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Knowing the Blood Nondonor to Activate Behaviour

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Abstract: This work is aimed at further developing the study of blood nondonor behaviour through a joint analysis of sociodemographic characteristics, psychological and physical barriers, impure altruism and anticipated emotions, as predictors of intention to donate. To that end, a step-by-step hierarchical regression analysis was applied on a sample of 2383 Spanish nondonors. The study's results confirm the influence of traditional variables (sociodemographic characteristics, psychological and physical barriers and impure altruism), as well as the power of anticipated emotions, both positive and negative, of donation action and inaction as variables explaining the intention to donate. Another important contribution has been to develop the moderating role of psychological and physical barriers, in addition to impure altruism, on cause–effect relationships between anticipated emotions and intention to donate. A number of practical implications can be derived from this study for transfusion centres responsible for donation promotion.

Keywords: blood donation; barriers; motivations; anticipated emotions; donation intention; nondonors

1. Introduction

Blood transfusion, along with its derivatives, is an essential service for every healthcare system. Despite its importance in satisfying patients' medical and surgical needs, there is a worrying imbalance between blood offer and demand (World Health Organization and International Federation of Red Cross and Red Crescent Societies 2010). This imbalance is caused by multiple factors, e.g., the increasing number of procedures requiring blood transfusion, an aging population, the tighter donor screening criteria and the perishable nature of blood (Zucoloto et al. 2019a; Vavić et al. 2012). In addition, even though approximately 40% of the male and female population are eligible to donate blood, only 5–10% donate (Custer et al. 2012; Lacetera and Macis 2010).

Taking into account, on the one hand, that blood is a scarce resource, and on the other, that voluntary, unremunerated donors are the main and preferred source for the donor system (Van der Poel et al. 2002), blood transfusion centres must allocate resources to promoting repetitive and extended donation behaviour and also direct efforts towards recruiting new donors among the population. Although the literature has proven that, in general terms, it is more efficient to retain existing donors than to recruit new donors, there are certain limitations with regard to donor recruitment, which leads transfusion centres to search for other alternatives, such as the number of allowed donations per year, age restrictions and rejection of donors through screening criteria related to health or medical specifications (Godin et al. 2007). The interest in recruiting new donors is about increasing donor pool size and also replacing donors who are no longer suitable with new donors (Wildman and

Hollingsworth 2009). However, donor recruitment efforts carried out by blood transfusion centres have not been successful, as most centres have suffered a decrease in new donor recruitment, in spite of the high amount of promotion campaigns (Carter et al. 2011). For this reason, studying variables that determine the behaviour of nondonors (individuals who have never donated blood) is essential for blood transfusion centres (Zucoloto et al. 2019a), with intention to donate being the variable explained in most studies that research this group of people (e.g., Reid and Wood 2008; Robinson et al. 2008).

Traditionally, intention is defined as the intrinsic declaration to carry out a specific action or behaviour (Ajzen 1991), and it is the most immediate determinant of behaviour, and of course of donation behaviour (Bednall et al. 2013). Regardless of traditional constructs addressed in models explaining intention (as a behaviour antecedent), and also the antecedents of intention (mainly TPB[1]-based models), in the field of blood donation, intention to donate can also be influenced by individuals' particular characteristics. Principal among them are sociodemographic characteristics (e.g., sex, age, education, place of residence) (Piersma et al. 2017), as well as other intrinsic variables such as donation barriers and motivations to donate (Martín-Santana and Beerli-Palacio 2013). Barriers and motivations are especially relevant because they are two factors that can tip the balance towards donation or nondonation, particularly among nondonors. Although research on these two factors has been widely addressed in donation literature, there are few works where they are jointly studied for nondonors. On the other hand, there is currently a growing research area dealing with anticipated emotions as key components determining the individual's behaviour, which might be relevant to expanding knowledge on nondonor behaviour.

With the above in mind, this work is aimed at further studying the influence of traditional variables of donor behaviour (sociodemographic characteristics, barriers and motivations) on nondonors' intention to donate. Additionally, in order to expand the range of variables determining intention, we have also analysed the influence of anticipated emotions. This study is therefore aimed at addressing a research gap in the knowledge about blood nondonor behaviour using a holistic method that incorporates barriers, motivations and sociodemographic characteristics as direct antecedents to the intention to donate. Additionally, this work makes a contribution to the donation field by including the factor of anticipated emotions as an intrinsic variable influencing the decision to donate. What is more, addressing all these variables together is an innovation and may help to define social marketing strategies of blood transfusion centres.

2. Theoretical Background and Hypotheses

In the blood donation field, there are numerous studies that have analysed donation behaviour. Some of these models comprise intention (and not behaviour) as an explained variable (e.g., France et al. 2008; Godin et al. 2005; Lemmens et al. 2009). In the case of nondonors, the only variable that could be explained is intention to donate, given that nondonors have never given blood. It is true that intention is not a perfect measurement because it does not necessarily always translate into behaviour (i.e., a donation) given the existence of situational factors, such as lack of time, health conditions, etc. (Holdershaw et al. 2011). However, some authors have used the intention to donate as a proxy variable of behaviour when real measurements of behaviour cannot be obtained (Polonsky et al. 2013; Schlumpf et al. 2008; France et al. 2007).

Most studies on the intention to donate analyse samples of donors (e.g., Masser et al. 2013; France et al. 2007) or mixed samples of donors and nondonors (e.g., James et al. 2013; Godin et al. 2005). Nevertheless, very few studies have expressly focused on intention (and its antecedents) in nondonors (e.g., Faqah et al. 2015; Reid and Wood 2008; Robinson et al. 2008). That is why it is necessary to study nondonors in particular, which is the aim of this paper, to address a current research gap.

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[1] TPB: Theory of Planned Behaviour.

Some authors state that there are certain individual characteristics influencing the intention to donate (Piersma et al. 2017; Robinson et al. 2008). In first place are sociodemographic characteristics (sex, age, education, etc.), which have been used mainly to describe a typical donor (a male adult with high levels of education and income) and to determine how sociodemographic characteristics influence real donation behaviour (Gemelli et al. 2017; Wittock et al. 2017; Zucoloto et al. 2019b). However, when analysing the effect of sociodemographic characteristics on the intention to donate, the existing studies are limited, and their results are inconclusive. The work by Schlumpf et al. (2008) is especially noteworthy, where older individuals (particularly, aged 55 years or more) reported up to 50% less intention to donate than younger subjects, which translates into an inversely proportional relationship between age and intention to donate. Godin et al. (2005) also found an inverse relationship between education and intention, albeit to a reduced extent. Finally, in their study, Nguyen et al. (2008) did not find statistically significant associations between donors' demographic characteristics and intention to donate, although they did identify a trend towards a greater intention among older donors (aged 40 years or more).

Based on the aforementioned works, a generic, nonparticularised hypothesis is presented, as there is no previous evidence that supports a specific hypothesis for each proposed sociodemographic characteristic. More precisely, this work considered the following: sex, age, highest level of education, employment status, total monthly income and population at place of residence. This broad selection of variables is justified by the fact that donating blood is a high-involvement decision. Therefore, exploring the influence of sociodemographic characteristics on donation intention could contribute to the existing knowledge of the donation behaviour of nondonors.

For these reasons, taking into account the fact that antecedents are limited and inconclusive, the first hypothesis is presented:

Hypothesis 1 (H1). *Sociodemographic characteristics influence the intention to donate.*

In second place, barriers and motivations are factors directly related to donor behaviour in general. On one hand, donation barriers are the current difficulties and contexts that an individual must overcome to donate blood (Godin et al. 2007). On the other hand, motivations are the forces or reasons driving individuals to donate (Martín-Santana and Beerli-Palacio 2013). The interaction between barriers and motivations ultimately determines the decision to donate (Hupfer et al. 2005; Gillespie and Hillyer 2002). Particularly for nondonors, studying these variables is crucial because its prevalence in this group is different compared to that of donors. This is confirmed by the results of the meta-analysis carried out by Bednall and Bove (2011), who found statistically significant differences between barriers reported by nondonors in comparison to donors. Out of the 27 barriers for which data were collected from both donor types, 14 were more prevalent among nondonors than among donors. Along the same lines, Shaz et al. (2010) also confirmed in a comparative study that 10 out the 12 barriers analysed were more prevalent among nondonors in comparison to current donors and lapsed donors.

In the case of motivations to donate, the issue is more inconclusive, since these variables have been researched more extensively among donors than among nondonors (Bednall and Bove 2011). The greater focus on finding out why individuals are compelled to remain in the system may be owed to the fact that retaining donors is less costly for transfusion centres than recruiting new ones (Gemelli et al. 2017; Wevers et al. 2014). Previous works analysing nondonor motivation towards potentially donating for the first time have studied mainly mixed samples comprising donors and nondonors (e.g., Hupfer et al. 2005; Shaz et al. 2010; James et al. 2013). One of the most important motivations for both donor types has been altruism (defined as the ultimate selfless desire to help others at a personal cost), although there are other least relevant donation motivations such as the space–time convenience of the donation site, donation incentives, etc. Given that nondonors have never given blood, reporting altruism as a possible motivation could be due to the socially desirable nature of such behaviour (Bednall and Bove 2011). Therefore, if donors and nondonors largely have

the same motivations in common, it can be inferred that the difference between being a donor and being a nondonor is either how intensely these factors influence the decision to donate or the greater prevalence of barriers over motivations.

The literature on donor behaviour is characterised by the large variety of barriers and motivations analysed (Bednall and Bove 2011). Among existing barriers, the literature dwells mainly, due to their significance and frequency, on psychological barriers related to the aversion to the donation process and fears associated with it (e.g., needles, seeing blood); and physical barriers, i.e., concerns about suffering negative physical consequences when donating, such as fainting, dizziness, nausea, etc. (France et al. 2014; Kowalsky et al. 2014; Zucoloto et al. 2019b). Regarding nondonors, the prevalence of psychological and physical barriers is especially relevant, as proven in some empirical studies (Shaz et al. 2010; Ngoma et al. 2013; Shaz et al. 2009). This is largely due to nondonors' lack of experience and of familiarity with the donation process (Bagot et al. 2016; Vavić et al. 2012). In fact, blood transfusion centres usually consider these barriers as being the most decisive on the decision to donate, so eliminating or at least mitigating them is more often than not the focal point of their social marketing campaigns (Newman 2014; Pagliariccio and Marinozzi 2012).

On the other hand, as previously mentioned, the main motivation to donate blood for donors and nondonors has been altruism (Bednall and Bove 2011; Bagot et al. 2016), to the extent that most campaigns to promote donation are based on messages directly appealing to donors' altruistic and solidary nature (Ferguson 2015; Chell and Mortimer 2014). However, although the act of donating meets all the characteristics of an altruistic act (Guiddi et al. 2015; Tey et al. 2019), it can be motivated by more "selfish" reasons (Ferguson 2015). Thus, some authors suggest that individuals donate blood not only to selflessly help other people in need (pure altruism), but also to get positive emotional rewards such as satisfaction, personal merit, etc. (warm-glow). The combination of both dimensions of altruism results in impure altruism (Andreoni 1990), which is closer to the reality of blood donation (Ferguson and Lawrence 2016; Evans and Ferguson 2014). Therefore, new donor recruitment campaigns may be of limited success, because they are too pure (Barreto 2019; Chell and Mortimer 2014) and should actually focus on the impure or "selfish" dimension of altruism. This is not to suggest that donating blood is a selfish act. In spite of looking for a personal benefit, the blood donor is contributing to other people's well-being while taking a number of risks and costs in terms of time, effort, etc. (Alfieri et al. 2017; Tey et al. 2019).

With regard to the influence of barriers and motivations on intention to donate, previous studies are scarce, although their results are significant. Martín-Santana and Beerli-Palacio (2013) verified that intrinsic and extrinsic inhibitors are antecedents of intention to donate, with this effect being negative. The authors concluded that intention decreased when the donor (1) was afraid of needles, of contracting a disease transmitted by blood transfusion or of feeling unwell; (2) was averse to seeing blood; (3) thought that donating blood required great effort; and (4) could not adjust schedules to the donation venue's opening times. In parallel, Ferguson et al. (2008), in their Study 2, analysed the predictive capacity of four motivation types on intention to donate: hedonism, benevolence, kinship and altruism. Out of these four variables, only benevolence (pattern in which the donor feels personal reward and the recipient receives a donation) was a statistically significant, and positive, predictor of intention. With a similar approach, Williams et al. (2019) performed a path analysis to assess the effect of the four motivational orientations proposed by the self-determination theory: amotivation (no motivation), external regulation (motivated by external rewards), introjected regulation (motivated to avoid guilt or to enhance one's ego) and autonomous motivation (intrinsic motivation). In this particular case, amotivation, introjected regulation and autonomous motivation had a direct effect on donation intention (negative in the case of amotivation), and autonomous motivation was the motivational orientation with larger total positive effects. For their part, Schlumpf et al. (2008) designed two logistic regression models, one based on behaviour and the other based on intention to donate as dependent variables. In the latter, social pressure and the responsibility to help others were positive, statistically significant predictors of intention to donate. Finally, Reid and Wood (2008) made

a hierarchical regression analysis including 10 possible predictors. Out of these 10 factors, three of them, related to barriers and motivations, were significant: subjective norm (perception of existing social pressure towards donating blood), perceived control (degree of control or confidence that an individual perceives that they have on the act of donating) and temporal barriers (i.e., lack of time).

However, these results cannot be generalised because, with the exception of the study by Reid and Wood (2008), which uses a sample consisting only of nondonors, the rest include individuals who have already donated once. Although the results offered by Reid and Wood (2008) are relevant, they need to be expanded in order to go deeper into nondonor behaviour.

Given the little attention paid to barriers and motivations as antecedents of the intention to donate, and given, in the light of the few existing studies, the positive signs that they might be determining factors of the intention to donate, the following hypotheses are presented:

Hypothesis 2 (H2). *Psychological and physical barriers have a negative influence on the intention to donate.*

Hypothesis 3 (H3). *Impure altruism has a positive influence on the intention to donate.*

Finally, to expand the existing knowledge on the determining factors of the intention to donate, it is necessary to incorporate new variables that can help to explain it. Based on decision affect theory, Mellers et al. (1999) suggest that, in addition to actual emotions at the moment of decision-making, decisions are influenced by emotions individuals expect to experience in the future, that is, anticipated emotions (AEs), so-called due to their prospective orientation (Bagozzi et al. 2000). Bagozzi et al. (2003, p. 278) have described AEs as "the notion of the hope of success and the fear of failure as antecedents of approach and avoidance behaviours in achievement contexts". Authors such as Xie et al. (2013) support using AEs as predictors of intention. In their study, they added AEs to the classic TPB model. This new model (model of goal-directed behaviour) provides a more exhaustive, enriching explanation of intention than TPB because it includes an emotional component with AEs. Thus, it addresses the criticism raised against the TPB model, which does not consider the role of affective variables (Conner et al. 2015).

The positive and/or negative influence of AEs on the intention to behave in a certain way has been verified by several authors (e.g., Bagozzi et al. 1998; Mellers and McGraw 2001; Richard et al. 1995; Sandberg and Conner 2008; Steg and Vlek 2009) in a wide range of contexts (e.g., Bagozzi and Dholakia 2006; Beaudry and Pinsonneault 2010; Wang 2011; Kim et al. 2013; Onwezen et al. 2013), including blood donation (Conner et al. 2013). In this particular context, the study of emotions has mainly focused on pre-donation anxiety, usually reported as a psychological barrier (Lemmens et al. 2005), anticipated regret (Faqah et al. 2015) and positive emotions such as satisfaction or pride derived from the act of donating (Ferguson et al. 2008). Except for the aforementioned regret, and despite the importance of AEs in predicting behaviour and the intention to carry it out (Richetin et al. 2011), AEs have been scarcely studied in the field of blood donation, especially positive AEs. The only exception is the work carried out by Conner et al. (2013), who analysed anticipated affective reactions, both positive and negative, as antecedents of the intention to donate. In both cases, the effect on intention was positive, even more so in the case of negative reactions. However, the authors' study only considered anticipated positive affective reactions of donation and anticipated negative affective reactions of nondonation, without taking into account positive reactions of nondonation and negative reactions of donation.

Thus, in our study, we suggest applying, for the first time in the field of blood donation, a more holistic, integrative approach such as that proposed by Bagozzi et al. (2016), Fong and Wyer (2003) and Zeelenberg et al. (2000). These authors determined positive and negative AEs derived from action and inaction. From this perspective, although most people experience positive emotions towards donation that lead them to donate (e.g., pride or satisfaction), even overcoming barriers (e.g., lack of time or information, fear of needles), others display negative emotions (e.g., regret or anxiety). Additionally, the existence of both positive emotions (e.g., calmness or relief) and negative emotions

(e.g., disappointment at oneself or guilt) caused by nondonation is also very relevant, but it has not been researched enough yet.

In view of the above, the following general hypothesis is presented, concerning the influence of anticipated emotions on the intention to donate, in addition to the corresponding four subhypotheses:

Hypothesis 4 (H4). *Anticipated emotions influence the intention to donate.*

Hypothesis 4a (H4a). *Positive anticipated emotions towards donation have a positive influence on the intention to donate.*

Hypothesis 4b (H4b). *Negative anticipated emotions towards donation have a negative influence on the intention to donate.*

Hypothesis 4c (H4c). *Positive anticipated emotions towards nondonation have a negative influence on the intention to donate.*

Hypothesis 4d (H4d). *Negative anticipated emotions towards nondonation have a positive influence on the intention to donate.*

Although scientific literature has paid little attention to the specific circumstances that may moderate the influence of AEs on decisions, according to Pollai et al. (2011), individuals' decision processes also depend on specific conditions that may moderate such AEs. As indicated above, the role of barriers and motivations in behaviour research is essential, because the result of the interactions between barriers and motivations determines the decision to donate. Thus, when motivations towards donating blood prevail over barriers, the person decides to donate, and vice versa (Hupfer et al. 2005; Gillespie and Hillyer 2002).

Due to the lack of literature, our research aims at addressing the questions of how current barriers and motivations may moderate the relationship between AEs and the intention to donate for nondonors in the following terms:

Question 1 (Q1). *Do psychological and physical barriers moderate the relationship between anticipated emotions and the intention to donate?*

Question 2 (Q2). *Does impure altruism moderate the relationship between anticipated emotions and the intention to donate?*

3. Methodology

3.1. Sample Design and Data Collection

Study Population and Data Collection

The study population comprised nondonors (individuals who have never given blood) who were older than 18 years, from both sexes and who lived in Spain. Data were collected with an online self-administered questionnaire from March to September 2018. Since there is no specific nondonor register, the collaboration of 14 of the 17 existing Spanish regional blood transfusion centres and 24 of the 83 Spanish public and private universities was needed in order to reach the study population. These institutions spread the URL of the questionnaire along with an invitation message through their main social media accounts (especially Facebook and Twitter) and their own platforms (e.g., official website, newsletter, blog). Additionally, universities also spread the invitation to the whole university community through their institutional e-mail service. A total of 46 dissemination campaigns (22 actions carried out by blood transfusion centres and 24 carried out by universities) gathered an initial sample of 2584 nondonors. Some questionnaires remained unfinished, however, so the final

sample was reduced to 2383 nondonors. For this reason, the questionnaire completion rate was 92.2%. Out of the final sample, 1261 questionnaires (52.9%) came from blood transfusion centres social media, and 1122 (47.1%) came from universities.

The final Spanish nondonor sample (see Table 1) had a higher rate of women (74.3%) than men. Most respondents were younger than 25 years of age (47.7%), had a university degree (60.4%), were employed (57.0%), earned less than 2000 EUR a month (53.2%) and lived in populations with more than 100,000 inhabitants (45.9%).

Table 1. Sample profile.

Characteristics	N	%
Sex		
Male	613	25.7
Female	1770	74.3
Age (Years)		
18–25	1136	47.7
26–35	490	20.6
36–45	396	16.6
46–55	273	11.5
>55	88	3.7
Education		
No formal education	3	0.1
Primary	86	3.6
Secondary	855	35.9
University	1439	60.4
Employed		
Yes	1359	57.0
No	1024	43.0
Total Monthly Income (EUR)		
<1000	389	16.3
1001–2000	880	36.9
2001–4000	799	33.5
4001–6000	228	9.6
>6000	87	3.7
Population at Place of Residence (Inhabitants)		
<1000	87	3.7
1001–5000	205	8.6
5001–10,000	208	8.7
10,001–25,000	297	12.5
25,001–50,000	254	10.7
50,001–100,000	224	9.4
>100,000	1094	45.9
TOTAL	**2383**	**100.0**

3.2. Measures

3.2.1. Dependent Variable

Donation intention (DI). A 7-point Likert scale of two items was used for measuring DI (Godin et al. 2014; Masser et al. 2012). In this scale, a response of 1 meant 'strongly disagree' and 7 meant 'strongly agree'.

3.2.2. Independent Variables

Sociodemographic characteristics. A number of questions were included in the questionnaire to elicit information on participants' sociodemographic characteristics concerning sex, age, highest level of education completed, employment status, total monthly household income and population at place of residence (measured as number of inhabitants). These variables have been analysed in previous studies (Piersma et al. 2017; Wittock et al. 2017; Shehu et al. 2015).

Psychological and physical barriers. A four-item, dichotomous (Yes/No) scale was used to evaluate the existence of psychological and physical barriers among nondonors. These barriers correspond to fears associated with the donation process and the potential negative physical repercussions attached to it. This scale was based on the items found in the literature on blood donation (Alinon et al. 2014; Beerli-Palacio and Martín-Santana 2015; Boenigk and Leipnitz 2016; Charbonneau et al. 2016; Hupfer et al. 2005; James et al. 2013; Polonsky et al. 2015; Shaz et al. 2010; Solomon 2012). The use of a Likert-type scale was discarded to avoid response fatigue biases.

Impure altruism. A 7-item dichotomous scale was used to evaluate respondents' impure altruism. It was designed based on the different items found in the literature (Beerli-Palacio and Martín-Santana 2015; Charbonneau et al. 2015; Chell and Mortimer 2014; Ferguson 2015; Gonçalez et al. 2013; Hupfer et al. 2005; James et al. 2011; Karacan et al. 2013; Shaz et al. 2010). The use of a Likert-type scale was also discarded for the same previous reason.

Anticipated emotions (AEs). AEs were measured using 7-point Likert scales on which a response of 1 meant 'strongly disagree' and 7 meant 'strongly agree', following the structure of the four categories proposed by Bagozzi et al. (2016): positive AEs of donation, negative AEs of donation, positive AEs of nondonation and negative AEs of nondonation. The decision to measure positive and negative AEs separately, both towards donation and nondonation, is due to the fact that they are two separate psychological systems instead of opposite ends of the same dimension (Zampetakis et al. 2016). To adapt the scales to the present research context, we based our work on the literature on AEs (e.g., Bagozzi and Dholakia 2006; Perugini and Bagozzi 2001) and on emotions in the context of blood donation (Conner et al. 2013). AEs initially considered in this work were as follows:

- Positive AEs towards donation: 'I would feel happy', 'I would feel proud' and 'I would feel satisfied'.
- Negative AEs towards donation: 'I would feel worried', 'I would regret it' and 'I would be anxious'.
- Positive AEs towards nondonation: 'I would be relieved', 'I would be convinced of my decision' and 'I would feel calm'.
- Negative AEs towards nondonation: 'I would be disappointed', 'I would feel guilty' and 'I would be angry at myself'.

The initial results of confirmatory factorial analysis (CFA) demonstrated that the individual reliability of the item 'I would be relieved' was lower than 0.50. For this reason, this item was eliminated.

The Appendix A shows the final items in the scales. All scales were pretested by 10 experts belonging to Spanish blood transfusion centres, who validated their content, and its suitability for the blood donation field.

4. Results

4.1. Analysis of the Validity of the Measurement Scales

Before performing a regression analysis, we needed to determine the one-dimensional nature of the scales designed to measure psychological and physical barriers and impure altruism. According to Debelak and Tran (2013), when variables are dichotomous, the correlation matrix that must be used to perform a principal component analysis (PCA) is the tetrachoric correlation matrix. For this reason, based on this matrix, a PCA was performed for both scales, with results being shown in Tables 2 and 3. Moreover, the reliability of both scales was determined by calculating Kuder–Richardson's Formula

20 (KR20), which is the equivalent to Cronbach's alpha for dichotomous variables (Nunnally and Bernstein 1994).

Table 2. Results of the principal component analysis (PCA) applied to the barrier scale and its frequencies.

Psychological and Physical Barriers		PCA Results		Frequencies	
		COM	F1	N	%
BARR1	General fear and anxiety of donation	0.803	0.896	946	39.7
BARR2	Fear of needles and/or pain	0.787	0.887	995	41.8
BARR3	Fear of seeing blood	0.734	0.857	668	28.0
BARR4	Suffering physical distress (nausea, vomit, dizziness, etc.)	0.621	0.788	870	36.5
BARR5	Suffering wounds in arms due to use of needles (haematoma, irritation, etc.)	0.425	0.652	394	16.5
Eigenvalue		3.370			
Total percentage of explained variance		67.39			
KR-20 of global scale		0.759			

Table 3. Results of the PCA applied to the motivation scale and its frequencies.

Impure Altruism		PCA Results		Frequencies	
		COM	F1	N	%
MOTIV1	Human solidarity, helping someone or saving lives	0.850	0.922	2328	97.7
MOTIV2	Personal satisfaction derived from helping others	0.741	0.861	2220	93.2
MOTIV3	Since blood cannot be artificially produced, we must all collaborate	0.669	0.818	2007	84.2
MOTIV4	Donating blood makes me feel needed and useful to society	0.561	0.749	1683	70.6
MOTIV5	Fulfilling the social duty or moral obligation of helping other people	0.546	0.739	1920	80.6
MOTIV6	I or my family could need blood in the future	0.499	0.706	2187	91.8
MOTIV7	Donating blood requires no effort	0.357	0.598	1471	61.7
Eigenvalue		4.223			
Total percentage of explained variance		60.33			
KR-20 of global scale		0.660			

Once the validity of both scales was proven, two new variables were created, each corresponding to the sum of barriers or motivations that respondents selected in each of the proposed scales, labelled as 'Barrier' and 'Motivation'. Thus, the first variable could range from 0 to 5; and the second one, from 0 to 7, with 0 meaning that the respondent did not present any of the proposed barriers or motivations, and 5 or 7 meaning that they presented all of them. Based on the average values of these variables, the percentage of barrier and motivation prevalence for each respondent was calculated, with mean values being MBarrier = 32.51% and MMotivation = 82.82%. In light of these average values and following Gomes et al.'s (2019) methodology, respondents were classified into two categories: 'high' and 'low', based on whether their prevalence percentages were above or below such mean values. These variables were labelled as 'Barrier_Extent' and 'Motivation_Extent'. The results indicated that 45.7% present a percentage of psychological and physical barriers above the global average (i.e., high Barrier_Extent), and 68.8% present a percentage of impure altruism above the global average (i.e., high Motivation_Extent).

Concerning the scales designed to measure AEs and DI, a CFA was used, based on the maximum likelihood estimation method, given that we are dealing with range scales. Both scales were validated in a single model. The resulting model was statistically significant (χ^2 (55) = 670.290, p = 0.000), although this statistic does depend on sample size. However, other indicators of the overall fit of the model were found within the values recommended by the literature (CFI = 0.962; NFI = 0.959; TLI = 0.946; RMSEA = 0.069). For this reason, the measurement model was considered to appropriately reproduce the covariance matrix under observation. This measurement model presented a satisfactory fit, with a CFI value greater than 0.95 and an RMSEA value of under 0.08 (Mathieu and Taylor 2006). Taking into account the approach of Anderson and Gerbing (1988), as can be seen in Table 4, the model showed an acceptable level of individual reliability; i.e., the relationship between each item and its

respective dimension was statistically significant, with t-statistic values that were also significant. Concerning internal consistency, the composite reliability (CR) values were close to or higher than 0.70, and those of variance extracted (AVE) were close or higher than 0.50. Moreover, the results suggested that the measurement model was reliable. Finally, the four AE scales obtained adequate levels of reliability based on Cronbach's alpha.

Table 4. Confirmatory factorial analysis (CFA) of anticipated emotions (AEs) and donation intention (DI).

Causal Relationships			Standardised Estimators	*t*	*p*	Composite Reliability
AE1	←	posAEdon	0.887	67.603	0.000	CR = 0.933
AE2	←	posAEdon	0.906	70.756	0.000	AVE = 0.822
AE3	←	posAEdon	0.926			α = 0.932
AE4	←	negAEdon	0.807			CR = 0.719
AE5	←	negAEdon	0.701	23.716	0.000	AVE = 0.468
AE6	←	negAEdon	0.512	20.279	0.000	α = 0.682
AE7	←	posAEnondon	0.800	26.594	0.000	CR = 0.805
						AVE = 0.674
AE8	←	posAEnondon	0.842			α = 0.805
AE9	←	negAEnondon	0.838	49.169	0.000	CR = 0.896
AE10	←	negAEnondon	0.894	52.955	0.000	AVE = 0.741
AE11	←	negAEnondon	0.850			α = 0.895
DI1	←	DI	0.561			CR = 0.666
						AVE = 0.509
DI2	←	DI	0.839	18.046	0.000	α = 0.639

Using the results of CFA, five new variables were labelled as 'positive AEs towards donation' (AE1–AE3), 'negative AEs towards donation' (AE4–AE6), 'positive AEs towards nondonation' (AE7–AE8), 'negative AEs towards nondonation' (AE9–AE11) and 'donation intention' (DI1–DI2). These new variables corresponded to the average values of the items in each scale, which were weighted with the standardised estimators obtained from the CFA.

The existence of multicollinearity was tested in this study. Multicollinearity refers to the correlation among three or more independent variables. This is one of the problems found in regression models, as the predictive power of any single independent variable is reduced by the extent to which it is associated with other independent variables. There are three ways of identifying collinearity: (1) analysing the correlation levels between the continuous variables; (2) analysing the tolerance value, which is defined as the amount of variability of the selected independent variable not explained by the other independent variables; and (3) analysing the values of the variance inflation factor (VIF), which is 1/tolerance. Thus, very small tolerance values and large VIF values denote high collinearity.

The results of Table 5 suggest that the correlation coefficients between the continuous variables used in the regression models are low, and therefore, discriminant validity exists (discriminant validity shows that two measures that are not supposed to be related are in fact unrelated, therefore suggesting that there is no multicollinearity). The tolerance values and the values of VIF corroborate the inexistence of multicollinearity, given that the tolerance values in this study are higher than 0.10 (0.672–0.983) and the VIF values are far from the threshold of 10 (1.018–1.487).

4.2. Hypothesis-Testing

The hypotheses were tested using hierarchical regression analysis by steps (Hair et al. 2010), in which the variables are entered in successive blocks (see Table 6). Thus, firstly, the effect of sociodemographic characteristics (sex, age, highest level of education, employment status, total monthly income and population at place of residence) as independent variables on the dependent variable (DI) was analysed (Model I). Secondly, the 'Barrier_Extent' was incorporated to determine its

additional effect on DI (Model II). Thirdly, the 'Motivation_Extent' was added to study its influence on DI (Model III). In addition, the four variables of AEs (positive AEs towards donation, negative AEs towards donation, positive AEs towards nondonation, negative AEs towards nondonation) were included as independent variables to analyse their predictive power on DI (Model IV). Finally, in order to analyse the potential moderating effect of barriers and motivations on the relationship between AEs and DI, two new models were estimated (Model V and Model VI). It should be noted that the moderating effect is significant if the change in the determination coefficient is significant. In this regard, empirical evidence indicates that an increase of more than 1 percent can be considered significant and therefore indicates the existence of a large moderating effect.

Table 5. Correlation between variables in the regression models.

Variables	Mean	SD	1	2	3	4	5
1 posAEdon	5.95	1.32	—				
2 negAEdon	2.67	2.32	−0.265 ***	—			
3 posAEnondon	3.57	1.82	−0.251 ***	0.220 ***	—		
4 negAEnondon	4.41	1.86	0.429 ***	−0.131 ***	−0.448 ***	—	
5 Intention	4.24	1.73	0.404 ***	−0.298 ***	−0.293 ***	0.378 ***	—

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Triple dash (—) corresponds to the correlation of each variable with itself, which is always 1.000.

The results of the regression model (see Table 6, Model I) indicate that every sociodemographic variable influenced DI, with the exception that the respondent was working or not. The results suggest that DI is higher when the subject was female ($\beta = -0.078$; $t = 3.860$, $p = 0.000$), younger ($\beta = -0.109$; $t = 4.555$, $p = 0.000$), had a lower level of education ($\beta = -0.140$; $t = 6.544$, $p = 0.000$), lived in places with fewer inhabitants ($\beta = -0.060$; $t = 2.924$, $p = 0.003$) and had lower income ($\beta = -0.036$; $t = 1.758$, $p = 0.079$). For these reasons, the results support H1.

In Model II (see Table 6, Model II), when 'Barrier_Extent' was incorporated as an independent variable, which classified individuals into two groups ('high' or 'low') based on the higher or lower prevalence of psychological or physical barriers, significant changes in the determination coefficient were observed ($\Delta R^2 = 0.078$; $\Delta F = 212.103$; $p = 0.000$). Thus, the results showed that the individuals with higher levels of such barriers ($\beta = -0.280$; $t = 14.564$, $p = 0.000$) had lower DI. Therefore, H2 is accepted.

In Model III (see Table 6, Model III), when 'Motivation_Extent' was added as an independent variable, which also grouped individuals into two categories ('high' or 'low') based on higher or lower levels of impure altruism, significant changes in the determination coefficient were observed ($\Delta R^2 = 0.056$; $\Delta F = 161.877$; $p = 0.000$). The results showed that the more altruistic subjects are ($\beta = 0.240$; $t = 12.723$, $p = 0.000$), the greater their DI is. For this reason, H3 is accepted.

In Model IV (see Table 6, Model IV), including the four categories of AEs revealed the existence of significant changes in the determination coefficient ($\Delta R^2 = 0.151$; $\Delta F = 134.131$; $p = 0.000$), which indicates how significant the influence of AEs is on DI. The results of this fourth model reveal that the four categories of AEs influence DI. As expected, the direction of the relationships between the different AEs and DI corresponds to what has been established in the literature. Thus, the AEs that motivated the act to donate (positive AEs towards donation, and negative AEs towards nondonation) were positive, whereas AEs that discourage the act to donate (negative AEs towards donation, and positive AEs towards nondonation) were negative. The greater influence on DI corresponded to positive AEs towards donation ($\beta = 0.217$; $t = 11.020$, $p = 0.000$) and negative AEs towards nondonation ($\beta = 0.173$; $t = 8.478$, $p = 0.000$). Thus, H4 is accepted.

Table 6. Results of the multiple linear hierarchical regression models for donation intention.

Independent Variables	MODEL I		MODEL II		MODEL III		MODEL IV		MODEL V		MODEL VI	
	β Coefficients	*t* Value	Beta Coefficients	*t* Value	Beta Coefficients	*t* Value	Beta Coefficients	*t* Value	Beta Coefficients	*t* Value	Beta Coefficients	*t* Value
Constant		27.651 ***		30.160 ***		25.481 ***		14.165 ***		11.741 ***		11.346 ***
Sex	−0.078	3.860 ***	−0.084	4.361 ***	−0.055	2.914 ***	−0.016	0.959	−0.015	0.901	−0.017	1.001
Age	−0.109	4.555 ***	−0.130	5.687 ***	−0.130	5.841 ***	−0.093	4.626 ***	−0.093	4.597 ***	−0.093	4.619 ***
Education	−0.140	6.544 ***	−0.122	5.946 ***	−0.098	4.891 ***	−0.078	4.292 ***	−0.080	4.401 ***	−0.077	4.233 ***
Employed	0.020	0.835	0.020	0.883	0.015	0.649	0.004	0.208	0.005	0.252	0.003	0.134
Income	−0.036	1.758 *	−0.043	2.173 *	−0.038	1.949 *	−0.037	2.105 **	−0.035	2.026 **	−0.037	2.114 **
Population at place of residence	−0.060	2.924 ***	−0.055	2.820 ***	−0.058	3.057 ***	−0.044	2.527 **	−0.044	2.549 **	−0.044	2.538 **
Barrier_Extent			−0.280	14.564 ***	−0.260	13.872 ***	−0.212	12.164 ***	−0.071	0.670	−0.211	12.101 ***
Motivation_Extent					0.240	12.723 ***	0.109	6.062 ***	0.109	6.071 ***	0.051	0.498
posAEdon							0.217	11.020 ***	0.261	10.057 ***	0.209	7.105 ***
negAEdon							−0.128	6.988 ***	−0.108	4.059 ***	−0.160	5.415 ***
posAEnondon							−0.076	3.972 ***	−0.086	3.446 ***	−0.099	2.734 **
negAEnondon							0.173	8.478 ***	0.140	5.078 ***	0.193	5.185 ***
posAEdon*Barrier_Extent									−0.230	2.568 ***		
negAEdon*Barrier_Extent									−0.044	1.184		
posAEnondon*Barrier_Extent									0.027	0.579		
negAEnondon*Barrier_Extent									0.096	1.774 *		
posAEdon*Motivation_Extent											0.030	0.338
negAEdon*Motivation_Extent											0.046	1.343
posAEnondon*Motivation_Extent											0.038	0.740
negAEnondon*Motivation_Extent											−0.039	0.622
R^2	0.055		0.133		0.188		0.339		0.341		0.340	
Adj. R^2	0.052		0.130		0.186		0.335		0.337		0.335	
F	22.763 ***		51.556 ***		68.420 ***		100.616 ***		76.075 ***		75.702 ***	
ΔR^2			0.078		0.056		0.151		0.002		0.001	
ΔF			212.103 ***		161.877 ***		134.131 ***		1.961 *		0.974	

Note: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

With Model V (see Table 6, Model V), we tried to analyse the moderating effect of the 'Barrier_Extent' variable on the relationship between AEs and DI. The results indicated that this interaction did not bring about significant changes in the determination coefficient, although a slight change was observed in the model ($\Delta R^2 = 0.002$; $\Delta F = 1.961$; $p = 0.098$). To be more precise, the results suggested that a high level of psychological and physical barriers weakened the relationship between positive AEs towards donation and DI ($\beta = -0.230$; $t = 2.568$, $p = 0.010$). Given that the rest of the interactions were not significant at a significance level of 5%, Q1 does not have sufficient empirical support.

The results of Model VI (see Table 6, Model VI) indicated that the 'Motivation_Extent' variable does not have a moderating effect on the relationship between AEs and DI. In fact, no significant changes in the determination coefficient ($\Delta R^2 = 0.001$; $\Delta F = 0.974$; $p = 0.421$) were observed. For that reason, respondents' level of impure altruism did not moderate the AEs-DI relationship, so Q2 was not empirically supported.

After contrasting the hypothesis, it was deemed appropriate to perform within-group comparisons (*t*-tests) to find out whether there were differences between the average values of the constructs analysed (DI and AEs) depending on the Barrier_Extent and Motivation_Extent values of the respondents. Firstly, focusing on the variable DI, Table 7 shows that individuals with a low prevalence of psychological and physical barriers (i.e., low Barrier_Extent) had the highest DI levels (M = 4.67). For Motivation_Extent, it is the opposite: The respondents with a high prevalence of impure altruism (i.e., high Motivation_Extent) reported greater levels of DI (M = 4.57).

Table 7. Within-group comparisons of donation intention and AEs.

Constructs	Low Barrier_Extent	High Barrier_Extent	*t* (*p*)	Low Motivation_Extent	High Motivation_Extent	*t* (*p*)
Intention	4.67 (1.65)	3.72 (1.69)	13.836 (0.000)	3.51 (1.73)	4.57 (1.63)	14.363 (0.000)
posAEdon	5.99 (1.34)	5.90 (1.29)	1.620 (0.105)	5.37 (1.51)	6.22 (1.13)	15.147 (0.000)
negAEdon	2.13 (2.06)	3.30 (2.44)	12.640 (0.000)	3.18 (2.46)	2.43 (2.21)	7.372 (0.000)
posAEnondon	3.44 (1.87)	3.75 (1.75)	4.148 (0.000)	4.02 (1.74)	3.38 (1.83)	8.142 (0.000)
negAEnondon	4.50 (1.86)	4.30 (1.85)	2.742 (0.006)	3.69 (1.81)	4.74 (1.79)	13.214 (0.000)

Secondly, regarding AEs and their relationship with Barrier_Extent, differences can be observed between the two groups in three out of four dimensions of AEs. The fact that no differences have been found in positive AEs of donation ($p = 0.105$) means that an individual who decided to donate would feel happy, proud and/or satisfied with themselves, regardless of whether they presented psychological and physical barriers or not. On the other hand, as expected, negative AEs of donation and positive AEs of nondonation are stronger in the group of people with greater barriers, while the opposite is true with negative AEs of nondonation.

Lastly, there are differences in all dimensions of AEs according to Motivation_Extent. Thus, positive AEs of donation and negative AEs of nondonation are greater among individuals with greater impure altruism levels, whereas negative AEs of donation and positive AEs of nondonation are higher among the people with lower impure altruism levels.

To summarise, major findings of this work are presented in the following table (see Table 8).

Table 8. Major findings.

Hypotheses/Research Questions	Model	Results
H1. Sociodemographic characteristics influence the intention to donate	I	Accepted
H2. Psychological and physical barriers has a negative influence on the intention to donate	II	Accepted
H3. Impure altruism has a positive influence on the intention to donate	III	Accepted
H4. Anticipated emotions influence the intention to donate	IV	Accepted
H4a. Positive anticipated emotions towards donation have a positive influence on the intention to donate	IV	Accepted
H4b. Negative anticipated emotions towards donation have a negative influence on the intention to donate	IV	Accepted
H4c. Positive anticipated emotions towards nondonation have a negative influence on the intention to donate	IV	Accepted
H4d. Negative anticipated emotions towards nondonation have a positive influence on the intention to donate	IV	Accepted
Q1. Do psychological and physical barriers moderate the relationship between anticipated emotions and the intention to donate?	V	Not empirically supported
Q2. Does impure altruism moderate the relationship between anticipated emotions and the intention to donate?	VI	Not empirically supported

5. Conclusions

The main contribution of this work has been the analysis and evaluation of the joint influence of blood donors' traditional behaviour variables (sociodemographic characteristics, psychological–physical barriers and impure altruism) and anticipated emotions (AEs) on nondonors' donation intention. Due to the absence of literature on the variables that might moderate AEs, this work has also contributed by examining the moderating role of psychological and physical barriers, along with impure altruism, on the cause–effect relationships between AEs and the intention to donate.

Therefore, from an academic point of view, we have expanded and made progress in the study on nondonor behaviour by identifying new behaviour variables, both explanatory and moderating, alongside revisions of usual models. At the same time, four scales have been designed and validated to measure the constructs studied in this work: psychological and physical barriers, impure altruism, AEs and intention to donate.

National hemotherapy systems currently abide by European regulations based on using blood from voluntary donors. Therefore, programmes to promote donation focus on raising public awareness to recruit and retain new donors (Carter et al. 2011). A number of practical implications can be drawn from this work, which may help transfusion centres to improve their new donor recruitment measures, in view of their capacity to increase their current donor pool and to replace donors who are no longer suitable. The results allowed us to conclude that an important segment to increasing the donor pool is made up of younger women with lower levels of education and income, who live in places with fewer inhabitants. These results are supported by previous literature (Wittock et al. 2017; Zucoloto et al. 2019a). Additionally, centres must make efforts to reduce the discouraging effect of psychological and physical barriers on the intention to donate, as well as incentivise (impure) altruistic motivations of this nondonor segment (Beerli-Palacio and Martín-Santana 2015; Polonsky et al. 2015).

The duality of positive and negative anticipated emotions, related to both action and inaction, in AE theory, has been particularly useful, since it has been validated that all of them influence the intention to donate and the expected direction. For this reason, necessary empirical evidence has been

provided to support the notion that it is necessary to consider the perspective of inaction (positive and negative AEs motivating nondonation), and not only the perspective of action (positive and negative AEs motivating donation) when creating a model for the role of AEs on the intention to donate. In fact, the AEs that most strongly influence the intention to donate do not belong to the same system (action vs. inaction), given that the most influential AEs are positive AEs towards donation and negative AEs towards nondonation. Having said that, in the context of nondonors, it is as important to consider AEs motivating donation (positive AEs towards donation and negative AEs towards nondonation) as AEs discouraging people from donating (positive AEs towards donation and negative AEs towards nondonation). This quadruple model of AEs, as recommended by Bagozzi et al. (2016), has been scarcely used in general terms. It is the isolated positive or negative dimension of AEs that is usually analysed. Belanche Gracia et al. (2017), in their preliminary study, find themselves among the few authors who apply the quadruple model to study the influence of AEs on purchase decisions. The authors obtained relevant theoretical results but did not follow up on them.

For all of the above, transfusion centres should launch campaigns with a dual objective: reinforcing emotions that motivate the intention to donate and eliminating emotions that inhibit it. Thus, their messages should emphasise feelings of happiness, pride and satisfaction associated with donating, and potential feelings of disappointment, guilt and anger at oneself derived from nondonation, as well as highlighting the altruist nature of blood donation. Having said that, given that the concept of altruism corresponds to impure altruism in the field of blood donation (i.e., people donate blood to help others, and also to get an emotional reward), messages should also refer to the personal emotional benefits derived from donation, and they should even be negatively framed (i.e., the loss of these emotional benefits) (Tey et al. 2019).

Furthermore, taking into account that nondonors have no donation experience, another way to influence their AEs, strengthening positive emotions and diminishing negative ones, as well as eliminating barriers and promoting motivations, could be to use AR (Augmented Reality) or VR (Virtual Reality) experiences. These immersive interactions would allow nondonors to face a simulation of blood donation in a controlled environment. Simulated experiences are particularly interesting as a first approach to the emotional and physical dimensions of blood donation. In addition, this technique has been used previously in other related fields to fight against negative emotions, as observed in the study made by Chesham et al. (2018). There, the authors used this approach to address social anxiety, achieving highly positive results.

Another contribution that this study has made in the context of AEs is to introduce new variables moderating the relationship between AEs and the intention to donate, e.g., psychological and physical barriers and impure altruism. In this sense, the results have only verified that high levels of psychological and physical barriers weaken the relationship between positive AEs of donation and the intention to donate. This highlights how necessary it is to invest resources in eliminating discouraging factors, in order to make the most of using positive AEs of donation to influence donation intention among nondonors.

Lastly, it would be recommendable for these campaigns, intent on achieving social marketing objectives, to use new technologies in order to connect with the targeted nondonor segment, which consists mainly of young people (less than 25 years old). To this end, we suggest that transfusion centres enter into collaboration agreements with partners whose target audience coincides with this nondonor group (e.g., universities, cinemas). In this way, they would be able to operate using means and platforms (social networks, media and digital platforms) that impact not only the relevant demographic (Sümnig et al. 2018), but also its largest proportion (Abbasi et al. 2018).

The main limitation of this study is the geographical context where it was carried out (Spain). In order to validate the results, it needs to be replicated in other different contexts. In the same vein, since volunteering is the only way to legally donate blood in Spain, it would be especially interesting, for comparative purposes, that the study be repeated in countries with different blood donation systems (e.g., remunerated or mixed systems). Another limitation could be the methodology that has been

used, which could have conditioned the sample's configuration. The fact that respondents decided to participate in the study requires us to be careful when generalising the results because there might be differences between individuals who decided to participate and those who did not. Additionally, the sample was composed of a majority of young people, presumably due to the origin of the sample (universities and social networks). However, in terms of management, this demographic is interesting. Young university students make up a numerous collective that is logistically very accessible (i.e., campaigns at universities, mobile units that can come closer to them) and very attractive for transfusion centres given their good health and great potential as long-term donors (Eshak et al. 2019; Healy and Murphy 2017; Gomes et al. 2019). In any case, it would be advisable to replicate the study while using other sampling systems which guarantee a sample distribution that is identical to the study population. Finally, it would be advisable to include additional items in the donation intention construct to increase its reliability, which, although it falls within acceptability, could be improved.

Appendix A. Final Items of the Scales

PSYCHOLOGICAL AND PHYSICAL BARRIERS	
BARR1	General fear and anxiety of donation
BARR2	Fear of needles and/or pain
BARR3	Fear of seeing blood
BARR4	Suffering physical distress (nausea, vomit, dizziness, etc.)
BARR5	Suffering wounds in arms due to use of needles (haematoma, irritation, etc.)
IMPURE ALTRUISM	
MOTIV1	Human solidarity, helping someone or saving lives
MOTIV2	Personal satisfaction derived from helping others
MOTIV3	Since blood cannot be artificially produced, we must all collaborate
MOTIV4	Donating blood makes me feel needed and useful to society
MOTIV5	Fulfilling the social duty or moral obligation of helping other people
MOTIV6	I or my family could need blood in the future
MOTIV7	Donating blood requires no effort
ANTICIPATED EMOTIONS (AEs)	
Positive anticipated emotions of donation (posAEdon):	
AE1	If I decided TO DONATE, I would feel happy
AE2	If I decided TO DONATE, I would feel proud
AE3	If I decided TO DONATE, I would feel satisfied
Negative anticipated emotions of donation (negAEdon):	
AE4	If I decided TO DONATE, I would feel worried
AE5	If I decided TO DONATE, I would regret it
AE6	If I decided TO DONATE, I would feel anxious
Positive anticipated emotions of nondonation (posAEnondon):	
AE7	If I decided NOT TO DONATE, I would be convinced with my decision
AE8	If I decided NOT TO DONATE, I would feel calm
Negative anticipated emotions of nondonation (negAEnondon):	
AE9	If I decided NOT TO DONATE, I would feel disappointed

AE10	If I decided NOT TO DONATE, I would feel guilty
AE11	If I decided NOT TO DONATE, I would feel angry at myself
DONATION INTENTION (DI)	
DI1	I am going to donate in the next four months
DI2	I would like to become a regular donor (twice or more times a year)

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