



SPECIAL ISSUE ARTICLE

Blood donor motivators during the COVID-19 pandemic

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Abstract

While donating blood during the COVID-19 pandemic offers individuals a possibility to contribute to their community, donation also exposes donors to additional risks, as physical distancing is impossible during a donation. This study explored what motivated blood and plasma donors in the Netherlands to donate during the COVID-19 pandemic, in order to identify potential focus points for donor recruitment in future crises. In total, 3175 of the invited 7286 donors who donated between 1 and 14 April 2020 participated in an online questionnaire including questions about motivations for blood donation. Motivations for blood donation were compared among donation types, sexes, age groups, and regions. Respondents consisted of 10.6% new, 18.9% whole blood, and 70.5% plasma donors. About 80% of all donors indicated wanting to help COVID-19 patients. Particularly whole blood donors were motivated by a call for donations (90.8%). Plasma donors more often hoped to get tested for SARS-CoV-2 antibodies than new and whole blood donors. Older donors (aged ≥ 40) more often reported hoping to get tested for SARS-CoV-2 antibodies, wanting to help COVID-19 patients, and thinking that getting infected during the donation process was impossible. Younger donors (aged ≤ 39) more often indicated that getting out of the house and not having to go to work motivated them to donate. Donors mainly had pro-social motivations to donate during the COVID-19 pandemic, as helping COVID-19 patients was the most important motivator. This shows the promise of explicitly expressing need in times of crisis, for blood banks in particular and philanthropic organizations in general.

KEYWORDS

behavior, blood donor, motivations, pandemic, SARS-CoV-2

1 | INTRODUCTION

To control the spread of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), causing Corona Virus Disease 2019 (COVID-19), governments around the world have taken measures to prevent further spread of the virus. Similar to other countries worldwide, preventive measures such as stay-at-home orders, limiting social contacts and physical distancing, were implemented in the Netherlands.

The COVID-19 pandemic itself and the resulting preventive measures, for example, lockdowns and curfews during the first phase have (had) a large health, social and economic impact on society, but also on the blood supply worldwide. Blood banks experienced a drop in donations, caused by a decrease in donors presenting for a donation, the cancellation of blood drives, a decrease in available personnel due to sickness, and fewer available donation beds due to physical distancing measures (Arcot et al., 2020; Pagano et al., 2020; Stanworth

et al., 2020). The COVID-19 pandemic may also increase barriers for donating blood, especially since much about SARS-CoV-2 was unknown during the first phase of the pandemic. This lack of knowledge can lead to a “fear of the unknown”, a negative motivator that can work as an invisible hand to impair action (Kittleson, 2020; Raub, 2021). There are important practical barriers as well. To reach the donation center, donors might be dependent on public transport or visit potentially crowded areas that make it difficult to adhere to preventive measures. Most importantly, physical distancing is impossible during parts of the donation process (i.e., the donation center staff needs to be close to a donor to insert the needle and withdraw blood). This means that, despite the implemented infection prevention measures, donors may be at an increased risk for infection, and, therefore, the barriers for donating might be increased in terms of health risks. Such barriers could cause blood donors to reconsider donating blood during the pandemic and may jeopardize their previous motivations. For example, donors previously motivated by the will to help patients, might now choose not to donate because of the fear to get infected.

To mitigate these barriers, blood collection agencies emphasized the continuous need for blood and ensured that measures preventing the spread of the virus were in place. A recent study showed that such an approach can be successful: A large spike in new donor registrations was seen after a call for donations by Sanquin (the Dutch blood bank) in the media (Spekman et al., 2020). Another recent study by Weidmann and colleagues reported that 56.9% of blood donors donated because they wanted to participate in the fight against COVID-19 (Weidmann et al., 2021). Similarly, Chandler and colleagues showed that, of those donors who make a blood donation during the pandemic, a majority reported they made an extra effort to donate in order to help their health care system (Chandler et al., 2021). In previous crises too, people have been observed to show prosocial behavior, such as blood donation, for example, after 9/11 in the United States, the 2008 earthquake in China, and the more recent bushfires in Australia (Glynn et al., 2003; Guo et al., 2012; Lilley & Slonim, 2016; Tran et al., 2010). A proposed reason for this influx of new blood donors is, that motivating factors might overcome previous barriers for donating blood in times of emergencies (Guo et al., 2012). More generally, other initiatives such as supporting individuals with poor health, helping out quarantined neighbors and friends, and organizing alternatives for childcare, became more common during the COVID-19 pandemic (NOS, 2020), indicating increased prosociality during crisis situations.

While there is plenty of evidence that people show prosocial behavior in times of crises, yet little is known about what drives blood donors to donate during a health crisis, such as the COVID-19 pandemic. Earlier research (under normal circumstances) shows that donors can have various reasons for donating blood. These can be divided into several groups of motivators, such as prosocial motivation (to help others), personal values (donating as a moral duty), perceived need for donation (knowing blood is needed), indirect reciprocity (knowing someone who needed blood), and many others (Bednall & Bove, 2011; Piersma et al., 2017). However, these motivations might change when donating can pose an additional health risk.

It is, therefore, important to investigate what motivates donors to donate during health crises such as the COVID-19 pandemic. This information can help steer campaigns for donor recruitment and help develop tools to keep current donors involved and motivated during normal *and* exceptional circumstances. Therefore, we explored the reasons why new, whole blood and plasma donors chose to (continue to) donate blood during the first phase of the COVID-19 pandemic.

2 | METHODS

2.1 | Setting

2.1.1 | Infection preventive measures in the Netherlands

The first notified case of COVID-19 in the Netherlands—one of the most densely populated countries in Europe with more than 500 inhabitants per square kilometer—was reported on February 27th, 2020. The disease was first recognized in the province North Brabant, in the Southern part of the Netherlands, followed by a fast increase in cases throughout the whole country (RIVM, 2021). By the 1st of April, 13,614 confirmed COVID-19 cases were reported, including 5159 hospital admissions and 1173 deaths. This rapidly increased to 41,087 confirmed cases, 11,126 hospital admissions, and 5168 deaths by May 5th (RIVM, 2020b). Preventive measures such as stay-at-home orders, limiting social contacts, and physical distancing were implemented throughout the country. Schools, child care facilities, bars and restaurants, museums and sport facilities were closed starting March 16, 2020 (Rijksoverheid, 2020). Additionally, events, such as concerts or theater shows, were canceled and a ban on group formation was introduced. Also, people with professions in which physical contact could not be avoided, such as hairdressers and beauty salons, had to close their business. People were urged to stay at home as much as possible, and quarantine themselves when they showed symptoms of COVID-19. At that time, only suspected COVID-19 patients admitted to a hospital, and individuals with severe symptoms and an increased risk of hospitalization were tested for SARS-CoV-2 infection, due to a limited testing capacity (RIVM, 2020a).

2.1.2 | Blood donation in the Netherlands

Sanquin is by law the only organization authorized to collect and distribute blood and blood components in the Netherlands. On a yearly basis, approximately 330,000 voluntary non-remunerated individuals aged 18–73 years make over 700,000 donations at one of the 49 fixed collection sites or 85 mobile collection sites. A donor must meet certain health criteria before making a donation. These criteria are checked by a donor physician or donor assistant using a donor health questionnaire. Additionally, the donor's blood is tested for transfusion-transmissible infections. During the COVID-19 pandemic, donors were also screened for COVID-19 related symptoms before entering the collection site to

prevent possibly infected individuals from donating and putting others at risk during the donation process. Inside blood bank locations, physical distancing was promoted by using less donation beds and creating more space between seats in waiting areas. Wearing a mouth-nose mask was not mandatory at the time of this study.

When prospective donors at Sanquin register to donate, they first go through a new-donor screening. During this first appointment at the blood bank, their medical history is taken, and a risk assessment is performed to determine whether they meet the health criteria. When new donors appear eligible to donate, three tubes of blood are drawn for testing purposes. After they have been cleared for blood donation, the majority of them become either a whole blood or plasma donor (although other donation types are also possible). Whole blood donors donate all parts of their blood, about 450 ml. Men can donate whole blood five times and women three times a year. Whole blood donors are invited by Sanquin for a donation, depending on the current blood stock and needed blood types, and make a donation without appointment. However, during the pandemic, mobile collection sites did require whole blood donors to make an appointment to donate.

Plasma donors only donate the plasma component of the blood. During the donation, plasma is separated from whole blood with the use of a centrifuge and collected, while the red blood cells are returned to the donor. Because their red cells are returned, recovery after plasma donation is quicker compared to whole blood donation. Hence, plasma donors can donate up to 26 times a year. Plasma donors usually donate after making an appointment. During the COVID-19 pandemic, Sanquin also started collecting plasma from recovered COVID-19 patients. These donors are referred to as convalescent plasma donors, and they were recruited via the municipal health services. From the plasma of these convalescent plasma donors, antibodies against SARS-CoV-2 were collected for medicinal purposes.

2.1.3 | Promotional messaging

Because the amount of donations made by donors was dropping, Sanquin posted motivational messages on social media. These stated that the blood stock was low, and donors should present to donate when invited. Additionally, messages emphasized that the blood bank remained open, also during lockdown and that some blood banks provided extra opportunities for making a donation by extending opening hours, e.g., during weekends. These messages were all posted in March 2020. Spekman and colleagues showed that publication of these messages by Sanquin on social media coincided with peaks in new donor registrations (Spekman et al., 2020). Around the same time Sanquin started with large scale sero-surveillance studies, to monitor the proportion of donors already having antibodies against SARS-CoV-2. These studies were widely covered in national news media.

2.2 | Study population

Plasma or whole blood donations made anywhere in the Netherlands between April 1st and 14th 2020 were tested for SARS-CoV-2

antibodies by Sanquin to measure seroprevalence (Slot et al., 2020). The test results were used for research purposes only, and not reported back to individual donors. Via news media donors and the general public were made aware that Sanquin started testing for SARS-CoV-2 antibodies, but not when the study would take place. Donors that donated COVID-19 convalescent plasma were not invited, as they were recruited separately and are not representative for regular donors. In addition to this study, a total of 7286 donors that donated whole blood or plasma or had their new donor screening between April 1st and 14th of 2020, with registered e-mail addresses were invited to participate in a large-scale online survey about COVID-19 within 8 days after their donation (van den Hurk et al., 2021). The invited sample consisted of 1002 new donors, 1624 whole blood donors, and 4660 plasma donors. Plasma donors were overrepresented because a larger amount of plasma donors were included in the antibody study.

Of the 7286 invited participants, 246 e-mail invitations (~ 3%) bounced due to several reasons, including outdated addresses or typos made during registration. In total 3839 donors participated in the survey study (52.7%), of which the large majority (3291 donors) also participated in the optional part (as explained in the Section 2.3) of the study (van den Hurk et al., 2021). After exclusion of donors who donated COVID-19 convalescent plasma ($N = 116$), 3175 (43.6%) donors remained for analysis. Response rate per donation type was 33.6%, 36.6%, and 50.2% for new donors, whole blood donors, and plasma donors, respectively.

This cross-sectional study was conducted according to the principles of the Declaration of Helsinki (2013) and the General Data Protection Regulation (GDPR). All participating individuals provided informed consent before participating in the online questionnaire and the study protocol and procedures were approved by Sanquin's Ethics Advisory Council and its Privacy Officer.

2.3 | Online questionnaire

Invited donors were provided with a web link to an online questionnaire programmed in Qualtrics (Provo, Utah, USA). The current study was part of a larger study about the impact of the pandemic on donor health and behavior. The larger study contained a basic part with questions about health, self-reported COVID-19 status, COVID-19 related symptoms, and infection prevention measures and an optional part. After donors finished the basic part of the questionnaire, they were informed about the purpose of the optional part of the study and asked for additional consent. The donor motivation measures used in this study were part of the optional part of the survey, also containing questions about donors' opinions about the pandemic.

2.4 | Measures

2.4.1 | Motivations to donate

Our survey questionnaire included one block of statements regarding motivations to donate blood during the pandemic. This block

consisted of nine statements focused on reasons why donors chose to donate blood during the COVID-19 pandemic, for instance: 'I visited Sanquin Blood Bank during the coronavirus outbreak because I hope COVID-19 patients can be helped with my blood or plasma' (see Table 1 for a full list of statements). Donors were asked to indicate to what extent they agreed with each of the statements on a scale of 1 (completely disagree) to 5 (completely agree). Additionally, donors could write down their own personal motivators in an open text field, in case they found the provided statements not applicable to their situation or were motivated by other reasons.

2.4.2 | Background variables

Demographic data on age, sex, donation type, and geographical region of the participating donors were obtained from the blood bank information system eProgesa (MAK systems, Paris, France). Geographical region was categorized into North (provinces of Friesland, Groningen, Drenthe, and Overijssel), Mid (North Holland, South Holland, Utrecht, Gelderland, Flevoland), and South (North Brabant, Limburg, and Zeeland). Donation type consisted of three categories: new donors, whole blood donors, and plasma donors.

TABLE 1 Full list of donor motivations statements

I visited Sanquin Blood Bank during the coronavirus outbreak because...
The Blood Bank called for donations
I want to help COVID-19 patients with my blood or plasma
I think I qualify for donating convalescent COVID-19 plasma
I cannot/do not have to go to work
I think it's not so bad if I'm infected with coronavirus
I think I've already had COVID-19 and cannot infect others
I hope to get tested for coronavirus
I think it's not possible to get infected or infect others during a donation
I want to get out of the house
Other, namely...

TABLE 2 Characteristics stratified by donation type

	Total	New donors	Whole blood donors	Plasma donors	<i>p</i> Value
<i>N</i> (%)	3175	337 (10.6)	601 (18.9)	2237 (70.5)	<0.001
Male (%)	1608 (50.6)	130 (38.6)	263 (43.8)	1215 (54.3)	<0.001
Average age (SD)	46.4 (14.5)	37.7 (12.2)	40.2 (14.7)	49.3 (13.7)	<0.001
Region (%)					0.035
North	598	58 (17.2)	89 (14.8)	451 (20.2)	
Mid	1698	186 (55.2)	345 (57.4)	1167 (52.2)	
South	879	93 (27.6)	167 (27.8)	619 (27.7)	

2.5 | Statistical analyses

To present the provided statements more comprehensively, answering options were combined to three main categories (disagree, neutral, agree). The answering options 'completely disagree' and 'disagree' were combined into 'disagree'. Similarly, the options 'completely agree' and 'agree' were combined into 'agree'. For continuous variables, we calculated means and standard deviations, and for categorical variables we report proportions. To test for differences between subgroups, we used ANOVA for continuous variables and Chi²-test for proportions. Statistical analyses were performed using SPSS, Version 23 (IBM, Armonk, U.S.A.).

3 | RESULTS

A total of 3175 donors were eligible for analysis. Of these, 337 (10.6%) were new donors, 601 (18.9%) were whole blood donors, and 2237 (70.5%) were plasma donors ($p < 0.001$, Table 2). Plasma donors were more likely to be male and had a higher average age compared to new donors and whole blood donors.

Overall, the majority of donors was motivated by wanting to help COVID-19 patients with their blood or plasma (82.4%) donation, followed by the call from the Blood Bank for donations (77.6%) and the hope to get tested for SARS-CoV-2 antibodies (27.3%). The motivations 'I think I've already had COVID-19' and 'I don't have to go to work' were the least reported motivations (4.9% and 4.8%, respectively).

Comparisons of the motivations for donation during the COVID-19 pandemic between new donors, whole blood donors and plasma donors are shown in Figure 1. We found that almost 90.8% of whole blood donors agreed that 'The Blood Bank called for donations' was a motivator for donating, compared to 61.9% of new donors and 76.4% of plasma donors ($p < 0.001$). Furthermore, only 20.8% of new donors said that the hope to get tested for SARS-CoV-2 antibodies was a motivation to donate, while plasma donors (28.5%) and whole blood donors (26.5%) indicated more often that this motivated them to donate ($p = 0.012$).

We also found females more likely to be motivated by the call for donation from the Blood Bank (81%, $p = 0.001$) and by the fact that they did not have to go to work because they had to work from home

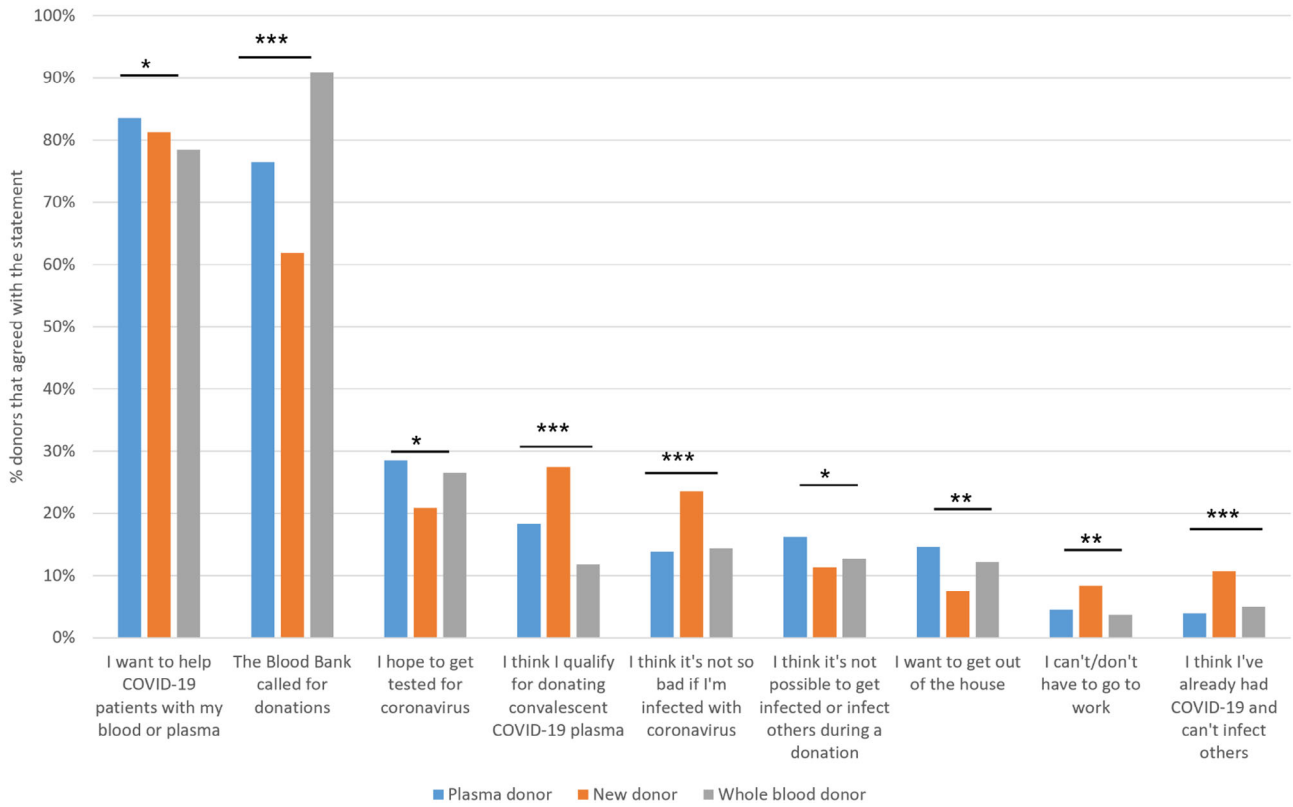


FIGURE 1 Percentage of donors that (completely) agreed with the provided motivations to donate, stratified by donation type. *** = $p < 0.001$, ** = $p < 0.01$, * = $p < 0.05$

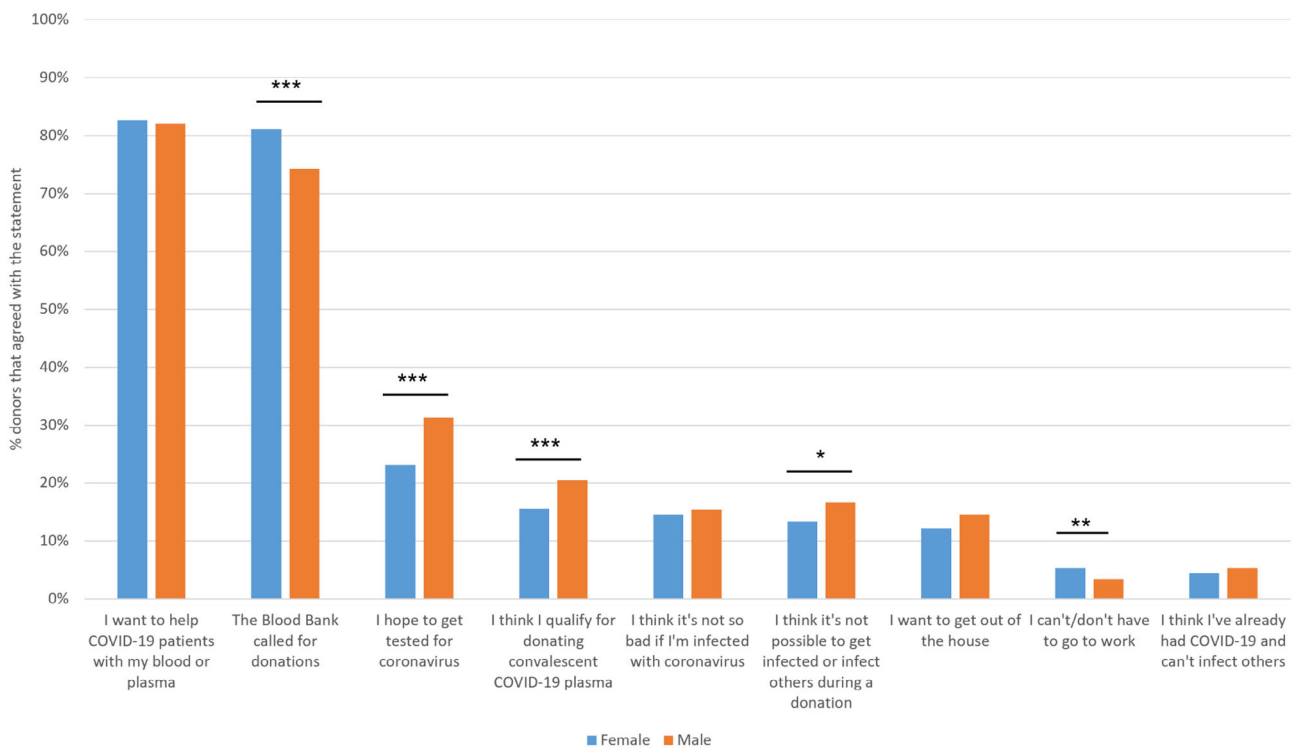


FIGURE 2 Percentage of donors that (completely) agreed with the provided motivations to donate, stratified by sex. *** = $p < 0.001$, ** = $p < 0.01$, * = $p < 0.05$

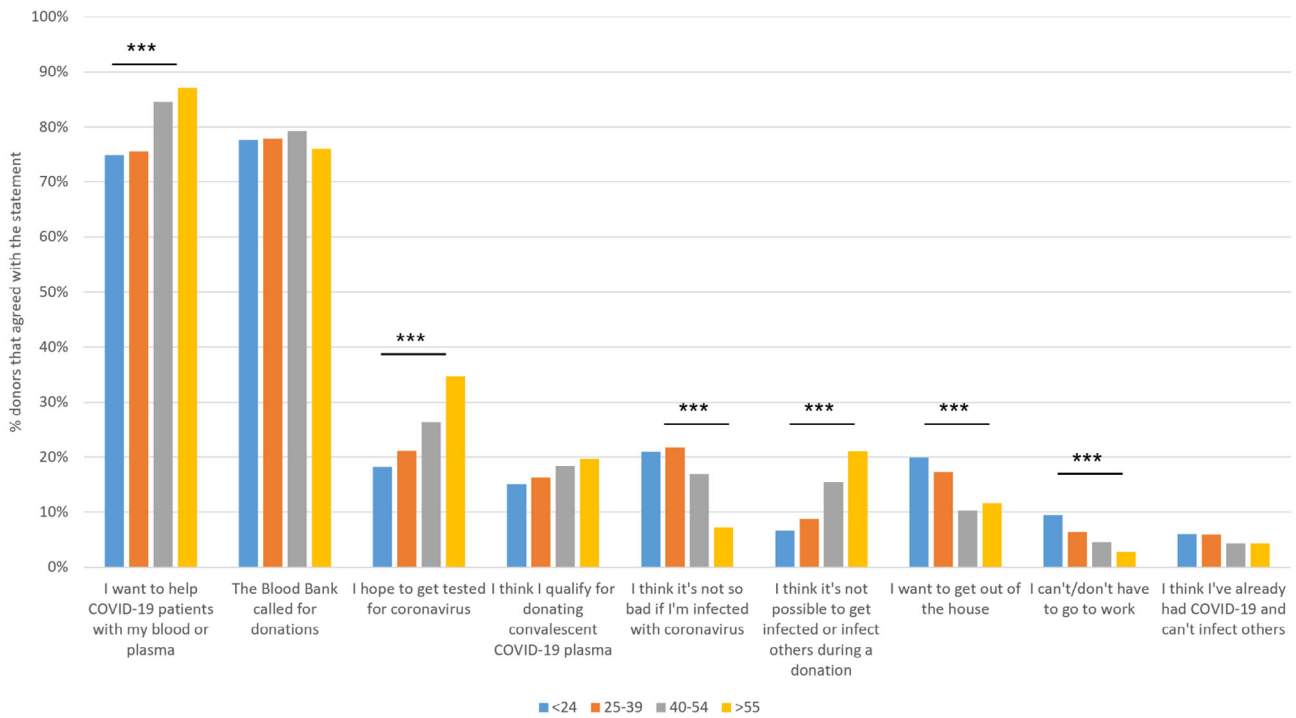


FIGURE 3 Percentage of donors that (completely) agreed with the provided motivations to donate, stratified by age-group. *** = $p < 0.001$, ** = $p < 0.01$, * = $p < 0.05$

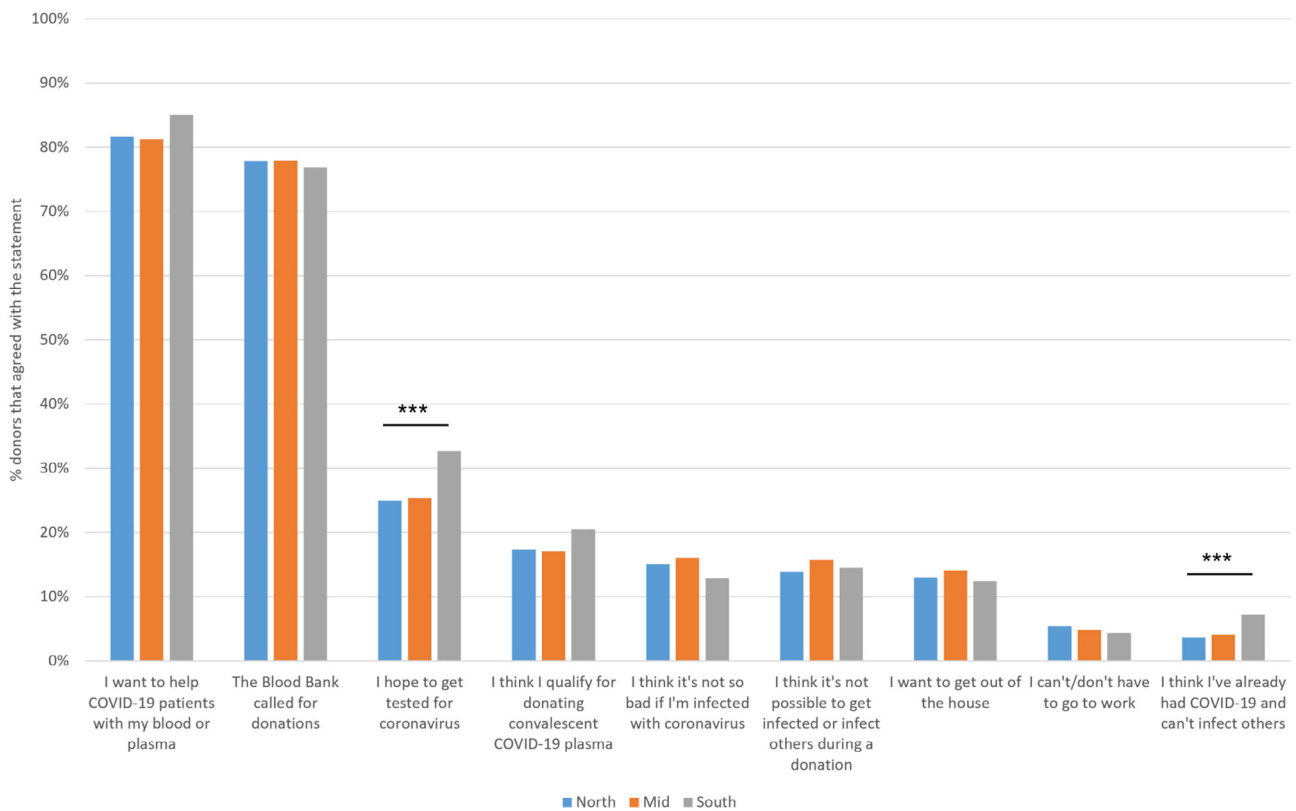


FIGURE 4 Percentage of donors that (completely) agreed with the provided motivations to donate, stratified by region. *** = $p < 0.001$, ** = $p < 0.01$, * = $p < 0.05$

or business was closed (5%, $p = 0.009$), compared to males (3%; see Figure 2). Males were more likely to be motivated by the possible qualification for donating convalescent COVID-19 plasma (21%, $p = 0.001$) and the hope to get tested for SARS-CoV-2 antibodies (31%, $p = 0.001$) than females (16% and 23%, respectively). Additionally, a larger proportion of male donors, compared to female donors, thought they could not get infected or infect others during a blood donation (17% vs. 13%, respectively, $p = 0.01$).

With regards to age (Figure 3), we found that donors in the two upper age categories (40–54 and >55 years old) were more likely to agree with the statements “I want to help COVID-19 patients with my blood or plasma” ($p = 0.001$) and “I don't think it's possible to get infected during a donation” ($p < 0.001$) than younger donors (<24 and 25–39 years old). Older donors were also more likely to be motivated by the hope to get tested for SARS-CoV-2 antibodies in comparison to younger donors ($p < 0.001$). Additionally, older donors (>55 years old) reported less often that it would not be so bad if they got infected, compared to other age-groups (7%, $p < 0.001$). Younger donors (<24 and 25–39 years old) more often indicated that getting out of the house and not having to go to work was a motivator to donate blood during the pandemic than older donors (40–54 and >55 years old, $p < 0.001$).

Looking at region (Figure 4), we found that donors donating in the southern part of the Netherlands more often agree to be motivated by the hope to get tested for SARS-CoV-2 antibodies (33%) than the mid and northern regions (both 25%, $p < 0.001$). Also, donors in the southern part of the country reported more often that they thought they already had had COVID-19 (7%), compared to the other regions (both 4%, $p = 0.001$).

In the free text field, donors could indicate other reasons for donating during the COVID-19 pandemic. Of the 839 donors who used this option, the majority (60.8%) indicated they always go when they are invited to donate (for whole blood donors) or have an appointment to donate (for new and plasma donors), and the pandemic did not change this. Some donors (9.4%) also indicated that the stay-at-home orders and closure of many facilities gave them more time to actually come and donate or register as donor. Also, 8.9% of donors said they wanted to help people with their blood and plasma, and that blood will always be needed, also in times of a pandemic.

4 | DISCUSSION

In this study among whole blood and plasma donors in the Netherlands, we investigated what motivated these donors to make a donation during the first phase of the COVID-19 pandemic. We found donors to be highly motivated by the blood bank's national media call to donate and the desire to help COVID-19 patients with their blood or plasma donation. However, donors also were aware of the potential risk of getting infected with the coronavirus during the donation process. This shows the trade-off between helping others and the risk of getting infected themselves (Spekman et al., 2020) donors have to make. If blood banks take preventive measures for both donors and

staff, this could help donors to overcome the fear of getting infected (Chandler et al., 2021; Masser et al., 2020). Clear and effective communication towards donors about such infection preventive measures is key to lower fear and achieve trust.

As indicated, the majority of donors was motivated by the call of the blood bank for donations and wanting to help COVID-19 patients with their blood or plasma. The other motivational statements asked about in the survey seemed to play less of a role in donor behavior and were less consistently agreed upon. Plasma donors, older donors, males, and donors from the South of the Netherlands agreed more often that they hoped to get tested for SARS-CoV-2 antibodies. Differences between sex and age groups were found regarding self-perceived infection and disease severity risk, and wanting to get out of the house or not being able to work.

Male and older donors (aged >55) agreed more often that they were motivated by the hope to get tested for SARS-CoV-2 antibodies. Also, younger donors more often thought getting infected during a donation would not be as detrimental for them compared to older donors. Since severe COVID-19 patients are more likely to be older and male, these worries are justified (Gallo Marin et al., 2021). It therefore makes sense these donors would like to know their SARS-CoV-2 antibody status. Most donors were aware of the seroprevalence studies Sanquin performed, since this was widely covered in national news media. Not all donors, however, were aware that the test results were not reported back to them. Overall, test seeking behavior was rather low in this study, but still prevalent (27.3%). Donors knowing that they have SARS-CoV-2 antibodies might feel safer and more protected against severe disease and re-infection. Additionally, donors might think they cannot infect others anymore. It has been proposed to use antibody test results as an incentive for donors to donate, especially when blood stocks are jeopardized (Chandler et al., 2021). However, it is unclear how donors adhere to preventive measures knowing they are temporarily immune to severe disease. Additionally, wanting to get tested for SARS-CoV-2 antibodies could make donors less compliant with the donor health check prior to donation. Blood banks should therefore be careful with sharing antibody test results with the donor until the potential impact of this policy on behavior is further investigated. Male and older donors also stated more often that they thought it was impossible to get infected with SARS-CoV-2 during a donation. It is unclear if this is because of limited knowledge about virus transmission or because of their trust in the safety measures that the blood bank installed.

Younger donors more often indicated that they donated because they did not have to go to work or wanted to get out of the house. Younger donors were heavily affected by the infection preventive measures, due to the closure of universities and schools and restrictions in leisure activities. Also, the closure of eating and drinking facilities and retail, where adolescents mostly work, limited their social outlets. Blood banks could use this knowledge to promote donating blood in this age group, by emphasizing that donating blood can be a legitimate reason for getting out of the house while also contributing to a good cause.

Furthermore, regional differences regarding the hope to get tested for SARS-CoV-2 antibodies and the donors thinking they have already had COVID-19 could be explained by the fact the first official cases of COVID-19 were diagnosed in the southern part of the Netherlands (RIVM, 2021). The southern provinces experienced extreme pressure on local health care, showing that the virus was already widely spread through the region. This possibly made residents more aware of the possibility they have already been in contact with the virus. Therefore, they could think they might have already had COVID-19 and wanted to know if they had been infected. This is in line with the findings from a study on antibody presence conducted among blood donors during the same time period, where Slot et al. show that a high proportion of blood donors living in the southern region of the Netherlands had antibodies (Slot et al., 2020).

A major strength of this study is the high-response rate, especially during a time of great uncertainty. Many donors mentioned they were highly motivated to support research on SARS-CoV-2 and were willing to participate in research. Additionally, we surveyed participants on a wide range of motivations and provided participants with the opportunity to write down their personal motivations. This gives us a complete overview of motivations to donate during the first phase of the COVID-19 pandemic. A limitation of the current study is that we only collected information on donors who had made a donation attempt during a specific week. This means our study results might not be representative for the entire donor population. If we had included donors that decided not to make a donation during the pandemic, our results may have been different. It is unknown how many donors decided not to come and donate due to the pandemic because of fear of to get infected, illness or because they were quarantined. Chandler and colleagues found that donors who anticipated a high risk of infection were much less likely to make a donation (Chandler et al., 2021). This is an important perspective that is currently missing and should be investigated to be able to remove barriers for these donors. In future research among non-donating donors, dis-motivators and other barriers that keep them from donating should be surveyed. This knowledge could help develop tools to keep also these donors involved.

Additionally, a majority of participants was plasma donor, which might have had an impact on our results, as plasma donors are more often male and older in age. Plasma donors indicated less often that they were motivated by the call from the blood bank for donations compared to whole blood donors. This can be explained by the fact that plasma donors make a donation appointment themselves, and are not invited for a donation. Additionally, plasma donors more often thought they did not qualify for donating COVID-19 plasma, compared to new donors. For new donors, potentially qualifying for convalescent COVID-19 plasma donation might have been a motivator to start donating.

Donors mainly had pro-social motivations, such as responding to the blood bank's call to donate and the desire to help COVID-19 patients with their blood or plasma. To gain more in depth knowledge on what motivates donors, future studies could look further into the different types of altruism, such as pure altruism, i.e. contributing to

the demand of a public good or reluctant altruism, i.e. feeling responsible.

5 | CONCLUSION

Insight in donor motivations during crisis situations can drive strategies for donor retention and donor recruitment in future crises. This study identifies potential focus points for donor recruitment during crises situations. Our study shows that donors were highly motivated by the possibility to help COVID-19 patients and respond to the call for donations from the blood bank. This indicates the potential of explicitly expressing need in times of crisis for blood banks and other philanthropic organizations. This holds especially if victims of these crises can directly benefit from a donors efforts, in this case COVID-19 patients. Moreover, people's desire to help during the COVID-19 pandemic can be utilized to develop a mutually beneficial relationship between donor and blood bank organizations. This study further shows the importance of taking the current context into account. Prosocial motivation, mutual commitment of donors and collection institutions, communication and engagement between individuals and institutes depend on and at the same time shape the context in which individuals are or are not willing to contribute to public goods.

CONFLICT OF INTEREST

The authors have no conflict of interest to disclose.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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