

ALTRUISTIC AND WARM-GLOW MOTIVATIONS: DIFFERENTIATING FIRST TIME FROM REPEAT DONORS

EAMONN FERGUSON
CLAIRE LAWRENCE
UNIVERSITY OF NOTTINGHAM

The conversion rate of first time donors to their second and third donation is low creating a significant problem to transfusion services. We hypothesise that feelings of warm-glow associated with donating blood, contribute to the differentiation between first time donors from those making second or third donations. To test this free-response motivations were examined a sample of 309 blood donors, categorised as first time donors and two categories of repeat donor: (1) those making their second or third donation and (2) those making their fourth or subsequent donation. We identified 33 categories of motivation for donating blood. Pure altruism and warm-glow were mentioned in the top 10 most frequent motivations. While pure altruism did not differentiate first time from the repeat donors, warm-glow did, with those making their second or third donations being 5 times more likely to express warm-glow and those making their fourth or subsequent donations 3 times more likely. These results add to the growing body of evidence that regular blood donors are more likely to express impure altruistic motives and that focusing on warm-glow interventions may offer the possibility to enhance the retention of blood donors.

Key words: Blood donation; Warm-glow; Altruism; Helping; Cooperation.

Correspondence concerning this article should be addressed to Eamonn Ferguson, School of Psychology, University of Nottingham, University Park, Nottingham NG7 2RD, United Kingdom. E-mail: eamonn.ferguson@nottingham.ac.uk

Health services worldwide could not function without a ready supply of safe blood (Ferguson & Masser, 2018; Ferguson, Murray, & O'Carroll, 2019). This blood is used to treat a wide range of illnesses and disease processes. For example, from whole blood, red blood cells are used, among other things, to treat anaemia, sickle cell disease, thalassaemia, blood loss following surgery and trauma in childbirth, as well as in palliative care. White cells are used to treat immunodeficiency conditions. Platelets are used to treat clotting deficient conditions (e.g., leukaemia) and plasma derived immunoglobins and albumin to treat infections, as well as kidney and liver disease. To meet this important need in the United Kingdom (UK), for example, the National Health Service (NHS) requires 31 units of blood per 1000 of the population, per annum, to provide the efficient and safe delivery of health care (NHSBT, n.d.-a, n.d.-b), with nearly 200,000 new donors required by the UK NHS yearly. However, about 3-4% of the UK eligible population donate blood, and this percentage is fairly consistent worldwide (Linden, Gregorio, & Kalish, 1988). Thus, there is always a need to recruit new donors as well as retain existing ones. However, the conversion rate from first to repeat donations is low, with only 7.2% of first time donors making three subsequent donations (Schreiber et al., 2005). This is crucial as four donations marks the point at which donors start to define themselves as a regular donor (see Ferguson & Chandler, 2005). These recruitment and retention issues need to be considered within the wider context of future demographic changes. For example, predictive models suggest that there may be future shortages in blood as the population ages (requiring more transfusions), with younger donors not being recruited to replace lost donors (Carter, Wilson, Redpath,

Hayes, & Mitchell, 2011; Greinacher & Fendrich, 2010; Greinacher, Fendrich, Alpen, & Hoffman, 2007; Greinacher, Fendrich, & Hoffman, 2010). Therefore, there is urgent need to better understand the motivations of donors on which to base interventions, but in particular, to explore motivations that differentiate first time from those making their second and third donations as these motivations may suggest interventions to enhance retention and increase conversion rates from first time donors.

BLOOD DONATION ALTRUISM, COOPERATION, AND SELF-SERVING MUTUAL BEHAVIOR

How can we define blood donor behavior? The blood donor gives a gift of blood, in a *voluntary* and *planned* fashion, at a *personal cost* to the donor, to the benefit of the both the *immediate* and potentially *long-term health* to the recipient. The voluntary and planned nature of blood donation links it to the wider literature of volunteer behavior, and we will return to this later (Ferguson & Chandler, 2005).

The personal cost to the donors involves the time and effort to donate, physiological/health costs in terms of blood loss, potentially fainting, feeling unwell, pain and discomfort, as well as psychological costs in terms of any accompanying anxiety, fear, and doubt. The benefits to the recipient may be immediate with transfusion stabilizing a patient following a trauma or in surgery, or long-term by allowing the patient to survive — when they may otherwise have died — and go on to reproduce and have children. Based on this description, blood donation may be described as a clear act of altruism. However, is this technically correct?

Recently, those working in the area of altruism and cooperation have started to question the accuracy of use of the term altruism within the behavioral, social, and medical sciences, and have proposed a semantic framework and typology that can be applied to ensure the term altruism and related constructs related to human cooperation are being used correctly and most effectively (Bshary & Bergmüller, 2008; Pizzari & Gardner, 2012; Scott-Phillips, 2007; Scott-Phillips, Dickins, & West, 2011; West, Griffin, & Gardner, 2007; West, Mouden, & Gardner, 2011). Bshary and Bergmüller (2008) further distinguish between *life-time* and *immediate* fitness consequences, as well as the behavior of the recipient as either *passive* or where the actor and recipient can *influence each other's* outcomes. Thus, the Bshary and Bergmüller typology identifies 16 different helping contexts of which only one relates to altruism. In these frameworks, (+) represents an outcome that is beneficial, and (–) represents an outcome that is a cost to either the actor (in this case the blood donor) and/or the recipient (in this case the recipient of blood), with the first term always referring to the actor and the second to the recipient. That is, altruism refers to the context where the actor pays a cost to benefit the long-term fitness of the recipient (–) and when the recipient gains (+) and is passive, resulting in a (–/+) category: the donor pays a cost without benefits and recipient gains benefits). This may sound like blood donation. However, if there is any benefit to the actor (in this case the donors) as well — i.e., +/+ : both donor and recipient gain benefits — even if the actor also pays a cost, then the act is no longer altruism but some form of mutually beneficial cooperation (West et al., 2007, 2011).

There is now substantial evidence that many blood donors gain personal benefits from blood donation. For example, the donors gain short-term benefits in terms of warm-glow (i.e., positive feelings as a consequence of donation; see Andreoni, 1990; Ferguson, Taylor, Keatley, Flynn, & Lawrence, 2012), as well as potential longer-term benefits in terms of increased reputation as a kind person (Lyle, Smith, & Sullivan, 2009), which will increase their chances of being helped by others (Milinski, 2016). While some donors may only pay costs without any gain, the majority gain. Thus, blood donation is clearly a (+/+) category (both donor and recipient gain benefits) and by application of Bshary and Bergmüller's (2008) frame-

work blood donation should be termed what they call a *self-serving mutually-beneficial behavior*. Therefore, blood donor behavior is a form of mutually-beneficial helping-behavior. In this spirit Ferguson et al. (Ferguson, 2015; Ferguson, Farrel, & Lawrence, 2008; Ferguson & Flynn, 2016; Ferguson, Taylor et al., 2012; Ferguson et al., 2019) have termed blood donor behavior an act of benevolence, or what Andreoni (1990) calls *impure altruism*: both the recipient and actor benefit, with the actor also motivated to help the recipient. Indeed, the Nuffield Council on Bioethics (2011) on donation of biological materials highlights, that while a behavior may appear altruistic, it may be also have a personal benefit to the donor:

We do not think it important from an ethical perspective that altruism is thoroughly ‘pure’. First, someone may donate biological materials because it also makes them feel good to help others. In a sense the donor’s own pleasure may lie at the root of their decision. But cases such as these remain altruistic for our purposes, on the grounds that concern for the welfare of others is a genuine motivator, and on the grounds that a disposition to help others can be reckoned as virtuous whether or not founded on the pleasure such action brings to the donor (p. 139).

However, there may still be some blood donors for whom the altruism definition (–/+; the donor pays a cost without benefits and recipient gains benefits) holds. These are likely to be first time donors, who donate to help others, but who gain no warm-glow or other benefits and therefore are less likely to return. Indeed, Ferguson (2015) argued that warm-glow derived from blood donation serves to reinforce donation behavior and converts first time donors to repeat donors. Thus, of all the motivations that are important for blood donation, theoretically, warm-glow has a specific role to play differentiating first time from repeat donors.

BLOOD DONOR AND VOLUNTEERISM: PLANNED, MOTIVATED BUT SEPARATE BEHAVIOR

With the above analysis of blood donation in mind, we can examine how work on blood donation fits with the wider literature on volunteerism and motivations. We start by differentiating non-health (volunteering time and effort, donating money) and health (blood and organ donation) based helping. Like much nonhealth helping, especially volunteering, blood donating is planned, effortful, time consuming, performed voluntary without any financial compensation and helps others. As such, they should have very similar motivational structures.

Volunteer Motivations in Non-Health Helping

Within the non-health based helping literature, the functional model of volunteering developed by Omoto and Snyder (1995) and Clary et al. (1998) offers a model identifying six functional motivations underlying volunteer behavior: (1) *values* (i.e., volunteers can express their values of altruism/humanitarianism); (2) *understanding* (i.e., volunteers can learn new skills that they would not normally have); (3) *social* (i.e., volunteers participate in activities that important others view favourably and social bonds are strengthened); (4) *career* (i.e., volunteering enhances career-related goals); (5) *protective* (i.e., volunteering is ego protecting by reducing feelings of guilt from being better off); and (6) *enhancement* (i.e., volunteers grow personally and emotionally). While developed within a social psychological framework, these motivations have a strong correspondence to mechanisms proposed to explain altruism/cooperation (see Ferguson et al., 2019). Specifically, the values motivation reflects other-regarding preferences of altruism and sympa-

thy/compassion (example item: “I feel compassion toward people in need”); the social motivation mechanisms reflects enhancement of reputation among friends and colleagues (example item: “My friends volunteer”); the protective motivation reflects ideas consistent with the negative state relief model to human helping (Baumann, Cialdini, & Kenrick, 1981) or helping to manage anticipated negative affect (example item: “Doing volunteer work relieves me of some of the guilt over being more fortunate than others”); both understanding and career motivations reflect self-interest (example items: “I can explore my own strengths,” and “Volunteering can help me to get my foot in the door at a place where I would like to work”); the enhancement motivation is of particular interest here as it is seen as being akin to warm-glow (example item: “Volunteering makes me feel better about myself”) (Ferguson et al., 2019). This link between warm-glow and the enhancement motivation is based on two considerations. First, the content of this motivation, like warm-glow, focuses on the act of helping (volunteering) being linked to feeling good about oneself. Second, warm-glow has theoretically been shown to represent an *anticipated response* to future helping as well as an emotional reaction to helping (Ferguson & Flynn, 2016). Thus, as enhancement may become a motivation that drives future volunteering so may warm-glow as an anticipated response about feeling good. Therefore, enhancement as a motivation and warm-glow as an anticipated response, are both motivations linking helping to feeling good. Thus, social, protective, enhancement, understanding, and career motivations all reflect some degree of direct self-benefit.

While predicted by many motivations, nonhealth volunteering is sustained by the enhancement, understanding, and protective motivations (Okun, Barr, & Herzog, 1998). Thus, as with blood donor behavior, sustained volunteering is linked to feelings of warm-glow (enhancement motivation). This highlights that both health and non-health based volunteering are acts of mutually beneficial behavior and not pure altruism per se (Bshary & Bergmüller, 2008).

Volunteer Motivation and Blood Donation

Applying the Omoto and Snyder (1995) and Clary et al. (1998) functional model of volunteerism to blood donation shows that enhancement (warm-glow) and values (altruism/sympathy) are prioritised by blood donors (Alfieri, 2017; Alfieri, Guiddi, Marta, & Saturni, 2016) with more experienced donors expressing motivations that reflect avoidance of guilt at not donating (protection), and strengthening of social bonds (social) (Guiddi, Alfieri, Marta, & Saturni, 2015). Again, we see clearly that donors are motivated by sympathy for others and warm-glow (as well as other self-beneficial motivations). Thus, consistent with the analyses based on Bshary and Bergmüller’s (2008) typology of cooperation, blood donation is a mutually-beneficial behavior when defined in terms of the Omoto and Snyder (1995) functional model of volunteerism.

Blood Donation and Non-Health Helping

Given that blood donation and non-health helping are very similar behaviorally (voluntary, effortful, planned) and predicted by the same motivations — primarily sympathy and warm-glow — it is pertinent to consider whether people who donate blood also perform non-health based helping? There is some evidence that blood donors are more likely to engage in other forms of non-health based helping (Merz, van den Hurk, & de Kort, 2017; Studte, Clement, Soliman, & Boenigk, 2019). However, others find that

non-health based helping and blood donation are unrelated (Ferguson et al, 2018). Conversely, it may be that there may be some blood donors (approximately 36%) *only* donating blood (Alfieri et al., 2017). Therefore, the overlap of health and non-health based philanthropy needs to be further explored.

The overlap in motivations and behavior processes between health and non-health based helping indicates that findings from understanding the motivation of blood donation are pertinent to the wider volunteer literature.

A PRIMARY FOCUS ON WARM-GLOW

Converting first time to repeat donors is crucial for transfusion services as repeat donors are more cost-effective. However, the conversion rate from first donation to repeat donations is low with only 21.4% making a second donation, and 7.2% making third and subsequent donations (Schreiber et al., 2005). Warm-glow has been suggested as a strong candidate motivation for facilitating this conversion (Ferguson, 2015). We acknowledge that blood donation behavior is driven by many motivations (Bednall & Bove, 2011) and drawn on numerous theoretical frameworks (see for recent reviews Ferguson et al., 2019; Masser, Ferguson, Merz, & Williams, 2019) including: theory of planned behavior (Godin, Conner, Sheeran, Bélanger-Gravel, & Germain, 2007; Lemmens et al. 2005; Masser, White, Hyde, Terry, & Robinson, 2009); social determination theory (France et al., 2017); functional model of volunteerism (Alfieri, 2017; Alfieri et al., 2016, 2017); the trans-theoretical model (Amoyal et al., 2013; Burditt, et al., 2009; Robbins et al., 2015); negative emotions (Chell, Waller, & Masser, 2016; France, & France, 2018; France, France, Frame-Brown, Venable, & Menitove, 2016; Meade, France, & Peterson, 1996; Viar, Etzel, Ciesielski, & Olatunji, 2010); and incentives (Masser, France, Himawan, Hyde, & Smith, 2016). However, we focus warm-glow specifically as it is hypothesized to differentiate first time from repeat donors (Ferguson, 2015). While warm-glow is usually defined as the positive affect that arises *at the time* of donation as a function of that donation, and is proportion to the amount donated, it has also been shown, theoretically, to act as an *anticipated response* (Ferguson & Flynn, 2016).

The proposal that the actual and anticipated experience of warm-glow is important for transition from first to repeat (second and third) donations is based on the following evidence. First, positive mood post-donation predicts repeat donations (Bednall, Bove, Cheatham, & Murray, 2013; Piliavin & Callero, 1991). Second, epidemiological analyses of secondary data indicate that facsimiles of warm-glow are greater in repeat donors (Ferguson, Atsma, de Kort, & Veldhuizen, 2012). Third, a focus on personal benefit from donation is a stronger predictor of subsequent donations than a focus on societal benefits (Ferguson et al., 2008). Fourth, compared to nondonors, blood donors show greater generosity in economic games designed to assess warm-glow preference (Ferguson, Taylor et al., 2012). Fifth, the anticipated affective component of warm-glow is important as anticipated positive affect is a significant predictor of blood donor behavior (Conner, Godin, Sheeran, & Germain, 2013). While all this evidence suggests that warm-glow plays a greater influence in the donor behavior of repeat donors, no study has specifically addressed if this increase in the importance of warm-glow emerges for second and third time donors. We suggest that while participants will identify altruistic motivations for their blood donation as a whole, warm-glow motivations will be the motivating force that distinguishes the move from first to second and third donations and subsequently on into sustained blood donation.

Hypothesis

The literature reviewed above on blood donation and volunteering behavior, shows clearly that feelings of altruism and sympathy, as well as warm-glow, are key motivators of volunteer behavior including blood donation. Therefore, these two motivations only are explored here, with the prediction that while altruism will be reported most frequently, it is warm-glow that will differentiate between first time donors and those making repeat donation, especially those making their second and third donations.

METHOD

Participants

Two samples of blood donors were recruited concurrently from two donor sites (fixed and mobile) in the UK (Table 1). The mobile site came to a local University and we sampled donors there due to its convenience. The fixed site was situated in the same University town but served a different demographic of the local community. Thus we were able to explore if site made a difference to donation rates and motivations.

TABLE 1
 Fixed versus mobile site characteristics

	All	Mobile	Fixed	<i>t</i> -test (mobile vs. fixed)
Age	<i>M</i> = 27.52 (<i>SD</i> = 10.95)	<i>M</i> = 22.99 (<i>SD</i> = 6.95)	<i>M</i> = 34.68 <i>SD</i> = 12.28)	<i>t</i> (153) = 7.57, <i>p</i> = .000
Sex	61% female	65% female	53% female	χ^2 (1) = 3.49, <i>p</i> = .062
Number of previous donation	<i>M</i> = 5.64 (<i>SD</i> = 10.34)	<i>M</i> = 2.74 (<i>SD</i> = 4.12)	<i>M</i> = 12.44 (<i>SD</i> = 15.98)	<i>t</i> (301) = 8.24, <i>p</i> = .000

Data were collected in November 1993 and coded between November and December of 1993. This time period is important for the current analysis. These data were collected and coded *prior* to the subsequent body of work identifying warm-glow as a potential key motivation for repeat donors. This is key, as evidence has demonstrated that once a theory starts to become more accepted and embedded, researchers may start to build this indirectly into their design, data collection, or coding (Deary, 1996). As such, coding of these data could not have been biased or contaminated by the researchers being aware of this specific hypothesis as they were collected and coded in 1993. That is, the coders were “blind” to warm-glow as a concept. While blood services may have changed their procedures since 1993 (adopted appointment system, reduce the use of mobile units, use more social media), the motivations driving donors have changed little as seen by recent papers (Bednall & Bove, 2011) that report very similar motivations to much older paper (Oswalt & Napoliello, 1974). As such we do not feel that these data are any less relevant today.

Procedure

A convenience sample of every third donor was sampled on arrival at the donor centre so as not to disrupt the blood donation process. Prior their donation, respondents completed a free response question asking about their reason for donating blood that day.

Material

Motivations. A broad focused survey was administered that asked about basic donor demographics (e.g., number of previous donations) as well as reactions to donation, stress appraisal, and coping pre- and post-donation. The question that asked about self-reported motivations for donation was phrased as follows: “In the space below please list as many reasons you have for deciding to give blood today.”

Donor experience. To reflect our primary hypotheses, we split the sample into three subgroups: first time donors, those who had donated up to 2 times previously (on their second or third donation), and those who had donated 3 times previously (on their fourth or subsequent donation). This was so we could explore the effects of warm-glow on those who had returned to make their second and third donation, compared to those who were making their first donation, and to further explore if higher levels of warm-glow are also seen in those who return for a fourth donation or more. While these divisions reflect our specific hypotheses, they are also consistent with blood donor categories identified by Ferguson, Singh, and Cunningham-Snell (1997). There were 79 first time donors, 78 who had donated up to 2 times previously (on their second or third donation), and 152 who had previously donated 3 or more times previously (on their fourth or subsequent donation).

Statistical Analysis

Free responses were content analysed using manifest coding which is based on key words and phrases in people’s textual responses (Dane, 1990). Two independent raters coded half of all the free response data and content analysed these to identify common themes based on the existing literature at that time, as well as new themes that emerged as a consequence of the coding process (e.g., Oswalt & Napoliello, 1974). The resulting categories were then integrated, and a common coding frame developed by the first author. This common framework was applied to all the free response data by two independent raters. Level of agreement was assessed and in the event of any disagreement a consensus was arrived at by discussion between the raters and the first author. These raters coded the data without any knowledge of the research hypotheses or how many donations the donors had made.

While a large number of motivations were identified, we focus only on warm-glow and altruism. The literature reviewed above shows that feelings of altruism/sympathy as well as warm-glow are key motivators in the literatures focusing on both blood donation and volunteering behavior. Therefore, these two motivations were key here, as these form the basis of the hypotheses being tested. Multinomial regression models were used to estimate the influence of warm-glow and altruistic motivations on donor career, with first time donors acting as the reference group.

RESULTS

Descriptive Analyses of Motivations for Donation

Thirty-three motivations for donation were identified (Table 2) with a 93% inter-rater agreement. As predicted, the most frequent reason for donation reflects the idea of altruism (i.e., to “help others”) along helping friends, saving lives, and duty. Warm-glow (i.e., to “feel good about themselves”) was the sixth most frequently reported motivation.

TABLE 2
Motivations for donation

Motivation	Percentage
It is something I can do to help; to help other, it is worthwhile	45.6%
In case I/my friends/my family need it	16.8%
It is important to do; it is necessary; it is needed	16.2%
Might save someone's life	13.3%
Duty to society	11.7%
So I feel good about myself; I enjoy it; it makes me feel physically good	11.6%
Blood is in short supply at the moment	10.4%
Because friends/relations are blood donors persuaded me to	10%
I had some time free	6.1%
I was sent a letter by the transfusion services	5.8%
For a free health check	5.5%
I am a regular donor	5.5%
To support the Blood Transfusion Service	5.2%
It is convenient	5.2%
For the tea, biscuits, stickers	5.2%
There is no reason why I should not; it is easy to do	4.9%
Received an extra invitation due to a rare blood group	4.2%
Friend or relatives have needed blood in the past	4.2%
I am lucky to be healthy	3.6%
It is just something I wanted to do	3.6%
It was advertised	3.2%
Overcome anxiety, a challenge	2.3%
To miss a lecture; time off work	3.2%
Guilt; to ease my conscience	2.6%
Set an example to others	1.6%
Never done it before, find out more	1.3%
I have not given for a while	1.3%
To reach my target of making 50 donations	1.0%
So that blood does not have to be imported that might be suspect	0.3%
Appeal for the Gulf War	0.3%
I have a dull existence	0.3%
For research purposes	0.3%
To reduce the number of nose bleeds I have	0.3%

Variation in Motivations as a Function on Donor Career

Univariate chi-squares showed that warm-glow was significantly associated with donor career, $\chi^2(2) = 7.79, p = .021$, such that this motivation was mentioned significantly more by those who made 1-2 previous donation (18%) and those who had made 3 previous donations (12%) than first time donors (3.8%). There was no significant association between donor career and expressing altruism, $\chi^2(2) = 3.65, p = .161$. Forty seven percent of first time donors expressed this, as did 54% of those who had made 1-2 previous donations, and 41% of those who had made 3 previous donation. There were no expected cell frequencies below five.

The multinomial model (Table 3) was a significantly better fit to these data than an intercept only model, $\chi^2(8) = 54.54$, $p = .000$, and showed that compared to first time donors, those who have made 1-2 previous donations (on their second or third donation) are 5 times more likely to express warm-glow as a motivation, and those who have made 3 previous donations (on their fourth or subsequent donation) are 3 times more likely. Those who have made at least 3 previous donations are also more likely to be male and to have donated at the fixed site. Self-reported altruistic motivations did not differentiate between the groups.

TABLE 3
Multinomial regression model

		<i>B</i> (<i>SE</i>)	<i>p</i>	OR	95% CI	
					Lower	Upper
1-2 previous donations (second and third time donors)		Intercept	0.47 (0.48)	.320		
		Warm-glow	1.71 (0.66)	.010	5.53	1.50 20.30
		Altruism	0.21 (0.33)	.523	1.23	0.64 2.37
		Sex (male)	-0.08 (0.36)	.882	0.92	0.45 1.87
		Site (mobile)	-0.87 (0.47)	.067	0.42	0.17 1.06
+ 3 previous donations (fourth time and subsequent donors)		Intercept	1.90 (0.43)	.000		
		Warm-glow	1.28 (0.66)	.051	3.61	0.99 13.13
		Altruism	-0.28 (0.30)	.362	0.75	0.42 1.37
		Sex (male)	0.62 (0.31)	.050	1.85	1.00 3.44
		Site (mobile)	-1.94 (0.41)	.000	0.14	0.06 0.32
<i>N</i>		303				
<i>R</i> ² (Nagelkerke)		.19				

Note. *B* = unstandardized coefficient; *SE* = standard error; OR = odds ratio; CI = confidence interval.

DISCUSSION

The results reported here support the hypothesis that repeat donors (those converting to their second and third donation) are more likely to express warm-glow as a motivation for donating blood compared to first time donors (Ferguson, 2015). This effect was slightly stronger for those who have made their second and third donation than those on their fourth or subsequent donations. Self-expressed altruistic motivations did not differentiate these donor groups but was expressed at a high level across all three groups.

Defining blood donation/donors. Thus, the repeat donors (any donor on their second or subsequent donation) could be described as “impure altruists” (Andreoni, 1990) who perform a *self-serving mutually-beneficial behavior* (Bshary & Bergmüller, 2008). This is consistent with behavioral data from economic games examining the general prosocial preferences blood donors (Ferguson, Taylor et al., 2012). However, warm-glow is not mentioned by every repeat donor, so there may well be that there are repeat donors who gain other forms of personal benefits, such as reputation (Lyle et al., 2009). There may also be some who are “pure-altruists.” What is needed is a deeper and more focused phenotyping of blood donors to address these issues.

Warm-glow, the wider volunteerism literature, and blood donor motivations. As detailed in the introduction, Omoto and Snyder’s (1995) motivational function of enhancement is similar to warm-glow, and

indeed enhancement is a functional volunteer motivation prioritised by blood donors (Alfieri, 2017; Alfieri et al., 2016) and a key motivation for long-term volunteer behavior (Okun et al., 1998). As a result, we can generalize from our results on blood donors and hypothesize that feelings of warm-glow may be key to moving people from being one-time volunteers to becoming sustained volunteers.

While warm-glow is only one motivation expressed by donors (see Bednall & Bove, 2011) it does seem to have a pivotal role to play in the development of the blood donor career and one that is worth focusing on in this regard. This is not to say that other motivations — such as altruism, curiosity, reciprocity — are not key for other aspects of donor behavior, such as factors increasingly the likelihood of becoming a first time donor (Ferguson, 2015).

Implications for Interventions

As the conversion rate from first to second and third time donation is low (Schreiber et al., 2005), interventions that target warm-glow would seem a valuable avenue to pursue. Indeed, Ferguson et al. (2008) have shown that a warm-glow intervention that focused on what the blood donor gains emotionally, compared to a pure altruism intervention (focused on what the recipient gains), enhanced preferences to donate blood in those who had made a commitment to donate blood. One way to develop this would be to incorporate techniques to enhance donors' recall of the positive emotions (warm-glow) that they felt after their donation (see Ferguson & Masser, 2018). Such intervention could target reminding donors of the positive feelings they felt when donating blood. A trial testing these ideas is currently being developed and undertaken by the authors in collaboration with the Australian Red Cross. We hope to report on this trial in the future. Thus, while targeting altruism in general may have broad appeal, interventions to increase repeat donations may be optimally effective if they (also) emphasize warm-glow.

Limitations

There are a number of limitations to this work. The sample size is relatively small, however, the findings were hypothesized and are consistent with theory and the broader literature. Second, these data are cross-sectional and thus any causal statements cannot be made, it would be better to follow donors as they progress through their donor careers to explore if the influence of warm-glow changes overtime within donors. It would also be useful to initiate interventions that focus on warm-glow to explore if these enhance the conversion from first to second and third time donations. Ferguson et al. (2008) did explore if warm-glow message enhance propensity to donate (not actual donation) and found that this was the case in committed donors. Thus, while these data are cross-sectional, there is growing evidence that there may be a causal role of warm-glow in repeat and committed donors. Finally, there is growing evidence donor motivations to vary as function of gender (Alfieri, 2017; Alfieri et al., 2016, 2017; Guiddi et al., 2015). However, we did not explore effects of sex as our sample sizes were insufficient to draw any definitive conclusions.

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