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Willingness to get vaccinated against Covid-19 and attitudes toward vaccination in general

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Abstract

Background: High uptake of Covid-19 vaccination is required to reach herd immunity.
Methods: A representative sample of 2,060 Belgians were surveyed in October 2020. Regression analyses identified the predictors associated with willingness to get vaccinated against Covid-19, and attitudes toward vaccination in general.
Results: 34% of the participants reported that they will definitely get vaccinated against Covid-19 and 39% that they would “probably”. Intended uptake was strongly associated with age, opinion on the government’s dealing with the Covid-19 pandemic, medical risk, spoken language, gender, and to a lesser extent with having known someone who was hospitalised because of Covid-19. Similar predictors were identified for attitudes to vaccination in general. Covid-19 vaccine hesitancy was more marked in age groups below 54 years old. We further analysed a sample of 17% (N = 349) found favourable to vaccination in general but not willing to be vaccinated against Covid-19. They were mainly female, young, French speaking, slightly less educated, working, and did not belong to a Covid-19 risk group. They were very dissatisfied with the government’s dealing with the pandemic, and did not know someone who was hospitalised because of Covid-19.
Conclusions: Vaccine hesitancy was higher for Covid-19 vaccines than for other vaccines. The part of the population being convinced of the utility of vaccination in general but hesitant about the Covid-19 vaccine is a primary interest group for tailored communication campaigns in order to reach the vaccine coverage needed for herd immunity.

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1. Introduction

After months of a global public health crisis that has paralysed our societies, safe and effective vaccines that protect against Covid-19 are becoming available [1,2]. The next crucial challenge will be to deploy these vaccines with sufficiently high vaccination coverage rates in the population so that thresholds required for herd immunity can be reached. For vaccine efficacies of approximately 80%, it has been estimated that herd immunity requires that minimally 60% but possibly up to 90% of the population become vaccinated [3,4]. Herd immunity will not just be a bonus that comes on top of individual vaccine protection; it will be an essential layer of Covid-19 prevention on which many people will depend as it remains to be seen whether Covid-19 vaccines will be equally effective in all individuals and whether some population subgroups won’t be able to receive vaccination for medical reasons.

To rapidly achieve herd immunity, mass vaccination will be required. However, apart from the logistic challenge of reaching sufficient numbers of individuals, there is an even bigger challenge in convincing vaccine hesitant individuals to become vaccinated [5]. Vaccination has always been controversial and throughout history a part of the population has always resisted it [6]. Over the past years, researchers have observed substantial and increasing levels of vaccine hesitancy in the population, often linked to the fact that infectious diseases and their consequences are fading from public memory but also in part through misinformation propagated on the internet [7,8]. The World Health Organization (WHO) labelled vaccine hesitancy one of the top ten threats to global health in 2019, next to e.g. antimicrobial resistance or air pollution...
and climate change [9]. In the context of the Covid-19 vaccine, policy makers dealing with vaccine hesitancy and scepticism will be a critical success factor. Therefore, it is important that policy makers have a good view on the people profiles who are likely to refuse or delay vaccination. This will enable them to target communication campaigns and to devise vaccination strategies that take into account the clustering of susceptibility in profiles that are likely to refuse. Several population surveys have identified predictors associated with Covid-19 vaccine hesitancy. It is more likely to occur in individuals of younger age, women as well as people with lower income, lower education, lower perceived severity of Covid-19, lower Covid-19 exposure, lower trust in government, living in more disadvantaged areas or people adhering to more right-wing political views [10–14].

This paper aims to identify among a representative sample of the Belgian population the predictors associated with the willingness to become vaccinated against Covid-19 and investigate whether these coincide with predictors of attitudes toward vaccination in general.

2. Methods

2.1. Survey

We used a nationally representative panel of the market research agency Dynata to complete a survey between 6 and 16 October 2020. A sample of 2,698 respondents drawn from a panel of 5,500 selected members who mirror the Belgian population (aged 18–80 years) as well as possible, were invited to participate in the survey. Of these, 494 did not complete the survey and 144 were excluded because they did not meet the company’s internal quality controls (e.g., they completed the survey unreasonably fast (below a third of the median time to completion)). This left us with a sample of 2,060 responses, which fulfilled pre-determined Belgium quota for age, gender and province (Appendix A). The main objective of the survey was to carry out an experiment to elicit individual preferences on who should get vaccinated first in the population; the results of the experiment are reported elsewhere [15]. In this paper we focus on two specific questions about attitudes toward vaccination. Before participants took the experiment, we asked them to answer the question “Would you say that vaccination for infectious disease is... very useful, rather useful, rather useless, very useless”. Then, at the end of the experiment, we asked the question “Once there is a safe and effective Covid-19 vaccine, will you get vaccinated?” and the four response items were “definitely”, “probably”, “probably not”, “definitely not”. The survey started by asking respondents for a range of sociodemographic characteristics along with their attitudes toward the government’s dealing with the coronavirus. Where at most 12.7% of the population across all age groups found vaccination rather or very useless (See Fig. 1), Covid-19 vaccine scepticism represented between 30% and 36% among people younger than 54 years old with the largest share of sceptics in the 25–34 and 35–44 age groups (See Fig. 2). While there were fewer Covid-19 vaccine sceptics in the older age groups (20% in 55–64 and 13.3% in people above 65), these shares were still larger than the shares of people reporting vaccination in general to be useless across any age groups.

We then studied the sub-sample of people who exhibited a seemingly inconsistent opinion of being pro-vaccination in general but being unwilling to take the Covid-19 vaccine once available. We used basic descriptive statistics and frequencies to describe all variables, comparing the full sample of survey data with the smaller sample of inconsistent individuals. We used chi-square tests to indicate significant differences in proportions between the two samples. We performed all analyses using the JMP Pro 16 statistical software.

2.2. Data analysis

We considered willingness to get Covid-19 vaccinated as a binary variable grouping the answers “definitely” against “probably”, “probably not” and “definitely not”. We determined the factors significantly associated to this response using a multivariate logistic regression model with as dependent variable whether an individual intends to become vaccinated or still doubts or refuses to become vaccinated. We estimated adjusted and unadjusted odds ratios of willingness to be Covid-19 vaccinated using all the variables that showed significance (p < 0.05) in a univariate analysis. We repeated the same analysis for attitudes toward infectious disease vaccination grouping “very useful” against “rather useful”, “rather useless” and “very useless”.

We then studied the sub-sample of people who exhibited a seemingly inconsistent opinion of being pro-vaccination in general but being unwilling to take the Covid-19 vaccine once available. None were excluded. Overall, 34% (N = 651) indicated that they would “definitely” become vaccinated with a Covid-19 vaccine and 39% (N = 742) stated that they would “probably” become vaccinated with a Covid-19 vaccine, 18% (N = 346) said “probably not” and 9% (N = 165) said “definitely not”. The numbers of sceptical answers to Covid-19 vaccination were substantially higher than the sceptical answers to the usefulness of vaccination in general. Whereas 73% stated to be willing to become vaccinated with the Covid-19 vaccine, 90% stated to think that vaccination is useful to protect against infectious diseases. 49% (N = 1,002) stated that vaccination is “very useful” and 41% (N = 848) stated it to be “rather useful”. 7% (N = 153) said “rather useless” and 3% (N = 57) said “very useless”.

When carrying out univariate analyses, we found larger discrepancies in different age groups’ willingness to be Covid-19 vaccinated compared to their attitude toward vaccination in general. While at most 12.7% of the population across all age groups found vaccination rather or very useless (See Fig. 1), Covid-19 vaccine scepticism represented between 30% and 36% among people younger than 54 years old with the largest share of sceptics in the 25–34 and 35–44 age groups (See Fig. 2). While there were fewer Covid-19 vaccine sceptics in the older age groups (20% in 55–64 and 13.3% in people above 65), these shares were still larger than the shares of people reporting vaccination in general to be useless across any age groups.

The multivariate logistic regression analyses (Table 1) revealed that factors predicting willingness to vaccinate against Covid-19 were being male (Odds Ratio (OR) = 1.53, (95% confidence interval 1.25–1.89), p < 0.0001), being Dutch-speaker (OR = 2.37 (1.89–
The predicting factors of the willingness to get vaccinated against Covid-19 were mostly similar to the predicting factors of reporting that infectious disease vaccination is very useful as illustrated by the strong correlation with the very high odds ratio of being both willing to take the Covid-19 vaccine and finding infectious disease vaccination very useful (OR = 16.44 (12.72–21.24)). While socioeconomic characteristics were not identified as predictors of the willingness to vaccinate against Covid-19, educational attainment is significantly and increasingly associated with positive opinion about vaccination in general (compared to basic education, secondary school OR = 1.35 (1.04–1.75), higher education OR = 1.71 (1.32–2.22), p = 0.0002).

While most respondents finding vaccination very or rather useful were favourable to Covid-19 vaccination (71.3%), a sample of N = 349 individuals (18.3%) exhibited a remarkable opinion toward vaccination (Fig. 3). They considered vaccination against infectious diseases very useful (15%, N = 52) or rather useful (85%, N = 297), but reported they would definitely not (24%, N = 85) or rather not (76%, N = 264) vaccinate against Covid-19. As these are likely to be the people in which communication campaigns about safety and effectiveness of Covid-19 vaccines are most effective, we investigated further who those people were (Table 2). Compared to the main sample, they were more likely to be women (Fig. 1).
younger than 54 years old ($p < 0.0001$), French speaking ($p < 0.0001$), with first or second degree secondary school ($p = 0.0714$), and working ($p < 0.0001$). They were also less likely to belong to a Covid-19 risk group ($p < 0.0001$), to have known someone who was hospitalised because of Covid-19 ($p = 0.0314$), and they were rather or very dissatisfied with the government's dealing with the Covid-19 crisis ($p < 0.0001$). A sample of $N = 36$ individuals ($1.9\%$) presented however negative attitudes toward vaccination in general but were willing to get vaccinated against Covid-19. They would get the Covid-19 vaccine for sure ($0.4\%, N = 8$) or probably ($1.5\%, N = 28$), but reported they find vaccination against infectious diseases very useless ($0.7\%, N = 13$) or rather useless ($1.2\%, N = 23$). Compared to the main sample, they were more likely to be men ($p = 0.0046$) who had not had a Covid-19 infection

### Table 1

Unadjusted and adjusted odds ratios of willingness to get Covid-19 vaccinated and of having a non-hesitant attitude toward vaccination in general.

| Characteristic                        | Covid-19 vaccine acceptance | General vaccine acceptance |
|---------------------------------------|-----------------------------|----------------------------|
|                                       | Unadjusted odds ratio (95% CI) | Adjusted odds ratio (95% CI) | P-value (adjusted) |
|                                       | Unadjusted odds ratio (95% CI) | Adjusted odds ratio (95% CI) | P-value (adjusted) |
| Gender                                |                             |                            |                  |
| Male                                  | 1.55 (1.28–1.87)            | 1.53 (1.25–1.89)           | <0.0001          |
| Dutch                                 | 2.33 (1.90–2.85)            | 2.37 (1.89–2.95)           | <0.0001          |
| Age                                   |                             |                            |                  |
| 18–24                                 | 1.00 (reference)            | 1.00 (reference)           | <0.0001          |
| 25–34                                 | 0.73 (0.47–1.13)            | 0.69 (0.44–1.09)           | <0.0001          |
| 35–44                                 | 1.00 (0.66–1.52)            | 0.95 (0.61–1.47)           | 1.19 (0.83–1.70) |
| 45–54                                 | 1.30 (0.87–1.95)            | 1.16 (0.75–1.77)           | 1.21 (0.85–1.72) |
| 55–64                                 | 2.02 (1.35–3.03)            | 1.72 (1.11–2.66)           | 1.54 (1.09–2.18) |
| 65–80                                 | 3.48 (2.35–5.16)            | 2.26 (1.45–3.53)           | 2.31 (1.62–3.30) |
| Education                             |                             |                            |                  |
| Basic                                 | 1.00 (reference)            | 1.00 (reference)           | 0.1705           |
| Third degree sec school               | 1.18 (0.93–1.51)            | 1.11 (0.84–1.45)           | 1.31 (1.05–1.64) |
| Higher                                | 1.09 (0.85–1.38)            | 1.28 (0.98–1.68)           | 1.52 (1.22–1.90) |
| Have children                         |                             |                            |                  |
| Yes                                   | 1.22 (1.00–1.49)            | NS                          | 1.30 (1.09–1.56) |
| Profession                            |                             |                            |                  |
| Working                               | 1.00 (reference)            | NS                          | 1.00 (reference) |
| Homemaker                            | 0.97 (0.58–1.62)            | 0.96 (0.57–1.62)           | 1.05 (0.68–1.63) |
| Student                               | 0.98 (0.66–1.46)            | 0.76 (0.54–1.06)           | 1.07 (0.70–1.44) |
| Unemployed                            | 1.02 (0.68–1.54)            | 1.01 (0.70–1.44)           | 1.04 (0.72–1.50) |
| Disabled                              | 1.87 (1.27–2.76)            | 2.06 (1.66–2.57)           |                  |
| Retired                               | 2.93 (2.33–3.69)            | 2.37 (2.31–4.64)           |                  |
| Profession is not 'essential'         |                             |                            |                  |
| Yes                                   | 1.40 (1.09–1.81)            | NS                          | 1.24 (1.00–1.55) |
| Financial difficulties                |                             |                            |                  |
| Never                                 | 1.41 (1.08–1.86)            | NS                          | 1.84 (1.43–2.36) |
| Once a year                           | 1.04 (0.77–1.42)            | 1.27 (0.96–1.69)           | 1.09 (0.79–1.50) |
| Once every three months               | 0.89 (0.65–1.23)            | 1.08 (0.81–1.44)           | 1.03 (0.73–1.39) |
| Every month                           | 1.00 (reference)            | 1.00 (reference)           |                  |
| Satisfaction with government's approach to Covid-19 pandemic | | |
| Very satisfied                        | 3.69 (2.12–6.43)            | 2.94 (1.61–5.37)           | 5.28 (2.87–9.71) |
| Rather satisfied                      | 1.66 (1.26–2.19)            | 1.55 (1.13–2.10)           | 1.74 (1.36–2.23) |
| Rather dissatisfied                   | 1.23 (0.94–1.63)            | 1.17 (0.87–1.58)           | 1.37 (1.07–1.75) |
| Very dissatisfied                     | 1.00 (reference)            | 1.00 (reference)           |                  |
| Has had a Covid-19 infection          |                             |                            |                  |
| Yes, confirmed with a test            | 1.34 (0.70–2.54)            | NS                          | 1.60 (0.90–2.86) |
| Probably, but not confirmed with a test | 1.00 (reference)         | NS                          | 1.00 (reference) |
| No                                    | 1.43 (0.99–2.06)            | 1.47 (1.07–2.02)           | 1.45 (1.00–2.12) |
| Know personally someone who has had Covid-19 | | |
| Yes, confirmed with a test            | 1.35 (0.90–2.04)            | NS                          | 1.31 (0.91–1.88) |
| Probably, but not confirmed with a test | 1.00 (reference)           | 1.00 (reference)           |                  |
| No                                    | 1.28 (0.90–1.82)            | 1.06 (0.78–1.44)           | 0.71 (0.49–1.04) |
| Know personally someone who was hospitalised for Covid-19 | | |
| Yes                                   | 1.60 (1.09–2.35)            | 1.78 (1.16–2.71)           | 1.64 (12.72–21.24) |
| Know personally someone who died of Covid-19 | | |
| Yes                                   | 1.33 (0.85–2.04)            | 1.31 (1.16–2.71)           | 1.64 (12.72–21.24) |
| Belong to a medically vulnerable group |                             |                            |                  |
| Yes                                   | 2.61 (2.15–3.18)            | 1.71 (1.35–2.17)           | 2.34 (1.95–2.81) |
| Determination vaccine prioritisation  |                             |                            |                  |
| Population                            | 1.00 (reference)            | 1.00 (reference)           |                  |
| Government                            | 2.35 (1.53–3.60)            | 1.58 (1.00–2.51)           |                  |
| Scientists                            | 2.30 (1.64–3.20)            | 2.14 (1.50–3.06)           |                  |
| Covid-19 vaccine acceptance          |                             |                            |                  |
| Yes, sure                             | 16.44 (12.72–21.24)         |                             |                  |
| General vaccine acceptance            |                             |                            |                  |
| Very useful                           | 16.44 (12.72–21.24)         |                             |                  |

Note: NS stands for “highly non-significant” ($p$-value $> 0.2$).
or had not known someone with a Covid-19 infection
\((p = 0.0546)\) or had not known someone who had been hos-
pitalised \((p = 0.0331)\) or had died \((p = 0.0710)\) because of Covid-19.

4. Discussion

A majority of Belgians (73%) report that they will definitely or
probably get vaccinated against Covid-19, though uptake is pre-
dicted to be lower among younger individuals, people at lower risk
of severe forms of Covid-19, women, those with lower education,
and those with lower trust in authorities. These characteristics
have also been identified as predictors of Covid-19 vaccine hesi-
tancy in similar studies in other countries [10–14].

According to Anderson et al. (2020) [3], if a vaccine has approx-
imately 80% efficacy, it is between 70% and 90% of the population
who needs to be vaccinated. If this is the case, the observed share
of the population willing to get Covid-19 vaccinated in this repre-
sentative sample may not be sufficient. However, a sample of 17%
of the population was found to be in favour of vaccination in gen-
eral but hesitant toward Covid-19 vaccination and so, this hesitant
group may be a key factor in whether herd immunity against the
coronavirus can be achieved within the population. Our study sug-
gests that, rather than focussing on vaccine sceptics or antivaxxers
who will be harder to convince that Covid-19 vaccination is neces-
sary, communication and educational efforts should be mainly tar-
gated at the group we identified as being pro-vaccines but doubtful
about the specific Covid-19 vaccine.

A limitation of this survey is that it did not collect reasons for
Covid-19 vaccine hesitancy to study further the sample of contra-
dictory individuals who consider vaccination useful, but do not
wish to get vaccinated against Covid-19. Why are people hesitant?
Some of the many reasons behind vaccine hesitancy are related to
the success of vaccines to eradicate diseases that used to be
deadly and as a result, people focus on the perceived risks of vac-
cination because they are less aware of the consequences of not
vaccinating [5,16]. In the context of Covid-19, we show that vac-
cine hesitancy may also be caused by individuals having no per-
sonal experience with people in their proximity having been
critically ill or passing away as a result of Covid-19 [17] because
the willingness to get vaccinated is almost twice higher when
knowing someone who has been hospitalised because of Covid-
19. However, there is hesitancy toward the Covid-19 vaccine

5. Ethics committee approval

This study did not fall under the Belgian law on experiments as
anonymous data collected by a third party were analysed and
therefore the Social and Societal Ethics Committee (SMEC) of KU
Leuven decided that no approval was needed.

Role of funding source

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Declaration of Competing Interest

The authors declare that they have no known competing financial
interests or personal relationships that could have appeared
to influence the work reported in this paper.

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Table 2
Descriptive statistics of the full sample and the subsample of contradictory respondents who believe vaccination is useful, but who do not wish to become vaccinated against Covid-19.

| Characteristic                  | Response item | Full sample (N = 2,060) | Subsample (N = 349) | P-value of difference |
|---------------------------------|---------------|--------------------------|---------------------|----------------------|
|                                 |               | N %                      | N %                 |                      |
| **Respondents’ general background** |               |                          |                     |                      |
| Gender                          | Female        | 1055 51%                 | 206 59%             | p = 0.0067           |
|                                 | Male          | 1005 49%                 | 143 41%             |                      |
| Age                             | 18–24         | 208 10%                  | 41 12%              | p < 0.0001           |
|                                 | 25–34         | 346 17%                  | 76 22%              |                      |
|                                 | 35–44         | 358 17%                  | 83 24%              |                      |
|                                 | 45–54         | 400 19%                  | 79 22%              |                      |
|                                 | 55–64         | 341 17%                  | 38 11%              |                      |
|                                 | 65–80         | 407 20%                  | 32 9%               |                      |
| Language                        | Dutch         | 1174 57%                 | 156 45%             | p < 0.0001           |
|                                 | French        | 886 43%                  | 193 55%             |                      |
| Education                       | None          | 8 0%                     | 0 0%                | p = 0.0714           |
|                                 | Primary school| 65 3%                    | 6 2%                |                      |
|                                 | First degree secondary school | 208 10%      | 43 12%              |                      |
|                                 | Second degree secondary school | 262 13%    | 53 15%              |                      |
|                                 | Third degree secondary school | 715 35%   | 120 35%             |                      |
|                                 | Higher education (non-university) | 495 24%   | 81 23%              |                      |
|                                 | University or post-university education | 278 14% | 45 13%             |                      |
|                                 | PhD           | 21 1%                    | 0 0%                |                      |
|                                 | Other         | 8 0%                     | 1 0%                |                      |
| Have children                   | Yes           | 1283 62%                 | 208 60%             | p = 0.3414           |
|                                 | No            | 777 38%                  | 141 40%             |                      |
| Profession                      | Working       | 1039 51%                 | 216 62%             | p < 0.0001           |
|                                 | Homemaker     | 87 4%                    | 14 4%               |                      |
|                                 | Student       | 168 8%                   | 28 8%               |                      |
|                                 | Unemployed    | 138 7%                   | 30 8%               |                      |
|                                 | Disabled      | 131 6%                   | 20 6%               |                      |
|                                 | Retired       | 497 24%                  | 41 12%              |                      |
| Difficulties with monthly expenses | Never      | 847 41%                  | 124 35%             | p = 0.2371           |
|                                 | Once a year   | 447 22%                  | 79 23%              |                      |
|                                 | Once every three months | 413 20%       | 77 22%              |                      |
|                                 | Every month   | 353 17%                  | 69 20%              |                      |
| **Respondents’ Covid-19 related background** |               |                          |                     |                      |
| Self-reported membership of a Covid-19 risk group | No           | 1261 61%                 | 265 76%             | p < 0.0001           |
|                                 | Yes, elderly  | 384 19%                  | 28 8%               |                      |
|                                 | Yes, chronically ill | 424 21%    | 52 15%              |                      |
|                                 | Yes, severe obesity | 133 6%    | 14 4%               |                      |
|                                 | Yes, other    | 69 3%                    | 6 2%                |                      |
| Self-reported profession is labelled as ‘essential’ | Yes         | 393 19%                  | 74 21%              | p = 0.3575           |
|                                 | No            | 1667 81%                 | 275 79%             |                      |
| Has had a Covid-19 infection | Yes, confirmed with a test | 64 3%        | 8 2%                | p = 0.4110           |
|                                 | No            | 1823 89%                 | 317 91%             |                      |
| Know personally someone who has had Covid-19 | Yes, confirmed with a test | 314 15%      | 49 14%              | p = 0.7480           |
|                                 | No            | 187 9%                   | 35 10%              |                      |
| Know personally someone who was hospitalised for Covid-19 | Yes | 127 6%                   | 12 3%               | p = 0.0314           |
|                                 | No            | 1933 94%                 | 337 97%             |                      |
| Satisfaction with government’s approach to Covid-19 pandemic | Very satisfied | 66 3%                    | 2 1%                | p < 0.0001           |
|                                 | Rather satisfied | 774 38%                | 92 26%              |                      |
|                                 | Rather dissatisfied | 827 40%            | 158 45%             |                      |
|                                 | Very dissatisfied | 393 19%                | 97 28%              |                      |
| Determination of the vaccine prioritization strategy | Population | 242 12%                  | 57 17%              | p = 0.1030           |
|                                 | Government    | 196 10%                  | 29 8%               |                      |
|                                 | Scientists    | 1466 72%                 | 262 75%             |                      |

Chi-square test to indicate significant differences in proportions between the two samples.
Appendix A. Study sample representativeness compared to overall Belgian population

| Variables | Categories | Study sample | Belgian population† |
|-----------|------------|--------------|---------------------|
| Gender    | Female     | 51%          | 51%                 |
|           | Male       | 49%          | 49%                 |
| Age       | 18–24      | 10%          | 11%                 |
|           | 25–34      | 17%          | 16%                 |
|           | 35–44      | 17%          | 17%                 |
|           | 45–54      | 19%          | 18%                 |
|           | 55–64      | 17%          | 16%                 |
|           | 65–80      | 20%          | 22%                 |
| Language  | Dutch      | 57%          | 60%                 |
|           | French     | 43%          | 40%                 |
| Province  | Vlaams-Brabant | 10%    | 10%               |
|           | Waals-Brabant | 7%      | 3%                |
|           | Brussels Capital | 9%    | 10%               |
|           | Antwerpen  | 15%          | 16%                 |
|           | Limburg    | 8%           | 8%                  |
|           | East Flanders | 13%   | 13%                |
|           | West Flanders | 10%  | 11%                |
|           | Hainaut    | 6%           | 12%                 |
|           | Liège      | 10%          | 10%                 |
|           | Luxembourg | 5%           | 3%                  |
|           | Namur      | 8%           | 4%                  |
| Education | None or primary school | 26% | 34%               |
|           | Secondary school | 35%  | 37%                |
|           | Higher education | 39%  | 29%               |

†Source: Statbel

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