended number of close contacts has steadily declined since November. As illustrated in Figure 8, in May, 38% of individuals reported adherence to the recommended number of close contacts (i.e., 0 or 1). On a positive note, the steady increase in the number of reported close contacts since January has currently leveled off.
- *Role of vaccination:* Vaccinated individuals report having fewer close contacts than unvaccinated individuals, which can be attributed to their higher voluntary motivation. Self-selection of participants may play a role in interpreting these results. Given the higher risk of the elderly, of people with comorbidities, and of health care workers on the one hand, and given the relative scarcity of vaccines on the other, those who are already vaccinated were more likely to be autonomously motivated to adhere to the measures even *before* their vaccination. At the same time, our findings illustrate that vaccination is not necessarily associated with reduced motivation and adherence.

- *The role of other sociodemographic factors:* older individuals, women, Dutch speakers, those with higher education, those with a life partner or an underlying chronic illness say they have fewer close contacts.

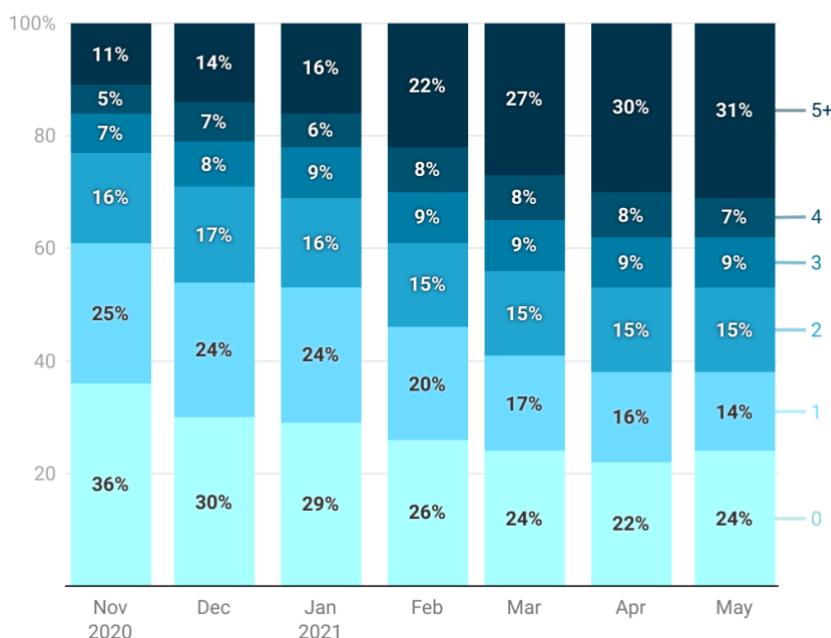
Figure 8.

Evolution in the number of close contacts over time

How many people have you been in close contact in the previous week?

"Close contact = interaction with other(s) taking longer than 15 minutes within the distance of 1.5 meters and without face covering."

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Question 6: Do we adhere to the measures to a different degree according to the vaccination status of our interaction partner?

- *Vaccinated individuals:* Do individuals adjust their behavior according to the vaccination status of their interaction partner? Vaccinated individuals report slightly less adherence when interacting with other vaccinated individuals compared to unvaccinated individuals (Figure 9a). In addition, there is considerable variability among vaccinated persons in perceived risk for virus transmission after vaccination (Figure 10). Vaccinated persons who perceive higher risk are more willing to remain compliant.

Figure 9.

Adherence to the measures as a function of the interaction partner's vaccination status and motives for vaccination

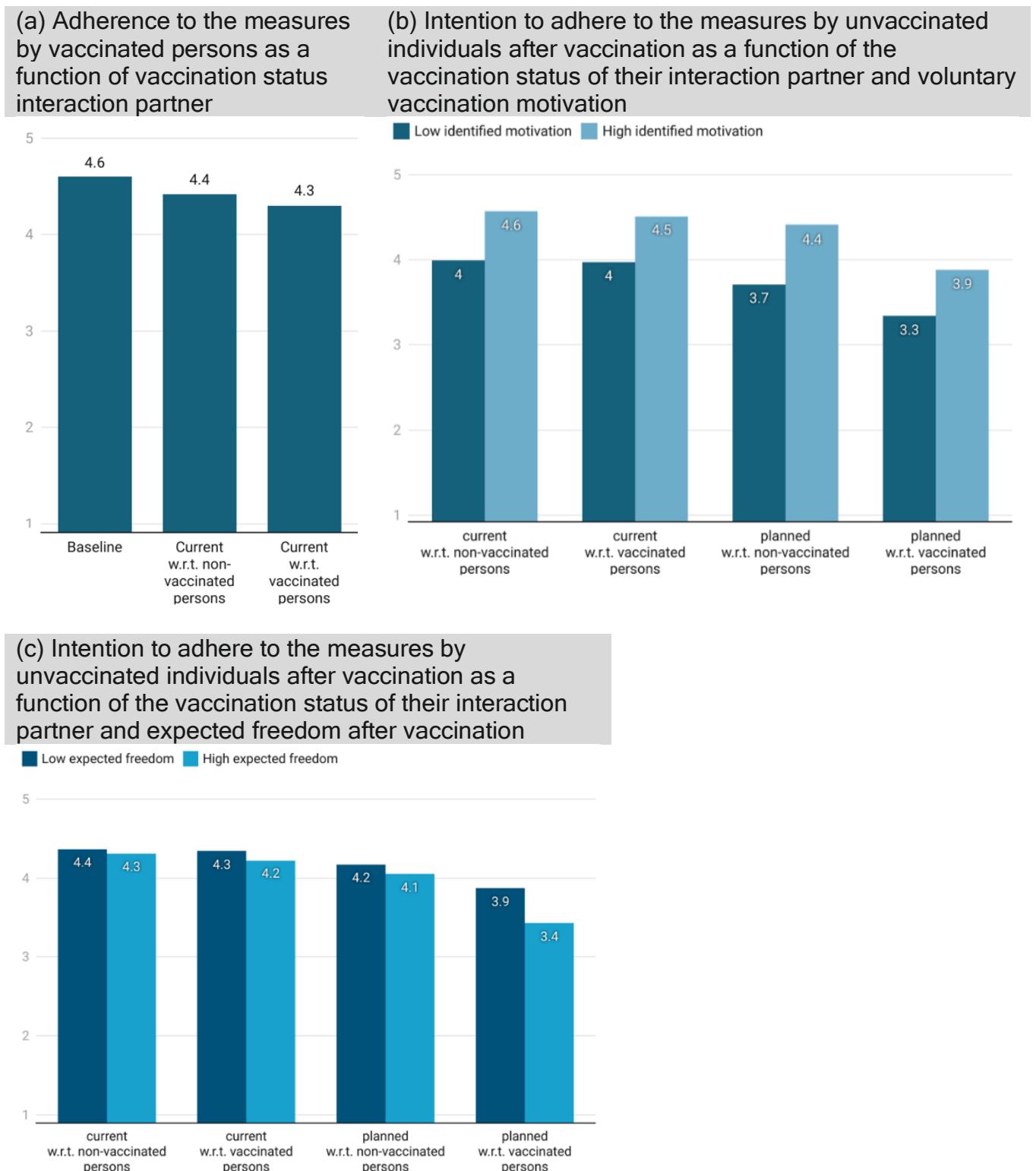
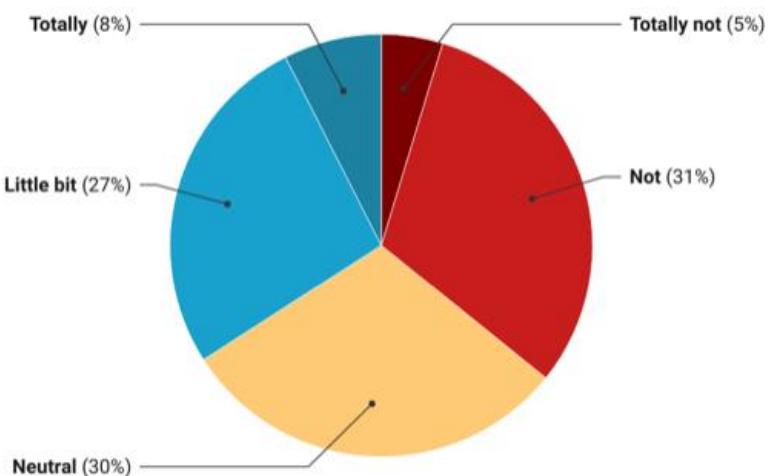


Figure 10.

Perceived infection risks after vaccination

To what extent do you expect to still be contagious now that you are vaccinated?

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N = 1850 vaccinated people



- *Unvaccinated persons:* When unvaccinated persons are asked about their intended adherence to the measures, they indicate that they plan to reduce their adherence after vaccination, when their interaction partner is also vaccinated. On the other hand, they plan to maintain their current level of adherence when interacting with unvaccinated individuals. Regardless of the vaccination status of their interaction partner, motives for being vaccinated play a crucial role. Individuals who are prosocially oriented and volunteer to be vaccinated plan to be more adherent (Figure 9b) than those who view vaccination as a pathway to personal freedom. The latter group is less likely to adhere, regardless of the vaccination status of the interaction partner (Figure 9c).

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