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The role of identity in how whole-blood donors reflect on and construct their future as a plasma donor

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Abstract

In the context of decreased demand for whole-blood and increased demand for plasma-derived products, donors in Australia are increasingly being asked to convert from whole-blood to plasmapheresis donations. Plasmapheresis is a different type of donation to whole-blood as the process takes longer, and can be engaged in more frequently. What is unknown is whether whole-blood donors view donating plasma as consistent with their donor identity, and how they respond to the possibility of donating more frequently. To explore this, we undertook semi-structured telephone interviews with 26 whole-blood donors who had recently made their first plasma donation. Findings indicated that while donating plasma was viewed as a bigger ask than donating whole-blood, the former was viewed as consistent with their identity as a donor because both behaviours were seen to benefit others and self, and were located within the same institutional context. Donating plasma was an opportunity for donors to enhance their self-concept as an altruistic giver. When contemplating their future donation behaviour, donors considered how their donor identity would fit alongside other salient roles. These findings have implications for how institutions can position their request of existing donors to give a different gift.

Keywords: Blood donation, Identity theory, Plasma, Altruism, Gift

Introduction

In most countries, including Australia, blood donors gift part of themselves voluntarily for the benefit of anonymous others (Healy, 2006). The gift they give aids healing of the injured, and of the sick - sometimes meaning the literal difference between life and death. What blood as a gift means to the donor, however, varies among individuals as well as by the institutional and structural contexts in which they donate (Healy, 2000; Kalampalikis, Haas, Fieulaine, Doumergue, & Deschamps, 2012; Valentine, 2005; Shaw, 2008). These contexts vary in terms of whether blood donation is truly voluntary and non-remunerated, the nature of the institution collecting the blood, and the systems of recruitment, collection, and marketing of donation (Titmuss, 1970, Healy, 2006). This context also informs whether the donor feels reciprocation of their gift through the emotional warm glow experienced by donating (Ferguson & Lawrence, 2016). While the act of donating is, for many, synonymous with whole-blood donation, in several countries, demand for whole-blood has fallen due to improved patient-blood management while demand for plasma-derived products remains strong and increasing (Ellingson *et al.* 2015). In Australia, this shifting demand has necessitated asking many whole-blood donors to change their donation type and convert to plasma.

In Australia both whole-blood and plasma donations are collected by the Australian Red Cross Blood Service (Blood Service). However, the marketing, recruitment, collection, and eventual uses of plasma differ from those of whole-blood. During plasmapheresis, plasma is extracted from the whole-blood taken, before the red blood cells are recirculated to the donor (Buzza *et al.*, 2012). This process means that plasmapheresis takes longer than a whole-blood donation, but that donors can donate more frequently - in Australia every two weeks rather than every 12 weeks for whole-blood¹. After donation, most plasma donations are separated into their components to be manufactured into blood products. The use of these products in a wider range of therapies coupled with demographic changes in Australia means that demand for plasma is strong and increasing.

¹ <https://www.donateblood.com.au/learn%23types-of-donation>

Because of this, the message to donors in Australia has been that plasma is a more useful gift to give than whole-blood.

This strategy of conversion to plasma has clear potential to increase the local plasma yield and meet recipients' needs. However, we do not know whether whole-blood donors view donating plasma as consistent with their identity as a donor – that is, whether plasma is the same or a different type of gift, or how they respond to the possibility of providing more frequent donations. These aspects of the 'ask' have important implications for maintaining the sufficiency of blood-product supply. To explore these identity-related aspects of asking donors to convert to plasma, we conducted semi-structured interviews with first-time plasmapheresis donors. In these interviews, we asked donors to reflect upon their recent plasmapheresis donation and their future intention to donate.

What role does identity play in blood donation?

While the decision to become a blood donor is theorised to be the outcome of an affectively cold, rational decision-making process (Masser, White, Hyde, & Terry, 2008), identity motives are thought to play a key role in maintaining blood donation in the longer-term. Recognising the social basis of the self-concept (Mead, 1934), identity theory proposes that the self comprises a collection of identities (Stryker, 1968, 1987) that reflect the roles a person occupies in the broader social structure. The self is therefore multifaceted with some role identities becoming more important or salient in defining an individual's self-concept than others (Callero, 1985; Charng, Piliavin, & Callero, 1988; Hogg, Terry, & White, 1995). While a role identity can become salient through the association of intrinsic or extrinsic rewards with performing the behaviour (e.g., Charng *et al.*, 1988), salience can also result from repetition of or investment in the behaviour, or significant other's validation and support of the role (Callero, 1985; McCall & Simmons, 1978; Turner, 1978; Stryker, 1980). Identifying as a blood donor allows for the signalling of a unique form of altruism (Valentine, 2005)

and the social benefit of a sense of belonging with the statistically few others who engage in this behaviour (Lucky *et al.*, 2014).

In the context of blood donation, while a donor role identity can emerge early in a donor's career (Masser, Bednall, White, & Terry, 2012) and strengthen through repeated donation (Charng *et al.*, 1988; Masser *et al.*, 2012), analyses indicates that it becomes a key motivational force by around the fifth donation (Ferguson, Atsma, de Kort, & Veldhuizen, 2012; Piliavin, 1990; Piliavin & Callero, 1991; Veldhuizen, Ferguson, de Kort, Donders, & Atsma, 2012). Donors for whom donating has become a defining aspect of their self-concept become intrinsically motivated to continue donating to both validate their role identity and reinforce their positive sense of self (Hogg *et al.*, 1995).

Is donating plasma the same as donating whole-blood, or something different?

For many donors, the idea and meaning of blood donation is synonymous with whole-blood (Bove, Bednall, Masser, & Buzza, 2011). Blood Services brand using the colour red, and donors commonly perceive that their donations go to help those who have suffered significant (whole-) blood loss through trauma or accidents (Cohn, 2016; Lynch & Cohn, 2018). Further, until recently in Australia, whole-blood donation comprised at least an initial and often significant part of a donor's career. As such, the role that informed a donor's identity was that of being a whole-blood donor (Bagot, Masser, & White, 2015).

Identity theory states that the verification of an identity will be strongest when the meaning of the behaviour matches the meaning of the identity (Stryker & Burke, 2000). This raises the question of how conversion to plasma relates to the role identity developed through donating whole-blood, and whether donors view plasma donation as consistent with, or verifying of, their existing donor identity. An earlier analysis suggested that donors may see a disconnect in terms of identity between donating whole-blood and donating plasma (Bagot *et al.* 2015). Specifically, once

other predictors of intention were considered, Bagot and colleagues (2015) found that whole-blood donors' self-reported role identity was significantly negatively related to their intention to convert to plasmapheresis.

Support for the idea that role identities may motivate, and be validated by, only behaviour that is precisely matched to the identity has also been observed in the broader volunteering literature (Grube & Piliavin, 2000; Lee, Piliavin, & Call, 1999). In Grube and Piliavin's (2000) analysis of American Cancer Society (ACS) volunteers, while participants indicated volunteering around ten hours a month to organisations other than the ACS, the specific role identity of being an ACS volunteer was negatively associated with the number of hours spent volunteering for other organisations.

However, scholars contend that participation in blood donation is likely associated with a self-concept that is broader than the behaviour from which it is derived. Rather, being a blood donor verifies a broader identity of being someone who contributes to their community through engaging in various voluntary activities (Alessandrini *et al.*, 2007; Alessandrini, 2007). From this perspective, being able to donate more frequently through plasmapheresis may be positively viewed as a way to reinforce this sense of self as altruistic. In turn, the individual's identity as someone who contributes to their community is strengthened.

Something different, and something more?

The identity implications of converting to plasma may go beyond the change in product donated. Given the greater time commitment and desired frequency of plasmapheresis, plasmapheresis is a bigger ask of donors than whole-blood donation. A salient consideration may be how this expanded role will fit with other important roles (e.g., family, occupation, or hobbies). While all roles have the potential to contribute to a person's identity, the relative contribution of each role to an individual's sense of self will vary, and individuals have a finite capacity to engage in the different roles that contribute to their self-concept (Charng *et al.*, 1988; Grube & Piliavin, 2000;

Hogg *et al.*, 1995). As such, even if donors view donating plasma as consistent with their identity, it is unclear how they will reconcile the request to 'do more' with their need to carry out other identity reinforcing behaviours.

The current study

In this study, we explore the identity implications of plasma conversion. Specifically, using semi-structured interviews, we consider how whole-blood donors reflect upon their first plasma donation and discuss their intention to donate in the future. In doing so, we explore our key research questions: Is donating plasma viewed as consistent with a donor's existing (role) identity?; and how do they envisage that enacting this role will fit in with other roles important for their self-concept?

Method

Participants

The contact details of eligible donors were extracted from the Blood Service's database. In order to obtain the perspectives of a range of people, donors were sampled to represent a broad mix of ages, genders, locations, and prior whole-blood donation experience. Donors were eligible to participate if they had donated plasma for the first-time within the preceding calendar week at a fixed site, were aged 18-65, had not experienced an adverse reaction at their last donation, had not been contacted for research participation in the last six months, and were not part of a group booking.

Telephone interviews were conducted in May 2017 with 26 donors (14 women, 12 men), aged 18-57 years (mean=33±11 years), who had completed 2-34 prior whole-blood donations (mean=9.6±9) (refer to Table 1 for participant details). Fifty-one percent of those contacted participated in an interview. At the time of interview, participants had donated plasma for the first-time 7 to 14 days previously.

Procedure

Ethical approval was granted by the Blood Service Human Research Ethics Committee. Eligible donors were invited by telephone and those agreeing were emailed information about the procedure. Verbal informed consent was obtained from all participants prior to interview. Interviews were audio-recorded with the permission of participants.

The interview schedule included open-ended questions about donors' recent plasmapheresis experiences, and their intention to donate again. Participants were encouraged to reflect in detail about the process of plasma donation, and follow-up and probing questions were used to clarify meanings and engage participants in further discussion about their recent donation (Liamputtong, 2012). Participants were also asked direct questions regarding their intentions to donate plasma every two, four, and twelve weeks. The average length of the interviews was thirty minutes.

Audio-recordings were transcribed verbatim. The interview transcripts were initially coded deductively, applying categories derived from the interview schedule, and then higher-level codes were derived through undertaking further analysis and discussion (Braun & Clarke, 2006). The transcripts were coded independently by two members of the research team, who met frequently to discuss themes and agree on the coding framework and content of codes.

Results

Themes relating to the meaning of plasma donation and to donor identity were identified from close examination of the final codes. In our analysis, we took the perspective that donors' role identities (and the salience of these) were demonstrated through the meanings and importance that donors attributed to blood and plasma donation, with these meanings informed by multiple influences. These included, but were not limited to, the institutional setting (that is, the recruitment, marketing, and organisation of blood product donation in Australia), cultural meanings

of donating blood products in a non-remunerated setting, the participants' prior donation experiences, and the donors' other salient role identities and commitments (Healy, 2000).

Plasma donation as different from and similar to whole-blood donation

Consistent with Bove and colleagues (2011), the majority of participants converted to plasmapheresis following a request from staff (21/26), while the remaining participants attributed their conversion to working in a setting in which plasma was used, knowing someone who had needed plasma-derived products, or donating with a friend or family member.

When asked to reflect upon their plasma donation 12/26 participants recalled approaching the donation with uncertainty or anxiety regarding the unfamiliar aspects of apheresis, particularly the return of red cells.

I was nervous because I had been told that they flush the blood back into your body and I wasn't sure how that was going to work ...Then of course I was given the chewy things [calcium tablet] and I felt that that probably wasn't quite explained...but as it turned out, I didn't even notice the blood being put back into my system (Participant 15, Female, aged 52, 34 whole-blood donations)

This quote illustrates that these participants' concerns about apheresis were informed by their familiarity with donating whole-blood. Consistent with Bagot, Bove, Masser, Bednall, and Buzza (2013), these participants raised concerns about procedural aspects of apheresis, including red cell return, saline compensation, needle pain, citrate response, and the duration of the donation, leading them to approach plasmapheresis with some trepidation. However, despite this, all of these donors remarked on their satisfaction with the procedure. In their post-donation reflections, many (16/26) noted that despite procedural differences, their experience of donating plasma was largely consistent with their experiences of donating whole-blood:

Well, it's not all that different to my previous blood donation experiences. It took a little bit longer, that was about it really. Otherwise it was perfectly agreeable and simple and straightforward. (Participant 23, Male, aged 47, 19 whole-blood donations)

The unremarkable nature of plasmapheresis was a common theme in responses. All participants, including those who identified negative aspects of the donation including red cell return (2), a mild citrate reaction (1), a post-donation bruise (1), and the time taken (2), indicated that ultimately they had found the procedure acceptable and intended to donate again. While this stated intention may be influenced by the context of participating in Blood Service-run research, the uniformity of donors' responses indicates that participants did not differentiate greatly between their whole-blood and plasma donation experiences.

The exception to this was several participants (12/26) who indicated that the comparative complexity of plasmapheresis contributed positively to their experience (Oswalt, 1977). Donors noted that they enjoyed watching the apheresis machine and learning about the procedure from staff, and that these interactions with staff contributed positively to their donation experience.

I like how the nurse explained what was happening as she was hooking the machine up; I thought it was pretty interesting to find out a few things with the apparatus, machine.... And that the blood is actually not red (Participant 8, Male, aged 29, 2 whole-blood donations)

Plasma donation as a 'higher value' donation than whole-blood?

While most participants donated plasma in response to a request from centre staff, when asked about their underlying motivations many (14/26) referred to helping others, feeling good about donating, and being a good citizen. Thus, participants referred not only to giving to others but also to receiving personal and social benefits through donating. Drawing on their role as a whole-

blood donor, participants often noted that these motivators were consistent across both donation types. However, some (10/26) indicated that they wanted to donate plasma because through this they could make a larger contribution – that is donate more frequently, contribute a more useful product, and donate a product given by fewer donors.

I've been a whole-blood donor for a couple of years...and I had a discussion with the Blood Service nurse when I was last there and it sounded like with the increased frequency, if you can donate plasma and potentially platelets as well, that seemed like a worthwhile venture and it's not as common and also sort of more in demand. So I'm just actually trying to help

(Participant 13, Male, aged 33, 5 whole-blood donations)

This donor indicates that his perception that plasma is needed more came from Blood Service staff. Other participants also noted that they had been told that they could help more people through donating plasma.

This framing of donation in terms of the desired outcome ('helping others') rather than of the product donated, suggests that these donors do not view whole-blood and plasma donation as discordant activities. Rather, both serve a higher-order identity, such as being an altruistic giver (Alessandrini *et al.*, 2007; Masser & Bagot, 2015). In doing this, these ten donors appear to have accepted the Blood Service's reframing of the bigger ask of more frequent and time-consuming donations as an opportunity to 'help more people'. While objectively this bigger ask could be a barrier to donating, for some donors it may be motivating if more frequent donation allows for reinforcement of a valued identity.

However, this recognition of the current higher need for plasma did not negatively impact donors' intentions to donate whole-blood in the future. When asked about their plans to donate plasma and whole-blood, most participants (17/26) indicated that they viewed both donation types as valuable and did not indicate a preference as to which product to donate in the future. Rather, as

this donor indicates, they were happy to donate whichever product was needed most by the Blood Service:

Hopefully my donation can be useful to someone or a group of people. As I say, I'm more than happy to donate be it blood or plasma, to me it's a really worthwhile thing to do.

(Participant 2, Male, aged 20, 4 whole-blood donations)

This participant sees both plasma and whole-blood donations as valuable because both are used to help others. For him, and for other participants, donating either product therefore allows them to maintain their identity as someone who is making a useful contribution, or gift, to society.

Donating as a salient role identity

Participants were asked how frequently they intended to donate plasma and to consider their perspectives on donating at three common frequencies: every 2, 4, and 12 weeks. Although all participants recognised that benefits to others would be greater if they donated every two weeks, only 10 said they intended to donate at this frequency.

Those donors who indicated a preference for two-weekly donations believed that donating at this interval was preferable for planning their schedules and booking appointments at desirable times, or that they would be more likely to fall out of the habit if they donated at a longer interval:

In my personal organisation and routine, I like the routine of fortnight, and monthly, I would be less inclined to make it a priority. It would quite easily then fall into 12 weeks, and then you fall into that trap of oh, I mean to go. (Participant 7, Female, aged 44, 4 whole-blood donations)

The main advantages of high frequency donation identified by these donors were the opportunity to establish and keep a routine of donating, and to give more often. In doing so, these donors prioritised maintaining a donation practice and, interestingly, did not anticipate that other

roles in their lives would impact on their plasma schedule. Some explained that, rather than competing with other commitments, donating plasma was consistent with co-existing role identities, such as being in an intimate relationship (donating with their partner), their life-stage (retired, student; having free-time), or their higher-order identity of being someone who helps others.

Weighing up the costs and benefits

The remaining 16 participants appeared to evaluate the importance of donating plasma against other unrelated role identities. Twelve of these donors indicated that donating every four weeks would suit them, while four indicated a preference for donating every 6, 8 or 12 weeks.

It's just many, many things going on in my life...So every two weeks would be far too frequently and I think it would become a chore and then I wouldn't like to do it. Also, it's a little bit painful sometimes (Participant 17, Female, aged 27, 8 whole-blood donations)

I think if I was a universal donor I would have more of a reason to do it as often as I could. But, because I'm O positive, I'm not particularly uncommon or unusual, I think two weeks is a little bit too much for me. (Participant 11, Male, aged 23, 2 whole-blood donations)

Participant 17 suggests that the time and physical discomfort of donating every two weeks could shift her perception of donating from a voluntary act to a burdensome one, and would then be inconsistent with her other roles and commitments, thus negatively impacting on her self-concept. Participant 11 draws upon knowledge of his blood type to inform his intended donation behaviour, citing the potential value of his donation to the Blood Service as a reason for donating less frequently. These participant quotes illustrate how individuals apply their knowledge of blood donation and of the institutional setting to shape the salience or importance of this particular role identity to them or to justify their resulting behaviour.

As with the two-weekly donors, those who opted for 4-6 weeks often noted that decisions about frequency were made with the goal of making a commitment they could keep. This indicates that even when the donor's role identity is less salient than it is for others, it remains an identity that they wish to fulfil. For example, these donors considered how often they could fit plasma donation into their schedules without compromising other roles important to them, and donate frequently enough to reinforce their self-concepts as altruistic givers:

I can't even meet up with my friends every four weeks. I know that sounds bad, because it's helping other people and stuff. But, I just think, in reality, how busy kids, life and schedule and all the rest of it is, that's (every 6 weeks) a manageable timeframe (Participant 12, Male, aged 35, 8 whole-blood donations)

I feel like every four weeks is not so infrequent that I'd feel bad about not giving enough.
(Participant 11, Male, aged 23, 2 whole-blood donations)

While Participant 12 notes that he might be expected to prioritise 'helping other people', he believes it important to set a goal that can be met. This perspective positions donating plasma as important, but less important than other more salient roles. The idea of 'not giving enough' (Participant 11) seems to be anchored in the perception that donating every four weeks remains a high frequency donation schedule, particularly in comparison to the 12-week frequency at which whole-blood donation is allowed. Being a 'good' donor is important to this donor, as he suggests that giving less often would negatively impact his self-concept.

Discussion

In the context of increasing demand for plasma and a concurrent decline in the need for whole-blood donations, we explored the extent to which whole-blood donors who had recently converted

to plasma saw donating plasma as congruent with their existing role-identity and how they envisaged that continuing to donate plasma would fit with other roles important for their self-concept. We found that while our first-time plasma donors could identify procedural differences in the processes through which they gave their gift, they did not view plasmapheresis as a different type of gift to whole-blood. Rather, both forms of donation were seen not only as helping others but also as benefitting themselves and the community, and therefore as consistent with a broader identity as a donor or as an altruistic gift giver (Alessandrini, 2007). However, the opportunity for increased donation frequency provided by plasmapheresis was not one that most donors anticipated fully embracing. Rather, our participants appeared to carefully consider the opportunity cost of frequent donation to their engagement in other roles important for their self-concept.

The finding that an identity formed on the basis of prior whole-blood donations was not seen as inconsistent with a continued commitment to donating plasma is in contrast to Bagot *et al.* (2015). The negative association between role identity and donors' intentions to convert to plasma observed in Bagot *et al.* (2015) was interpreted as donors viewing plasmapheresis as inconsistent with, and potentially threatening to, their whole-blood donor identity. However, this was not evident in participants' responses in the current study. Rather, consistent with their motivation to provide the most useful gift, donors in our study viewed both forms of donation as consistent with their role as a donor or altruistic gift giver (Alessandrini, 2007).

This difference in results may reflect the different stages of decision-making that participants in the two studies were in. In Bagot *et al.* (2015) whole-blood donors were considering plasmapheresis in the abstract and had yet to convert. In the current analysis, participants had recently engaged in (largely) successful first plasma donations. Consistent with our need for cognitive consistency (Festinger, 1957), while a role identity formed through whole-blood donation may deter conversion, once conversion occurs, donating plasma may be reconciled as consistent with an identity as a donor.

While not viewing plasmapheresis as inconsistent with their donor role, most participants recognised plasma as a greater 'ask' than whole-blood donation. Some constructed this as an opportunity to help others more often. While this representation appears to reflect Blood Service messaging around plasmapheresis, it is consistent with donors having a higher-order (Grube & Piliavin, 2000) identity as an altruistic giver (Alessandrini et al., 2007; Masser & Bagot, 2015). This reflection of Blood Service messaging in accounts of donating plasma also suggests an institutional component to donor identity not previously recognised. In Grube and Piliavin's (2000) analysis of ACS volunteers, an ACS-specific role identity was negatively related to volunteering for *other organisations*. However, in Australia, blood and plasma donation are both requested by the Blood Service, with plasma donation not viewed as inconsistent with donors' role identities developed through donating whole-blood. Here, the role identity appears not solely determined by the role *per se* but also by the institutional setting in which it occurs (Healy, 2000). As such, donors appear to develop their altruistic identities in relation to the institution and what it represents. This is consistent with the findings of research that asked blood donors their views on donating blood for research. Specifically, while donors expressed ambivalence regarding donating for research, those who expressed trust in the blood collection agency perceived that these donations would benefit others (Cohn, 2016; Raivola, Snell, Pastila, Helen, & Partenen, 2018).

This influence of Blood Service messaging and information was also evident in donors' perspectives on their future donation behaviour. For example, participants interpreted information about the two-weekly minimum inter-donation frequency, the uses of plasma, and the blood types most desirable, to inform their perspectives on how often they thought they would, or should, donate. Consistent with their understanding that they were giving a gift, but also receiving benefits from donating, participants appeared to weigh up the benefits of donating plasma at a particular frequency against the costs to them, including time and physical pain. Ultimately, they did not perceive that a donation practice would be sustainable if the costs far outweighed the benefits.

However, the frequency at which donors intended to give was also influenced by the relative importance of being a donor in the context of their other roles. While a positive association has been observed between role identity and frequency of behaviour (Anderson & Cychosz, 1995), our new plasma donors appeared to be actively negotiating their desire to maintain a commitment to donating relative to the salience of their donor role, and the institutional parameters set by the Blood Service. For example, all participants wanted to make a commitment to a future donation frequency that they could keep. For most, this commitment was less than the Blood Service mandated minimum 2-week inter-donation frequency. This recognition of the relative importance of being a donor vis-à-vis other roles may reflect donors' recognition of the multiple roles that contribute to their self-concept, and a want to avoid donating becoming an obligation. In part, it may also reflect an awareness that the recognition and reinforcement of being a donor by significant others is unlikely to be contingent on a particular frequency of donation. However, this perception may reflect our participants' status as new plasma donors. Once donors become established plasma donors, validation of this role identity by others may result in donors wanting to validate and reaffirm their identity through more frequent donation behaviour (Anderson & Cychosz, 1995).

Conclusion and future directions

When existing donors are asked to give a different gift by an organisation with which they already engage, this request is likely to be successful if the new gift is perceived as consistent with donors' existing role identity, and as not too costly. Blood Services and other institutions could benefit from this knowledge that multiple behaviours grow from a single behaviour in their recruitment of donors for other forms of donation such as stem cells or organ donation, or for biomedical research.

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