Motivation in Italian whole blood donors and the role of commitment

Marco Bani* and Maria Grazia Strepparava

Department of Experimental Medicine, Medical Faculty, Multimedia Health Communication Laboratory, University of Milano Bicocca, Monza, Italy

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The literature contains numerous reports on motivation in blood donors, although none of these are specific to blood donation in Italy and almost all of them focus on altruism and the desire to help others. Altruism is important, but a comprehensive analysis of donor motivation should examine all the factors affecting the decision to donate, including commitment to voluntary blood donor organizations. The aims of this paper are to verify if the motivational factors that influence the choice to donate blood in Italy are generally consistent with the findings from other countries reported in the literature and to focus on commitment to donor organizations as an additional factor. A sample of 895 whole blood donors completed a self-report questionnaire containing questions about: reasons for beginning to donate, people who influenced this choice, and level of commitment to voluntary blood donor organizations. The most frequently reported reasons for giving blood for the first time were “to help others” (56%), “influence of family/friends” (22%), and “social/moral obligation” (11.2%); commitment did not vary as a function of the leading motivation reported. Differences emerged between males, who more frequently reported having been influenced by parents and friends, and females, who referred more often to altruistic motives. The opportunity to check one’s own state of health also played an important role (6.9%), especially for male donors. Overall, however, the decision to donate was primarily a personal choice (41.3%), although influence was also attributed to relatives (21.8%), friends (22.3%), and voluntary blood donor organizations (21.8%). The reported level of commitment to the donor organization was positively correlated with the number of total and annual donations made and number of new donors recruited.

Keywords: blood donation; motivation; donor; commitment

Introduction

There are numerous reports in the literature examining motivation for donating blood and consequently how blood donor promotion campaigns can be refined to recruit and maintain more donors (Belda Suárez, Fernandez-Montoya, Rodríguez Fernández, López-Berrio, & Cillero-Peñuelaet, 2002; Glynn et al., 2002; Hollingsworth & Wildman, 2004; Hupfer, Taylor, & Letwin, 2005; Marantidou et al., 2007).

With regard to blood donor motivation, several studies have found that altruism is the principal or sole motivator of blood donation behavior (Pilivian & Callero,
1991; Simon, 2003), and this explanation is widely accepted. However, it seems simplistic to conclude that such a complex behavior is caused by one single factor, and consequently a number of researchers have sought to identify other types of motivation (Giles, McClanahan, Cairns, & Mallet, 2004; Godin et al., 2005; Lemmens et al., 2005). For example, Ferguson et al. consider blood donors to display benevolence rather than altruism, defining benevolence as a mix of self-interest and altruism (Ferguson, Farrell, & Lawrence, 2008). In general, however, the secondary motivational factors influencing the decision to donate and the emotional aspects of the blood donation experience remain underemphasized and require further investigation.

A clearer framework of analysis is also needed in relation to the wide variability of blood collection systems across countries (Hagen, 2003). This variation makes it impossible in many cases to generalize the results of a blood donation study beyond the context in which it has been carried out. For example, the donation experience, and consequently the motivational factors involved, may differ depending on whether the donors are voluntary or remunerated and occasional or regular (Farrugia, Penrod, & Bult, 2010).

Three main types of blood collection scheme are currently in operation (Healy, 2000). In some countries, such as Great Britain, France, and Ireland, the National Health Service is the sole agency involved in collecting blood. In Germany, Belgium, the Netherlands, and Luxembourg, the Red Cross either has a monopoly on blood collection or controls most of the collection sites, with some additional supply coming from small blood banks; in these countries, collection generally takes place in hospitals or at external donation sites. Finally, in the Italian context, as well as in Spain, Portugal, Greece, Norway, and Denmark, large voluntary organizations or blood banks handle almost all of the blood collection, with the support of some smaller organizations and hospitals.

The most important reports on motivation in blood donors come from the USA, Sweden, and Great Britain, while no studies of the Italian context have been published.

In Italy, blood donation is handled almost entirely by Italian Association of Voluntary Blood Donors (AVIS), a voluntary organization with 1.2 million donors and almost 2 million blood donations per annum. Blood collection mainly takes place at public transfusion centers, although AVIS directly manages a number of transfusion centers accounting for nearly 10% of blood collected. The blood collected is supplied to the National Health Service in return for a small fee; the proceeds are used to fund blood donation campaigns.

This study looked at motivational factors in the decision to donate blood within the Italian system, in view of the lack of Italian published research in this field. Level of commitment to voluntary donor organizations was examined as a possible motivational factor, which had not been previously investigated.

**Materials and method**

The data were collected by distributing a questionnaire to blood donors immediately after they had made a whole blood donation at AVIS Blood Centers in Bergamo in September 2006 to October 2006; 800 questionnaires were distributed at the main collection centre and a further 1200 at four local hospitals.
The Bergamo branch of AVIS is one of the largest blood centers in Italy (in terms of number of donations and donors) and may be considered representative of the overall Italian blood collection system.

The data collection instrument was a self-report questionnaire (Appendix 1) containing questions on sociodemographic data (gender, age, and education), the annual and total number of blood donations made, commitment to the voluntary donor organization, and its mission (familiarity with promotional messages, celebrity endorsements, and blood transfusion recipients).

The section of the questionnaire covering motivation included one open-ended question about the decision to begin donating blood and a multiple choice question about the people who influenced this choice. Compilation of the questionnaire was relatively time consuming, and this may explain the low return rate, which was nonetheless in line with the average for this type of self-report instrument.

For analysis purposes, the sample was divided into three categories based on the total number of donations made – new donors (0 previous donations), regular donors (1–10 donations), and veteran donors (over 11 donations) – and into five categories based on donor age (expressed in years): 18–25, 26–35, 36–45, 46–55, and 56–65.

The study used a cross-sectional design, and the data analysis was carried out using appropriate statistical software (SPSS, version 14.0, SPSS Inc., Chicago, IL).

The data were analyzed by means of descriptive statistics, as well as chi square and t tests for independent samples, one-way analysis of variances, and Pearson correlations. Results are expressed as mean values ± standard deviation and statistical significance was set at $p < 0.05$.

**Results**

The questionnaire was completed by 964 donors (return rate 48.2%). Of these, 71 were unusable because incorrectly completed or with too much missing information, therefore the final sample contained 895 donors. There was a prevalence of males (80.3 vs. 19.7%), a difference which is typical of the Italian donor population, in contrast to other European countries where men and women donors are almost equally distributed (Bani & Giussani, 2010). A total of 81.9% had partners and 39.8% had completed their high school education (8.7% were graduates).

Overall, the sample proved representative of the general donor population in terms of age and gender distribution (cf. Annual Report AVIS Lombardia 2009).

Males and females differed significantly in the number of total and annual whole blood donations reported (see Table 1), due to the difference in prescribed waiting periods between donations (3 months for men vs. 6 months for women), while homogeneous for age (male 40.77 ± 10.91 vs. female 39.18 ± 12.39; $p > 0.05$). The number of donations also differed significantly as a function of age group, with the oldest donors (46–65) reporting higher total and annual donation rates ($F$-ratio = 116.54, df – degree of freedom 4, $p < 0.001$; $F$-ratio = 5.10, df 4, $p < 0.001$).

**Motivations**

To analyze responses to the open-ended question “Why did you choose to become a blood donor?”, 11 macro-categories were initially identified of which 6 were found to
be useful in building up a description of the sample. The remaining five categories collected only 24 answers in all (e.g. to overcome fear, to get a day’s paid leave from work, to be awarded additional leave during military service, don’t know) and were consequently collapsed into the category “other” (see Table 2).

The categories were generated following grounded theory (Strauss & Corbin, 1994, 1998), a well-known qualitative research methodology that emphasizes generation of theory from data in the process of conducting research. Coding was carried out by two independent judges with a concordance rate – calculated using Cohen’s kappa coefficient, of 0.926 ($p < 0.001$). Only 86 subjects reported more than one motivation, and in these cases, only the first-mentioned answer was included in the analysis, since it was considered the most important factor for the donor and to ensure that all respondents were equally represented.

The main category, to which 56% of the responses were assigned, was “to help others” (“act of solidarity”, “to help people in need”, “it’s nice to know I can be of help to someone”, “as an act of altruism”, etc…), thus broadly corresponding to the altruism factor.

Answers coded to the category “family and friends” (22%) contained explicit references to parents, relatives or friends who had persuaded the respondent to give blood (“through friends”, “I was asked by my sister”, “I followed my father’s example”, “other people convinced me”, and “I was persuaded by a colleague” etc.).

Responses in the “duty” category (11.2%) referred to blood donation as a social and moral responsibility, perceived as a civic duty (“I think it is essential in order to

Table 1. Annual and total donation per gender and age groups.

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Male, $M$ (SD), ($n = 699$)</th>
<th>Female, $M$ (SD), ($n = 172$)</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>18–25</td>
<td>37.15 ± 31.27</td>
<td>17.69 ± 20.15</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>26–35</td>
<td>6.83 ± 4.85</td>
<td>4.70 ± 5.50</td>
<td></td>
</tr>
<tr>
<td>36–45</td>
<td>18.94 ± 13.16</td>
<td>10.36 ± 10.14</td>
<td></td>
</tr>
<tr>
<td>46–55</td>
<td>33.82 ± 21.83</td>
<td>16.54 ± 15.65</td>
<td></td>
</tr>
<tr>
<td>56–65</td>
<td>57.09 ± 32.94</td>
<td>25.33 ± 22.58</td>
<td></td>
</tr>
<tr>
<td>6.83 ± 4.85</td>
<td>4.70 ± 5.50</td>
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<td>57.09 ± 32.94</td>
<td>25.33 ± 22.58</td>
<td></td>
</tr>
</tbody>
</table>

Table 2. Reasons for becoming a blood donor.

<table>
<thead>
<tr>
<th>Reason</th>
<th>All donors, % ($n$, $n = 819$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>To help others</td>
<td>56.0 (459)</td>
</tr>
<tr>
<td>Influenced by family/friends</td>
<td>22.3 (180)</td>
</tr>
<tr>
<td>Duty</td>
<td>11.2 (92)</td>
</tr>
<tr>
<td>To help relatives or friends</td>
<td>3.2 (26)</td>
</tr>
<tr>
<td>Involved by Avis</td>
<td>2.6 (23)</td>
</tr>
<tr>
<td>Curiosity</td>
<td>1.7 (15)</td>
</tr>
<tr>
<td>Other</td>
<td>3.0 (24)</td>
</tr>
</tbody>
</table>
give meaningful help to the community”, “on principle”, “because I think it is the right thing to do”, “out of a sense of responsibility and civic duty” etc.

Motivations cited in the category “to help relatives or friends” (3.2%) related to a past or current need for transfusions on the part of family or friends. This experience either led the donor to wish to “return the favour” or made them aware of the general need for donated blood (“seeing my father who needed blood transfusions because he was anaemic” etc.).

Finally, a further 2.6% of responses were assigned to the category “recruited by AVIS”, as they explicitly mentioned AVIS promotional activities (“I began to donate because a member of AVIS asked me to”, “I was persuaded by the President of the AVIS branch in my town/village”, “because I knew other members of AVIS from my town/village” etc.). In practice, there is overlap between this category and the family and friends category, given that relatives and friends are often members of AVIS. However, in our analysis, we chose to separate the influence of the “institutional AVIS” from that of family and friends who belonged to AVIS.

Except for the motivating factor “helping others” (which in line with findings from the literature was more frequently reported by female donors, there were no other significant differences based on gender or on the number of donations.

Subsequent to this level of analysis, one particular motivational aspect was examined separately: the opportunity to check own state of health via periodic medical tests, which was cited by 6.9% of respondents. Examining this factor as a function of gender, it was found that males mentioned it more frequently than did females (χ² = 8.9; df 1, p < 0.003).

**Level of commitment**

To assess subjects’ level of commitment to the voluntary donor organization and to blood donation in general, five questions were asked about subjects’ familiarity with slogans and celebrities promoting blood donation, direct acquaintance with people needing blood transfusions, personal attempts to persuade others to donate and tendency to discuss blood donation in everyday conversation (see Table 3). No differences in the level of commitment were found as a function of gender. As expected, new donors show a lower level of commitment but a major knowledge of people who need transfusion (χ² = 7.06; df 2, p < 0.02).

Forty-seven percent of donors claimed to know someone who had received at some time, or who regularly required, blood transfusions. As many as 91.4%
discussed blood donation in a range of everyday contexts (64.1% with friends, 54.1% at school/work, 44% with family, and 11.6% with strangers).

There were no significant interactions between primary motivation and level of commitment, except for the category “helping relatives or friends”, which as might have been expected was reported more frequently by subjects personally acquainted with blood transfusion recipients ($\chi^2 = 19.15; \text{df} \ 4, \ p < 0.001$).

Higher commitment was associated with a higher rate of donation. Specifically, the total number of donations made by those directly acquainted with transfusion recipients was significantly greater than the number of donations made by those who did not know any recipients (36.8 $\pm$ 32.9 vs. 30.2 $\pm$ 27.8, $p < 0.001$).

Donors who had tried to recruit somebody to donate blood had higher total and annual donation rates than donors who had not (35.5 $\pm$ 31.2 vs. 24.8 $\pm$ 25.5, $p < 0.001$; 2.8 $\pm$ 1.4 vs. 2.5 $\pm$ 1.2, $p < 0.003$); likewise, donors who also engaged in other types of voluntary work had higher donation rates than donors who did not (42.2 $\pm$ 33.7 vs. 28.7 $\pm$ 27.6, $p < 0.001$; 3.0 $\pm$ 1.6 vs. 2.7 $\pm$ 1.2, $p < 0.018$).

In addition, there was a significant positive correlation ($p < 0.05$) between the number of total and annual donations ($r = 0.327$ and $r = 0.192$, respectively) and the number of other people a donor had successfully persuaded to become donors: that is, the more a person donated, the more he/she encouraged others to do likewise.

With regard to the number of times donors forgot to honor their commitment to make a periodic donation, 35% of donors reported having forgotten it at some time (ranging from rarely to frequently) with donors who reported a higher level of commitment more likely to remember to donate. Specifically, donors personally acquainted with people needing blood transfusions ($\chi^2 = 14.73; \text{df} \ 4, \ p < 0.005$), donors who had personally attempted to persuade others to donate ($\chi^2 = 23.62; \text{df} \ 4, \ p < 0.001$), and donors who tended to discuss blood donation in everyday conversation ($\chi^2 = 20.12; \text{df} \ 4, \ p < 0.001$) were all more likely to remember to honor their donation commitment.

**Influences on the decision to donate blood**

After asking respondents about their main reasons for donating blood, the next question asked them who, if anyone, had influenced their decision to give blood, and results are reported in Table 4.

As might have been expected, subjects who reported having been influenced by AVIS were more familiar with slogans and celebrities promoting blood donation ($\chi^2 = 10.28; \text{df} \ 1, \ p < 0.001$; $\chi^2 = 18.50; \text{df} \ 1, \ p < 0.001$).

<table>
<thead>
<tr>
<th></th>
<th>All donors, % ($n$) ($n = 895$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal choice</td>
<td>41.3 (370)</td>
</tr>
<tr>
<td>Friends</td>
<td>22.3 (200)</td>
</tr>
<tr>
<td>Avis</td>
<td>21.9 (196)</td>
</tr>
<tr>
<td>Family</td>
<td>21.8 (195)</td>
</tr>
<tr>
<td>Partner</td>
<td>5.3 (43)</td>
</tr>
<tr>
<td>Family doctor</td>
<td>1.3 (12)</td>
</tr>
</tbody>
</table>
Females were more likely to make a personal choice to donate than males ($\chi^2 = 4.0; \text{df} \ 1, \ p < 0.047$) and were more influenced by their partner ($\chi^2 = 6.4; \text{df} \ 1, \ p < 0.011$), while males were more likely to be influenced by friends ($\chi^2 = 83.7; \text{df} \ 1, \ p < 0.004$).

Analyzing influences as a function of donor age group, a significant difference emerged between the youngest donors (18–35 years) and the 46–65 years age bracket; specifically, the influence of family was stronger for younger subjects ($\chi^2 = 27.69; \text{df} \ 4, \ p < 0.001$).

**Discussion**

In general, this research provides a picture of Italian donor motivation in line with the results reported in the international literature and in particular with reports on the dimension of altruism (mainly for female, Bani & Giussani, 2010) and the influence of relatives and friends.

The results show that individual decision making is a key component of the choice to become a blood donor, and that only some donors are directly influenced by other people.

However, other less frequent factors can also contribute significantly to the decision to donate. These include the attitudes of family and friends and attitudes toward having regular health check-ups. The level of influence of relatives and friends found in this study is in line with previous research results (Nilsson Sojka & Sojka, 2008), since if friends, family, and partner are collapsed together into a single category, this macro-category accounts for more than 50% of donors.

With regard to the youngest age group (18–35 years), it is interesting to note that the peer group had a relatively low influence on these donors, contrary to what might be predicted given the general importance attached to peer groups by the young. It follows that the family is the leading role model for young donors in terms of social responsibility and commitment.

Another motivational aspect is gratitude for transfusions received by relatives or friends and/or direct involvement in situations where transfusions were needed. Although only a small percentage of donors reported such direct personal involvement, accounts of personal experience are a key element in blood donation promotion campaigns. Direct knowledge of someone requiring a transfusion or having benefited from one appears to be connected to a high level of commitment to donation; in fact, the more a donor knows about situations of need, the more they donate and the more they persuade others to become donors. In this study, about half of the sample knew someone who had received, or currently required, transfusions, and these donors made a higher number of donations. This finding appears to confirm the important link between donor and recipient (Ferguson, France, Abraham, Ditto, & Sheeran, 2007).

Therefore, it may be concluded that donors themselves are highly effective promoters of blood donation, in line with the results of earlier studies (Misje, Bosnes, Gåsdal, & Heier, 2005). However, most promotional campaigns continue to be targeted at non-donors.

The opportunity to periodically check one's own state of health is another important factor in choosing to donate blood, although it is usually not the first motive to be declared because it is perceived as dissonant with respect to altruism or the “helping others” ideal. In this study, it was mentioned by a sizeable minority of
donors and particularly by males. This finding provides further input for promotional campaigns, as suggested by earlier research (Glynn et al., 2003, 2006; Sanchez et al., 2001).

Essentially, when being a donor is not just limited to the physical act of donating blood but also involves maintaining a loyal commitment to the donation programme (by trying to recruit other people, talking about, and therefore heightening awareness of, donation in various life contexts), there is a significant increase in donor behavior and more generally, greater involvement in the entire donation process.

It is important to redefine the role of existing donors in blood donation campaigns. Given their proven efficacy in recruiting new donors, regular donors should be provided with targeted information to support and enhance their spontaneous recruitment efforts. In addition, information campaigns targeted at the general population should aim to highlight as much as possible the real-life situations where donated blood is needed and used.

Acknowledgments
Our heartfelt thanks to “AVIS Provinciale Bergamo”, whose staff assisted us in the distribution and collection of the questionnaires, and to Dr. Barbara Giussani for her complete trust.

References
Appendix 1. Questions included in the questionnaire

How many blood donations have you made in your life?
How many blood donations have you made in the last 12 months?
Why did you begin to donate blood?
Who convinced you to become a blood donor?

- Nobody
- My partner
- A friend
- A relative
- Avis
- My physician
- Other

Are you familiar with any celebrities endorsing the cause of blood donation?
Are you familiar with any slogans promoting blood donation?
Do you know anyone (relatives, friends, colleagues, neighbors) who needs or has needed a blood transfusion?
Do you talk about blood donation in your everyday life?
Have you ever tried to persuade someone to become a blood donor? If yes, how many people have you persuaded?