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Motivators and deterrents to blood donation among Black South Africans: a qualitative analysis of focus group data

T. N. Muthivhi¹, M. G. Olmsted², H. Park², M. Sha², V. Raju¹, T. Mokoena¹, E. M. Bloch^{3,4}, E. L. Murphy^{4,3}, and R. Reddy¹

¹CEO-Strategy, South African National Blood Service, Johannesburg, South Africa

²Survey Research Division, Research Triangle Institute, Research Triangle Park, North Carolina, USA

³Department of International Research and Training, Blood System Research Institute, University of California San Francisco, San Francisco, California, USA

⁴Department of Laboratory Medicine, University of California San Francisco, San Francisco, California, USA

SUMMARY

Background and Objectives—South Africa has a markedly skewed representation where the majority of blood (62%) is presently collected from an ethnically White minority. This study seeks to identify culturally specific factors affecting motivation of donors in South Africa.

Materials and Methods—We performed a qualitative study to evaluate motivators and deterrents to blood donation among Black South Africans. A total of 13 focus groups, comprising a total of 97 Black South Africans, stratified by age and geographic location were conducted. Transcripts of the interviews were analysed using a coding framework by Bednall & Bove.

Results—Participants made 463 unique comments about motivators focusing primarily on promotional communications (28%), incentives (20%) and prosocial motivation (16%). Participants made 376 comments about deterrents which focused primarily on fear (41%), negative attitudes (14%) and lack of knowledge (10%).

Conclusion—Although prosocial motivation (altruism) was the most frequently mentioned individual motivator, promotional communication elicited more overall comments by participants. As reported by many authors, fear and lack of awareness were strong deterrents, but scepticism engendered by perceived racial discrimination in blood collection were unique to the South African environment.

Keywords

blood donation; deterrents; motivators

Correspondence: Tshilidzi Muthivhi, CEO-Strategy, South African National Blood Service, 2 Constantia Boulevard, Constantia Kloof, Ext. 22, 1709, Johannesburg, South Africa. Tel.: +27 11 761 9279; fax: +27 86 6745918; tshilidzi.muthivhi@sanbs.org.za.

CONFLICT OF INTEREST

The authors have no competing interests.

An effective strategy for recruitment and retention of voluntary nonremunerated blood donors is crucial to maintaining an adequate blood supply. In the United States, under-representation of minority populations as blood donors and the concomitant need for effective recruitment strategies has long been recognised as adversely impacting transfusion inventories and the ability to address the needs of a diverse patient population (Murphy *et al.*, 2009); culturally specific barriers to blood donation have not, however, been extensively studied (Mathew *et al.*, 2007). Problems of eligibility, fear and distrust, lack of effective education, and marketing are just some of the variables that adversely impact on efforts to enlist a broader representation of blood donors (Shaz & Hillyer, 2010).

South African National Blood Service (SANBS) collects 805 000 donations per annum from voluntary non-remunerated donors to meet the demand for blood products in South Africa. The majority of blood (62%) is collected from White donors who make up 11% of the population while only 24% of blood is collected from Black donors who make up 83% of the population.

The predominantly White South African donor pool has reached high levels of donation intensity, indicating that past recruitment efforts have been successful, at least in reaching this segment of the population. A broader ethnic representation in South Africa, however, is necessary. Under-representation of Black donors is more than a socio-political problem as predominant collection from a minority group is unsustainable and will eventually result in shortfall in provision of blood. In addition, Black Africans are more likely to be blood Group B than Whites, whereas Whites are more commonly Group A than Blacks, resulting in a deficit in Group B blood and a surplus of Group A and increased blood wastage (Fleming *et al.*, 1994). Furthermore, phenotypic disparity with mismatch of non-ABO antigens confers risk of alloimmunisation, in transfusion recipients.

There have been deficiencies in past recruitment efforts targeting the Black population in South Africa which continue to impact donation rates. For example, past policies at SANBS to safeguard against human immunodeficiency virus (HIV) by risk profiling of donors based upon age, sex and race have alienated Black donors. Although such policies have since been abandoned in favour of donor education and improved laboratory screening (Vermeulen *et al.*, 2009), their negative effect lingers (Heyns Adu *et al.*, 2006). Culturally based misconceptions, including loss of virility, risk of high blood pressure, transmission of infectious disease, weight loss and damage to one's health, have also been reported as barriers to blood donation in Africa (Jacobs & Berege, 1995; Tagny *et al.*, 2010). In addition, a spirit of volunteerism is generally not encountered to the same extent evident in developed countries, which further impacts, adversely, on recruitment (Allain *et al.*, 2008).

In addition to those factors described above, there has been a lack of research on motivations and deterrents of blood donation in South Africans. A few studies have addressed these factors with African immigrants in Australia, Canada and the United States (Shaz *et al.*, 2009; Polonsky *et al.*, 2010; Polonsky *et al.*, 2011; Tran *et al.*, 2013), but there is a dearth of published research with South Africans living in their own country. While the authors believe that some of the findings from past research may be applicable, differences are also

likely as the context of blood donation differs when one is an immigrant rather than living in one's own home country.

This report presents findings from a qualitative analysis of focus group data gathered by SANBS in early 2013. We examined the following hypotheses based on the findings from previously published research on motivation for or deterrents against blood donation: (i) convenience and altruism are the primary motivators for blood donation among SANBS blood donors; and (ii) fear of test results, lack of awareness of need for blood donors and inconvenience are the major deterrents against donating blood among South Africans.

MATERIALS AND METHODS

Focus groups

Qualitative data from 13 focus groups were collected between February 2012 and March 2012 by Social Surveys Africa, a market research organisation based in South Africa under contract with SANBS. In view of the goal to improve ethnic diversity in the donor pool and focus on non-participants in the blood supply, all participants were Black South Africans.

The focus groups were designed to evaluate the attitudes of three different SANBS donor classifications and three different age groups across two different geographic areas. Two donor catchment areas were selected in the Gauteng Province, namely Midrand/Fourways and Soweto. The former was selected for its somewhat higher socioeconomic profile, while the latter was selected based on it being broadly representative of typical metropolitan townships in South Africa. Six focus groups were held in each geographic area. However, within each of these areas, the profile of respondents was relatively broad, covering the complete spectrum of donors and potential donors found in these areas.

To ensure diversity of participants, the focus groups were further stratified by age and donor status. Participants were divided into three age groups (16–20, 21–35, 35–50 years) in order to evaluate if attitudinal differences were evident between younger and older groups. For donation status, the team recruited participants from four different groups based on donor status – new (donated for the first time, but have not returned to donate a second time yet), repeat (donated blood two or more times over the last 12 months), or lapsed (previously donated, but not in the last 12 months) donors, and non-donors. A sample of new, repeat and lapsed donor participants were randomly selected from the SANBS database and contacted by the research team. The non-donors were recruited from the general public within the two geographic areas; recruitment for this group consisted of placing flyers in community centres and advertisements in the local newspaper.

Focus groups were held with a total of 97 eligible participants in one of three group compositions – new or repeat donors, new or lapsed donors and non-donors. The focus groups explored the following themes: (i) primary social influences; (ii) awareness, knowledge and reciprocity; (iii) perceived need for donation and self-interest; (iv) broad social context factors in South Africa; and (v) convenience and recruitment strategies. All participants provided written informed consent and received a small honorarium of R300 (approximately \$30 USD) for their time.

Qualitative analysis

A qualitative analysis was conducted by Research Triangle Institute under the Recipient Epidemiology and Donor Evaluation Study (REDS-III). Transcripts of the focus groups were imported into NVivo 9 for analyses (Bazeley, 2007). Using the framework developed by Bednall & Bove (2011), we identified motivators for and deterrents against blood donation in South Africa, in relation to both age and donation status. A coding scheme was developed based on input from the findings of the preliminary analyses already conducted on the focus group data and a review of the interviews by the project team using standard practices in qualitative analyses (Hsieh & Shannon, 2005). In addition to the previous work done with these data, the coding scheme incorporated the entire taxonomy of factors that influence blood donation developed by Bednall & Bove (2011). The coding scheme included a few new subcategories of motivators and deterrents of blood donation, but did not substantially alter the previous taxonomy; new elements identified in the analyses that were not found in the previous work are identified in the tables describing the findings. All focus group data were coded using the coding scheme to allow a quantitative summary of motivators for and deterrents to blood donations.

Coding and analyses

The analyses used a combination of ‘conventional’ (e.g. coding categories are derived from the text data) and ‘summative’ (e.g. coding scheme is derived from the text data but the focus is on counting events or occurrences of key words or content) qualitative analyses techniques to understand the results of the focus group discussions (Landis & Koch, 1977; Coffey & Atkinson, 1996; Berg, 2001; Hsieh & Shannon, 2005).

The summative coding process involved counting events or occurrences of key words from the transcripts. To maintain consistency when coding potentially repetitive contents, we applied three coding principles to the focus group data. First, we assigned one code for similar comments uttered by a participant during one topical discussion. For instance, if one participant repeated similar comments with the same theme when one topic was discussed with other participants, only one code representing one theme was given. The intent was not to over-represent one theme as similar comments are inevitable during focus group discussions for clear communication. Second, we assigned codes for similar comments uttered by a participant, if during different topical discussions. Some participants said similar things when the group discussed dissimilar themes. Separate codes were given in this case to convey how important this factor was to that particular participant. Third, we assigned a code for each participant's similar comments, if uttered during one topical discussion. If similar comments were made by multiple participants (e.g. one participant made a similar comment after another participant) and this happened during the same discussion thread, each participant's comment was counted and coded. Tables 1 and 2, provide an example of statements made by participants that were coded into each of the motivator and deterrent categories evaluated.

All focus group transcripts were coded independently by two members of the project team. In cases where codes differed, they were reviewed by a third member of the team who determined which code was appropriate; the assigned codes were then reviewed by all three

members of the team to ensure agreement. At the conclusion of the coding process, data were summarised in tables showing both the counts and percentages of statements made that were consistent with each category of motivator or deterrent for blood donation.

RESULTS

Each focus group consisted of 6–10 participants, stratified by donation status (donor vs non-donor) and age (16–20; 21–35; and 36–50). Participants were 65% male and 35% female. A total of 39 participants had never donated blood and were evenly distributed between the 16–20 and 21–35 age groups. Fifty-eight participants were new, repeat or lapsed donors. However, when conducting the focus groups, these groups were mixed comprising three different combinations of donors including (i) new and repeat donors; (ii) lapsed and repeat donors; and (iii) lapsed donors only.

Motivators

As shown in Table 3 and Fig. 1, both donors and non-donors discussed ‘promotional communications’ most frequently as a motivator of blood donation (27.7% of 463 motivation comments counted). Among the promotional communication motivators, general advertising and direct marketing were mentioned more frequently than blood drives and educational approaches. Incentives were the second most endorsed motivator, as evidenced by 20.1% of comments counted. However, they comprised a list of nine incentives, including gift items, money, recognition, health check-up, infectious disease screening, perceived health benefits, learning one’s blood type, time off work or school, and nonspecific incentives. Prosocial motivation was also frequently considered as a motivator (16.5% of comments counted), predominantly due to altruism (a desire to help other people generally). Examining the counts of comments for all subcategories, altruism (15.6%) was the single most frequently cited motivator of donation behaviour. In contrast to previous studies, convenience of collection site was mentioned in only 6.7% of motivator comments counted.

Motivators reported by first-time, lapsed and repeat donors were similar in pattern to those of all donation types combined. Promotional communications (27.4% of comments counted), incentives (18.0% of comments counted), and prosocial motivation (14.1% of comments counted) were the top three motivating factors but were endorsed at different frequencies. Non-donors, on the other hand, referred to these three factors equally frequently at about 25 to 29%; note that for non-donors, comments made about motivations focused on what they believed would motivate them to donate.

Deterrents

Table 4 and Fig. 2 show that fear played a significant role in deterring blood donation for both donors and non-donors. Fear as a deterrent was indicated by about 40.7% of all comments counted – most commonly fear of needles, discovering illness, being exposed to a disease or contagion, and fainting/dizziness. Other fears included reduced health, physical injury, a fear of blood, and even fear brought on by rumours and misconceptions. Negative

attitudes, were often expressed as scepticism/cynicism (e.g. 'Black people's blood would be thrown away after donation') and were reported by 14.1% of comments counted.

Lack of knowledge of the need for blood or knowledge of the donation sites was frequently mentioned as a deterrent (indicated by 9.6% of comments counted). Ineligible health conditions were also cited as a common deterrent by 8.6% of the comments counted, from non-donors (13.2%) and donors (5.7%). These participants described being ineligible to donate because of their current health or an existing health condition. This included belief that they were not eligible for blood donation because they did not eat well, did not reach a certain weight, or their past experience of being turned away at the donation site because of having a low iron level or because of exclusionary rules for medications they were taking.

Examining the counts for all subcategories, fear of needles, and scepticism/cynicism were reported most frequently by donors as deterrents to blood donation. For non-donors, belief that their health condition(s) prevented them from donating was the most cited deterrent, followed by scepticism/cynicism and a fear of needles.

Some differences were observed between donor and non-donors. Although inconvenience, with respect to the location and hours of collection site was not a deterrent mentioned frequently by both groups, it was mentioned more often by donors (7.8% of comments counted) than non-donors (2.8% of comments counted). Three comments (1.3%) counted from donors also indicated that ineffective incentives were a deterrent; however this was not a deterring factor reported by non-donors. In addition, lack of knowledge (of the donation site, the need for blood or general ignorance) were among the top three deterrents reported by donors (11.3% of comments counted), but it was less frequently reported by non-donors (6.9% of comments counted).

DISCUSSION

South Africa has a markedly skewed representation of the population in the donor pool. Specifically, the majority (62%) of blood is presently collected from an ethnically White minority (11% of the population) while only 24% of blood is collected from the majority Black population (77% of the population). Asian donors and donors of mixed ethnic origin contribute the remaining 14% of blood supply (8 and 6%, respectively), better approximating the distribution of these ethnic groups in the general population (2.5 and 8% of the population, respectively) (Lownik *et al.*, 2012). To correct these imbalances, SANBS is actively recruiting Black South Africans but lacks information on motivators and deterrents specific to this population subgroup.

Promotional communications (i.e. advertising or marketing) and incentives were the most frequently endorsed motivators of donation behaviour (or intent) by both donors and non-donors and outranked the prosocial motivation category, although altruism was the single most frequently cited sub-category of motivation. Surprisingly, convenience of collection site was not a common motivating factor. Thus, our hypothesis that convenience and altruism are the primary motivators for blood donation was only partially supported. Also of interest with respect to motivation, participants in the focus group who were currently

students reported that receiving time off or ‘merits’ for donating blood would serve as a motivator for future blood donation; this was a new finding that had not been previously reported by Bednall & Bove (2011).

Regarding deterrents against blood donation, our second hypothesis was partially supported in our sample of South Africans. Among both donors and non-donors, fear (of needles and discovering illness in particular), negative attitudes (mostly due to scepticism/cynicism) and lack of knowledge (about the need for blood or donation site) were the most commonly reported deterrents. These findings regarding deterrents are consistent with previous research with African immigrants living in other host countries (Shaz & Hillyer, 2010; Polonsky *et al.*, 2013; Tran *et al.*, 2013). For non-donors, the other most frequently cited deterrent was perceived ineligibility due to a given health condition, whether real or imagined; this was unique to this study as it was not reported in Bednall & Bove (2011). In addition, comments in the category of scepticism/cynicism were particularly interesting as they highlighted concerns about racial discrimination in the transfusion service. This perception may – in part – be due to previous policies in South Africa (prior to the introduction of nucleic acid testing) whereby the cellular components (red cells and platelets) from all Black donors were discarded to mitigate against HIV risk. While this practice is no longer followed, the concern raised by focus group participants represents continued scepticism or cynicism about how SANBS handles blood from black donors.

Previously Bednall & Bove (2011) found that low self-efficacy was the most frequently reported deterrent in the studies conducted in the United States, Europe and other developed countries. In their taxonomy, the concept of low self-efficacy referred to the prospective donor's belief that he or she did not have adequate resources (enough blood) for donation or that donation would adversely impact their ability to meet work or family commitments, thereby deterring against blood donation. In this analyses, low self-efficacy was characterised by similar comments by participants as well as barriers such as being too busy to have time to give blood. However, this deterrent was among the least frequently cited factors by donors and non-donors in this study.

Our findings suggest a number of possible next steps in both the operational recruitment as well as the retention of blood donors. Foremost, it appears that promotional communications are seen as important by current and potential donors in South Africa and therefore should be continued. Currently SANBS employs a variety of outreach methods to the community including text messaging, telephone calls, public advertising and targeted mailing campaigns. These communications should convey messages that appeal to a sense of altruism, while emphasising other aspects of blood donation that could motivate potential blood donors. Thus, information about blood donation (e.g. current need for blood and the blood donation process) and various incentives (e.g. free health checks, small gift items, time off work or school) could receive greater emphasis; for non-donors, money was mentioned as a possible motivator for blood donation; however, paid or incentivised donation is widely regarded as being high-risk for transfusion transmitted infections. Therefore this strategy is not used by SANBS or other major blood bank system around the world. If presented as specific interventions and followed by research data acquisition,

giving donors more information about the donation process may lead to quantifiable increases in donation frequency (Lownik *et al.*, 2012).

Some of the successes both by SANBS and other transfusion services in Africa bear testament to the ability to improve donor recruitment, often at low cost where strategies are carefully considered (Allain *et al.*, 2008). Although the overall return rates of first-time donors in South Africa exceed those in the United States, lower rates among Black donors need to be addressed, preferably using strategies based upon quantitative evidence of efficacy. Examples of successful recruitment approaches across the continent include innovative educational programs targeting elementary and high schools as well as social marketing campaigns, e.g. media promotions that have been used to engage a broad donor demographic leading to improved donor retention and younger age of donation (de Coning, 2004). Another pan-African success (since adopted internationally) has been Club 25, pioneered in Zimbabwe, in which high school students pledge to donate 25 units by age 25 and to adopt healthy behaviours (World Health Organization, 2006; Tagny *et al.*, 2008).

Second, our results indicate that negative attitudes persist among Black donors in South Africa as the result of past risk profiling, including the impression that blood donations from this population group will be discarded. It will be important to restore the public's trust through explanation about current policies and the need to assure blood safety, collection from all population groups and the equitable distribution of blood to both public and private hospitals (Wagner & Manolis, 2012). Other fears (of needles, physical injury and knowledge of HIV status) that were expressed by the participants in the interviews should be addressed directly by educational and marketing efforts as research has consistently found that they deter blood donation (Lemmens *et al.*, 2005; McVittie *et al.*, 2006; Weinberg *et al.*, 2009; Merav & Lena, 2011; Zito *et al.*, 2012). While deterrents were mentioned less frequently than motivators, they appeared to have a strong impact on the participant's willingness to consider future blood donation.

Third, in contrast to other studies that have shown that convenience (i.e. proximity, ease of access to and operating hours of collection sites) is a significant motivating factor for blood donation, convenience did not appear to be one of the most important factors in this study (Schreiber *et al.*, 2006). While convenience was mentioned in a little over 8% of the time by donors as a motivator it was only mentioned once by non-donors. Because we were unable to analyse new, repeat or lapsed donors separately in the current dataset it is unclear which of the participants had concerns and why; for example, convenience of donation site may be more salient to lapsed donors than other categories of donors and this could influence the decision to donate. Given the lack of clarity shared by this and previous studies, we recommend that future recruitment efforts still continue to focus on convenience of blood donations sites while also addressing the significant motivators and deterrents of blood donation cited by participants.

The study has a number of limitations which should be acknowledged. First, participants in the focus groups are not representative of the general population in South Africa. Given the nature of convenience samples, the participants may either over- or under-represent attitudes that are present in the larger society. Second, due to the manner in which data were

collected, individual-level analyses by gender and age were not possible in this study. Future studies should address these limitations through selection of larger, more diverse samples coupled with documentation of the demographic characteristics so as to allow for more detailed analyses of participant characteristics. This evaluation could be accomplished through continued use of focus groups, or preferably, by advancing to large cross-sectional surveys which would provide the advantage of being more representative of the attitudes and opinions of the population at large.

In conclusion, this study has yielded valuable insights into motivations and deterrents to blood donation in the contemporary Black population of South Africa, a group under-represented in that country's blood supply. Because the results differ in some respects to those reported internationally, the findings support the need to study local opinions to support donor recruitment campaigns. They also presage the introduction of quantitative research methods to build an evidence base to guide blood donor recruitment.

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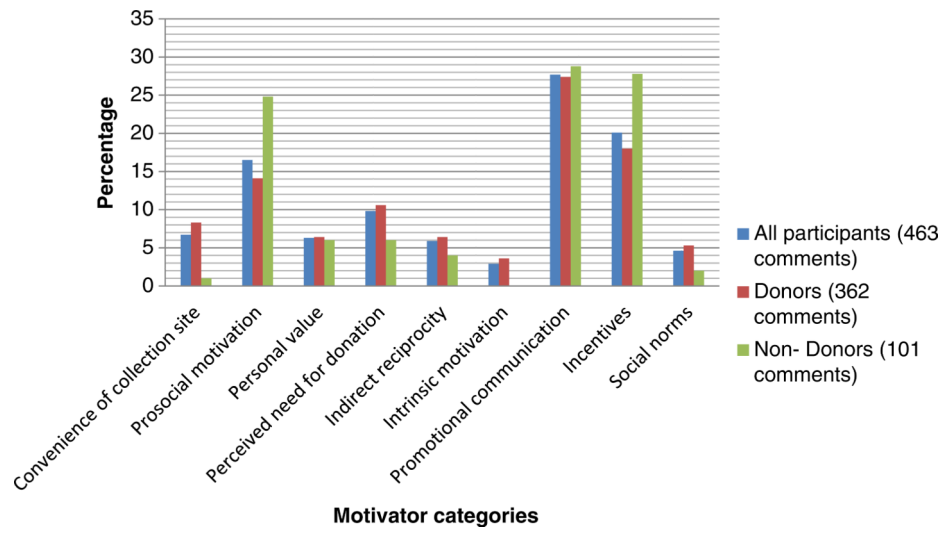


Fig. 1. Frequencies of motivators to blood donation, by participant group. (The unit of analysis is the number of comments referencing each motivator.).

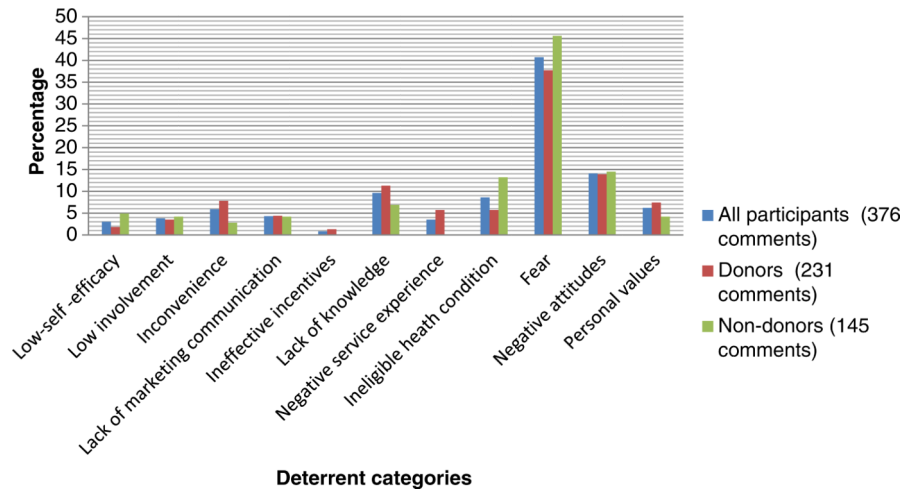


Fig. 2. Frequencies of deterrents to blood donation, by participant group. (The unit of analysis is the number of comments of each deterrent.).

Table 1

Examples of quotes for motivators to blood donation

Motivators to blood donation	Example quotes
Convenience of collection site	'To me it is accessibility'.
Prosocial motivation	
Altruism	'To help people who need some blood'.
Collectivism (community)	'I am helping the community'.
Collectivism (friends and family)	'If I donate for my friend to be alive I would do it'.
Personal values	
Personal moral norms	'Giving blood is the right thing to do'.
Religiosity	'... because that is what God does'.
Reputation of collection agency	<i>No cases coded in this sample</i>
Perceived need for donation	
Specific blood type	'I realised that my blood group is the one that is important and I then decided to start donating'.
After catastrophic events	'... my friend died because they couldn't get blood as quickly as they could'.
Everyday	'... there are so many accidents where people are losing blood'.
Indirect reciprocity	
Upstream (friends and family)	'... a family member needed blood'.
Downstream	'I could need blood one day'.
Upstream (self)	'I got shot and lost lot of blood'.
Intrinsic motivation	
Self-esteem	'... it feels great'.
Curiosity	'I wanted to see what will happen'.
Promotional communications	
Educational approaches	'I think information and awareness will change people's mindset because without information people will not just go and donate without understanding'.
Direct marketing	'The second time I went it was because of the SMS I received'.
Advertising	'... a campaign on TV and on the magazines'.
Blood drives	'... they came to school to do their drive'.
Incentives	
Health check	'... it's good because it will teach you about your health'.
Money	'It's one way that could attract people to come'.
Perceived health benefits	'Someone's life is counting on my blood. I have to be more responsible in my choices and actions'.
Learn blood type	'... she is willing to donate blood just to find out'.
Time off work or school ¹	'I just wanted to take a break at work for a few minutes'.
Gift item	'I am not saying they must pay, but incentives like squeeze bottles. Those things motivate people'.
Infectious disease screening	'Piece of mind. After being told you are a hero, your blood is clean'.
Recognition	'I also feel that they see what I am doing, a little recognition'.
Nonspecific	'Incentives are good because they keep people coming for me'.
Social norms	
Descriptive norms	'My colleagues give blood a lot'.
Subjective norms	'My supervisor asked 'anyone who wants to donate?'

¹This is a motivator category unique to this study.

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Table 2

Examples of quotes for deterrents to blood donation

Deterrents to blood donation	Example quotes
Low self-efficacy	
Lifestyle barriers	'I wouldn't go because people are busy'.
Not enough blood	'... if I can donate blood my body will have a shortage of blood'.
Low involvement	'I don't think I will be interested'.
Inconvenience	'... they would come between 4 and 5, and most of us in university are attending classes till 6'.
Lack of marketing communications	'... marketing is still lacking when it comes to blood donations'.
Ineffective incentives	
Unwanted	No cases coded in this sample
Inadequate	'... why would I be going there instead of hustling money somewhere?'
Lack of knowledge	
Need for blood	'... people might wonder why is it that their blood is needed'.
Donation site	'I am done with school I don't know where to go to donate'.
General lack of knowledge	'... lack of information'.
Negative service experience	
Staff	'... if you find a nurse who doesn't know what she is doing it takes forever'.
Servicescape	'... hey also like to set-up their tents direct to the sun when it is very; very hot!'
Ineligible health conditions	'Since my iron is low'.
Fear	
Rumours and misconceptions	'... there are devil worshippers they drink people's blood'. 'My friend thinks that when you go to the hospital when you die and you have that wrist band on, they take your body parts with'.
Needles	'I am not going near the needle'.
Physical injury	'Some of them will discourage you from going because they say you will be hurt'.
Nonspecific	'I don't donate just because I am scared'.
Reduced health	'... it takes me almost a week to recover again after I donate'.
Contagion	'We are afraid of the needles because we fear that we might get infected'.
Fainting/dizziness	'We get dizzy and we faint'.
Blood	'I am not comfortable to see blood'.
Discovering illness	'... some people are afraid of knowing their status'.
Negative attitudes	
Negative word of mouth	'If I hear again that my blood is not being used, I am gonna stop and for good'.
Scepticism/cynicism	'I once saw on TV where they were saying the white people's blood is put on one side and the black people's blood is put on the other side'. 'The perception that black people's blood is thrown away its still there'.
Outgroup prejudice	'I am not going to donate blood to a Rastafarian'.
Personal values	
Personal moral norms ¹	'At home they don't want me to donate'.
Religiosity	'Bible says your blood is yours don't give it to the other person'.

¹This is a deterrent category unique to this study.

Table 3

Motivations to blood donation broken into subcategories. Number and percentage of comment of each motivator, by participant group

Motivators to blood donation	All participants 463 comments	Donors 362 comments	Non-donors 101 comments
	Count (%)	Count (%)	Count (%)
Convenience of collection site	31 (6.7%)	30 (8.3%)	1 (1%)
Prosocial motivation	76 (16.5%)	51 (14.1%)	25 (24.8%)
Altruism	72 (15.6%)	49 (13.6%)	23 (22.8%)
Collectivism (community)	2 (0.5%)	1 (0.3%)	1 (1%)
Collectivism (friends and family)	2 (0.5%)	1 (0.3%)	1 (1%)
Personal values	29 (6.3%)	23 (6.4%)	6 (6%)
Personal moral norms	25 (5.4%)	19 (5.3%)	6 (6%)
Religiosity	4 (0.9%)	4 (1.2%)	0 (0%)
Reputation of collection agency	0 (0%)	0 (0%)	0 (0%)
Perceived need for donation	45 (9.8%)	39 (10.8%)	6 (6%)
Specific blood type	3 (0.7%)	3 (0.9%)	0 (0%)
After catastrophic events	2 (0.5%)	2 (0.6%)	0 (0%)
Everyday	40 (8.7%)	34 (9.4%)	6 (6%)
Indirect reciprocity	27 (5.9%)	23 (6.4%)	4 (4%)
Upstream (friends and family)	8 (1.8%)	7 (2.0%)	1 (1%)
Downstream	13 (2.9%)	10 (2.8%)	3 (3%)
Upstream (self)	6 (1.3%)	6 (1.7%)	0 (0%)
Intrinsic motivation	13 (2.9%)	13 (3.6%)	0 (0%)
Self-esteem	7 (1.6%)	7 (2.0%)	0 (0%)
Curiosity	6 (1.3%)	6 (1.7%)	0 (0%)
Promotional communications	128 (27.7%)	99 (27.4%)	29 (28.8%)
Educational approaches	23 (5.0%)	15 (4.2%)	8 (8%)
Direct marketing	43 (9.3%)	38 (10.5%)	5 (5%)
Advertising	55 (11.9%)	39 (10.8%)	16 (15.9%)
Blood drives	7 (1.6%)	7 (2.0%)	0 (0%)
Incentives	93 (20.1%)	65 (18.0%)	28 (27.8%)
Health check	11 (2.4%)	9 (2.5%)	2 (2%)
Money	16 (3.5%)	4 (1.2%)	12 (11.9%)
Perceived health benefits	2 (0.5%)	2 (0.6%)	0 (0%)
Learn blood type	1 (0.3%)	1 (0.3%)	0 (0%)
Time off work or school ^I	8 (1.8%)	8 (2.3%)	0 (0%)
Gift item	31 (6.7%)	22 (6.1%)	9 (9%)
Infectious disease screening	4 (0.9%)	4 (1.2%)	0 (0%)
Recognition	12 (2.6%)	9 (2.5%)	3 (3%)
Nonspecific	8 (1.8%)	6 (1.7%)	2 (2%)
Social norms	21 (4.6%)	19 (5.3%)	2 (2%)
Descriptive norms	13 (2.9%)	11 (3.1%)	2 (2%)

Motivators to blood donation	All participants 463 comments	Donors 362 comments	Non-donors 101 comments
Subjective norms	8 (1.8%)	8 (2.3%)	0 (0%)

^lThis is a motivator category unique to this study.

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Table 4

Deterrents to blood donation broken into subcategories. Number and percentage of comments of each deterrent, by participant group

Deterrents to blood donation	All participants 376 comments	Donors 231 comments	Non-donors 145 comments
	Count (%)	Count (%)	Count (%)
Low self-efficacy	11 (3.0%)	4 (1.8%)	7 (4.9%)
Lifestyle barriers	6 (1.6%)	2 (0.9%)	4 (2.8%)
Not enough blood	5 (1.4%)	2 (0.9%)	3 (2.1%)
Low involvement	14 (3.8%)	8 (3.5%)	6 (4.2%)
Inconvenience	22 (5.9%)	18 (7.8%)	4 (2.8%)
Lack of marketing communications	16 (4.3%)	10 (4.4%)	6 (4.2%)
Ineffective incentives	3 (0.8%)	3 (1.3%)	0 (0%)
Unwanted	0 (0%)	0 (0%)	0 (0%)
Inadequate	3 (0.8%)	3 (1.3%)	0 (0%)
Lack of knowledge	36 (9.6%)	26 (11.3%)	10 (6.9%)
Need for blood	6 (1.6%)	5 (2.2%)	1 (0.7%)
Donation site	19 (5.1%)	13 (5.7%)	6 (4.2%)
General lack of knowledge	11 (3.0%)	8 (3.5%)	3 (2.1%)
Negative service experience	13 (3.5%)	13 (5.7%)	0 (0%)
Staff	9 (2.4%)	9 (3.9%)	0 (0%)
Servicescape	4 (1.1%)	4 (1.8%)	0 (0%)
Ineligible health conditions	32 (8.6%)	13 (5.7%)	19 (13.2%)
Fear	153 (40.7%)	87 (37.7%)	66 (45.6%)
Rumours and misconceptions	7 (1.9%)	4 (1.8%)	3 (2.1%)
Needles	42 (11.2%)	27 (11.7%)	15 (10.4%)
Physical injury	14 (3.8%)	11 (4.8%)	3 (2.1%)
Nonspecific	5 (1.4%)	2 (0.9%)	3 (2.1%)
Reduced health	17 (4.6%)	10 (4.4%)	7 (4.9%)
Contagion	20 (5.4%)	12 (5.2%)	8 (5.6%)
Fainting/dizziness	19 (5.1%)	7 (3.1%)	12 (8.3%)
Blood	9 (2.4%)	3 (1.3%)	6 (4.2%)
Discovering illness	20 (5.4%)	11 (4.8%)	9 (6.3%)
Negative attitudes	53 (14.1%)	32 (13.9%)	21 (14.5%)
Negative word of mouth	1 (0.3%)	1 (0.5%)	0 (0%)
Scepticism/cynicism	43 (11.5%)	26 (11.3%)	17 (11.8%)
Outgroup prejudice	9 (2.4%)	5 (2.2%)	4 (2.8%)
Personal values	23 (6.2%)	17 (7.4%)	6 (4.2%)
Personal moral norms ^I	9 (2.4%)	7 (3.1%)	2 (1.4%)
Religiosity	14 (3.8%)	10 (4.4%)	4 (2.8%)

^IThis is a deterrent category unique to this study.