# DETERMINANTS OF BLOOD DONATION: A STUDY ON ORGANIZATIONAL SATISFACTION

Maura Pozzi, Caterina Gozzoli Daniela Marzana, Giovanni Aresi\*

ABSTRACT

The present research aims at investigating if motivations and social norms can determine satisfaction with organization – understood as an indicator of organizational well-being – in blood donation. Moreover, this study analyses the relations of organizational satisfaction on integration in the organization and identification with it in order to pursue research on prosocial behaviour volunteer retention. 2464 blood donors were contacted. The present work has important applicative implications as it can give guidance to blood donation organizations regarding factors determining attraction and maintenance of donors.

Keywords: Blood Donation, Organizational Satisfaction, Motivation to Give Blood. JEL Classification: D23, D24, D51, I00, I12, 115, I31, I38.

#### 1. INTRODUCTION

In Italy blood donors make up about 3% of the total population, or 4.6% of everyone who, aged between 18 and 65 years, can donate (Higher Institute of Health, 2015). If these numbers make it possible to reach self-sufficiency with respect to whole blood, the situation is different for the blood components (plasma, double red cells, platelets) that Italian hospitals are forced to buy from other countries. Moreover, it is necessary to take into account that during the summer months – for example, due to the spread of West Nile virus, which prevents donation – or in the event of an emergency – such as an earthquake, for example – situations of difficulty arise even for whole blood.

It is thus very important to understand the donation process and to grasp which factors can support donation. Some authors (Piliavin, 1990; Lucchini, 2005) claim that this process, taking its rightful place in the category of helping behaviors, is generated from the interaction of several variables and recommend identifying these variables as well as searching for interpretive models in order to understand

The authors would like to thank the anonymous referees for their helpful comments and suggestions.

<sup>\*</sup> Maura Pozzi, Caterina Gozzoli, Daniela Marzana, Giovanni Aresi, Department of Psychology, Università Cattolica del Sacro Cuore. Email: maura.pozzi@unicatt.it; caterina.gozzoli@unicatt.it; daniela.marzana@unicatt.it; giovanni.aresi@unicatt.it.

it. Among existing models, the most accredited and stable over time are Omoto and Snyder's Volunteer Process Model (Omoto and Snyder, 1995) and Godin and colleagues' Model (2005), which underscore in a particular way the importance, first, of motivations and satisfaction and, second, of social norms.

Furthermore, the Theory of Planned Behaviour used by Piliavin and collaborators in their work (Callero, Howard and Piliavin 1987) has been shown to be useful for understanding donation, although the variables that have gone into making up the model have undergone important changes over time – with the exception of role identity and norms – attesting to the importance of including more variables of an organizational nature.

These considerations are even more relevant in Italy as compared to other European countries in that blood donation takes place in our country mostly thanks to volunteer associations which, collaborating in an extensive and consolidated way with transfusion services, organize and guarantee donations. Among these organizations the oldest and most important is AVIS (Associazione Volontari Italiani Sangue), distributed in capillary fashion throughout Italy and engaged in promoting and supporting blood donation as well as in spreading a culture of solidarity.

Recent work carried out in the Italian context with AVIS donors (Alfieri, Saturni and Marta, 2013; Guiddi, 2013; Saturni and Marta, 2009) has confirmed the increasing importance of organizational variables in the donation process, in particular, satisfaction with the organization, integration in it, and identification with it.

The present work, therefore, aims to a) investigate the factors that determine satisfaction with blood donor organization – understood as an indicator of organizational well-being, considering the variables that the aforementioned models have identified as important predictors of this variable – motivations to donate and social norms supporting donation, and b) whether satisfaction can be linked to integration in the organization and identification with it – the latter factors thought to be determinant for donor retention.

# 2. OMOTO AND SNYDER'S VOLUNTEER PROCESS MODEL: MOTIVATIONS, SATISFACTION, INTEGRATION, AND IDENTIFICATION

The Volunteer Process Model (VPM; Omoto and Snyder, 1995; Omoto, Snyder and Martino, 2000; Snyder and Omoto, 1992) envisions three stages that are mutually interactive and consequential – antecedents, experience, and consequences – of volunteer action and three different levels of analysis – individual, organizational, and social. In the antecedents stage the researchers analyze personality characteristics, motivations, and the circumstances that can foster the choice to volunteer (Omoto and Snyder, 1995). In the experience stage the authors place the situations that can promote and support continuing engagement. In particular, they focus on the organizational variables that intervene in the volunteer's behavior: among these, satisfaction and integration in the group are particularly discriminant and significantly correlated with the duration of the voluntary action in a given or-

ganization. The third stage of the volunteer process, consequences, focuses on the effects of engagement, on an individual and collective level. Engagement in volunteerism, in fact, has effects not only on the individual who donates his/her voluntary action and on the person who receives it, but also on the context in which they interact.

The model's theoretical framework of reference is the functionalist approach (Omoto and Snyder, 1995; Omoto, Snyder and Martino, 2000), according to which volunteerism is able to meet some of the needs of people who engage in it. These needs correspond to motivations that spur people to engage themselves. Generally, the term motivation is understood to mean the process of activating the individual in order to reach a goal, within a given and specific organization. However, people who engage in voluntary activities are driven by multiple motivations at the same time, and not only by one. This approach reveals that volunteerism serves different functions for any one person who may possess different motivations from those held by other people. The motivations underlying voluntary actions may, in turn, be different depending on the function volunteerism has for those who undertake this commitment. The authors identify six related motivations (Clary et al., 1998; Omoto and Snyder, 1995; Omoto, Snyder and Martino, 2000), which can be synthesized as follows:

- a) Social: people engage in activities of volunteerism because they wish to make new acquaintances and thus enlarge their relational sphere;
- b) Values: people engage in activities of volunteerism because within the associations in which they participate, they can share and experience values that are fundamentally important for them;
- c) Self-enhancement: people engage in activities of volunteerism because this allows them to grow and develop, thus allowing for the promotion of selfesteem and self-acceptance.
- d) Ego-protection: people engage in activities of volunteerism, on the one hand, in order to reduce guilty feelings due to their sense of being more fortunate than others and, on the other hand, to solve personal problems by shifting attention to the people who benefit from their service;
- e) Understanding: people are motivated to carry out activities of volunteerism because they believe that through them they can acquire new skills or have the possibility of trying out other skills that are not put into practice in other spheres of their lives;
- f) Career: people hope that through participation in voluntary activities and groups, they can increase their possibilities of finding a new job.

Several studies that have applied this model to blood donation reveal that these motivations are not constant, but differentiate themselves based on the life cycle phase in which the donors find themselves, gender, historical period etc. (Alfieri et al., 2016; Guiddi et al., 2014; Stukas, Snyder and Clary, 1999).

In the VPM the duration of the voluntary experience depends on satisfaction and also on integration, even if there does not appear to be any link between these two variables. In the integrated Model of volunteerism proposed by Marta and Pozzi (2008), satisfaction, integration, and identification are situated as antecedents to the maintenance of engagement. Different studies (Healy, 2000, 2006; Thomson et al., 2002; Schreiber et al., 2006) have shown that different elements of the organization connected to the donation act can have a considerable impact on donor engagement and on the decision to continue to donate: among these, satisfaction has a strong influence.

#### 3. GODIN'S MODEL AND NORMS

To understand donation in a specific way, Godin and collaborators (2005) investigated the factors that explain the intention to give blood among the general population. The researchers identified two groups of variables connected to the donation gesture: personal variables and organizational-contextual variables. Among the personal variables, a particular role is played by subjective Norms, that is, the level of influence the opinions of "other referents" (parents, friends, partners, colleagues etc.) have on a person's behavior.

Godin et al. include environmental and contextual characteristics among the organizational-contextual variables, both from the standpoint of their importance for the ability to predict personal variables and from the standpoint of how they impact the perception of satisfaction the donor experiences for the donation gesture. The role of satisfaction is seen to be crucial in its capacity to discriminate the duration of a behavior.

One of the limitations of Godin et al.'s model (2005), however, is that it does not consider the role of satisfaction perceived with respect to the organization, which, with reference to Rothman's (2000) theoretical proposals, was considered a fundamental variable precisely for predicting donor behavior.

## 4. THE PRESENT RESEARCH

Analysis of the literature in the area of blood donation highlights both the role of individual factors (Alfieri et al., 2016; Guiddi et al., 2015; Stukas, Snyder and Clary, 1999) as well as structural factors (Healy, 2006; Chamla, Leland and Walsh, 2006; Schreiber, Schlumpf and Glynn, 2006; Masser et al., 2008) for facilitating the blood donation gesture.

In the present work we propose to probe, first of all, whether personal variables – motivations and social norms – can influence satisfaction with the organization (understood as an indicator of organizational well-being) and, secondly, whether the latter, differently from models that see identification and integration in the organization having similar weight, can be a predictor.

Organizational well-being is commonly understood as the organization's capacity to promote and maintain the physical, psychological, and social well-being of workers of all levels and roles. Studies and research on organizations have shown

that the most efficient structures are those with satisfied employees and a serene and participatory "internal climate".

The concept of organizational well-being, therefore, makes reference to the way in which people live their relationship with the organization in which they operate; the more a person feels that he/she belongs to the organization, because of sharing its values, practices, and languages, the more he/she feels satisfied and thus increases well-being.

In the present work we hypothesize that:

- 1. Omoto and Snyder's six motivations and subjective norms relative to parents, partners, friends, and colleagues are positive predictors of satisfaction with the organization;
- 2. Satisfaction with the organization is positively predicted by integration in the organization and identification with it.

### 4.1. Method

# 4.1.1. Participants and recruitment

Two thousand four hundred sixty-four blood donors from three AVIS centers in the north of Italy participated in the study (49.3% in Cremona, 27.1% in Asti, and 23.6% in Varese). The age range of participants is in keeping with Italian laws on donation that allow only adults of legal age and not over 65 years to donate (Range: 18-65 years; M = 38.57; SD = 10.03). The mean number of donations carried out turns out to be 27.84 (Range 1-150; SD = 24.92). 65.8% of participants are male.

49.3% reported having an educational qualification of high school diploma, 24.2% a Master's degree, 17.7% a middle school diploma or lower, 5.6% a Bachelor's degree, and 3.5% responded "other".

About half of the sample is married (49.1%), 41.7% are single or never married, 3.0% are separated, and 6.1% responded "other". In any case, 80.2% reported being in a relationship at the time of completing the questionnaire.

81.9% reported working, 7.6% reported being a student, 4.0% reported simultaneously working and studying, 3.3% are unemployed, 0.4% are pensioners, and the remaining 2.8% responded "other".

Each participant was asked to complete a self-report questionnaire in the waiting room of many blood donation centers located in the north of Italy. The questionnaire was administered by several appropriately trained volunteers. The volunteers explained to the donors that the questionnaire was anonymous, that participation would be voluntary and uncompensated, and that the data provided would be analyzed in aggregate for the sole purpose of research.

#### 4.1.2. Instruments

The self-report questionnaire was comprised of socio-demographic variables and of instruments described below.

Socio-demographic variables. Participants were asked about their age, gender, educational qualification, and activity.

Satisfaction with organization. To investigate satisfaction with AVIS, a dimension of Marta and Pozzi's (2008) scale of satisfaction in non-profit organizations, adapted to the AVIS organization, was used. It consists of 6 items ("I am satisfied with the friendly climate that exists in AVIS"), to which respondents are asked to rate their agreement on a scale of 1 (= Completely disagree) to 4 (= Completely agree).

Motivations to donate. To investigate and distinguish the motivations underlying the act of donation, the Voluntary Function Inventory (Clary et al., 1998; Omoto and Snyder, 1995) was used, in an ad hoc adaptation to blood donation. Donors reported how important each of five different motivations was to them in making their decision to be a blood donor. Motive importance was assessed with a 30-item inventory consisting of five separate subscales. Each subscale consisted of five items rated on a 5-point scale (1 = not at all important, 5 = extremely important). The six motivation subscales were Values (e.g. "Because of my personal values, convictions, and beliefs"), Understanding (e.g. "I can learn how to deal with a variety of people"), Ego protection (e.g. "No matter how bad I have been feeling, giving blood helps me to forget about it"), Social (e.g. People I'm close to want me to give blood"), Career (e.g. "Giving blood allows me to explore different career options") and self-Enhancement (e.g. "To feel better about myself").

Social norms. To investigate respondents' perceptions regarding the support and approval of parents, friends, partners (if they have one), and colleagues/classmates, a scale built ad hoc on the basis of Cartwright and Zander's (1968) theorizations on group norms was administered. This scale is composed of 16 items (4 for each relationship type, e.g. "My parent(s), friends, partner, colleagues or classmates approve of my involvement in AVIS") to which respondents are asked to rate the degree of their agreement with each statement on a scale of 1 (= Completely disagree) to 4 (= Completely agree).

Integration with the organization. It was assessed through an ad hoc single question about the degree of integration perceived by subjects with their organization. Respondents had to indicate their agreement on a 5-point scale (from 1 = not at all to 5 = very much).

Identification with the organization. It was assessed through an ad hoc single question about the degree of identification perceived by subjects with their organization. Respondents had to indicate their agreement on a 5-point scale (from 1 = not at all to 5 = very much).

# 4.2. Data Analysis

To achieve our pre-set objectives, we carried out three multiple linear regressions. In the first one, the dependent variable (DV) is satisfaction with AVIS and the indipendent variable (IV) are motivations to donate and social norms. In the

second and third ones, the DV is satisfaction with AVIS and the IV's are, respectively, integration and identification.

## 4.3. Results

In Table 1 the descriptive analyses, correlations, and Cronbach's alphas of the instrument used are presented.

42\*\* .57\* 1. Satisfaction with Avis .27\* 2.82 .71 .50\* .51\* .57\*\* 29\* .36\* .28\*\* 29\* .65\* .60\* .53\*\* .36\*\* 2. Social motivation 58\* .43\*\* .34\* .54\* .59\* .39\*\* .39\* .48\* .38\* 2.96 .83 .38\*\* .55\*\* .27\*\* 3. Values Motivation .19\* .54\* .34\* .35\*\* 3.48 .76 .26\* .32\* .38\* 4. Ego-Protection .65\* .29 .28\* 1.93 .89 .64 .71 .20\* .20\* .27 .31 Motivation 5. Self-Enhancement .37\*\* 74\* .25\* .33\* .44\* .35\* .22 2.95 1.0 .41\* Motivation 6. Career Motivation .25\*\* .21\*\* .22\* 1.54 .71 .56\*\* .16\*\* .23\*\* .23\* 7. Understanding 2.43 .94 .36 .28 .26 .33\* .43 .40\* Motivation 8. Norms Friends .44\* .43\* .57\* .31\* 2.61 .74 .31\* 9. Norms Parents 34\* .22\* 2.40 .77 .39\* .24\* 10. Norms Partner .32\* 19\* .20\*\* 2.63 .80

Table 1. - Correlations and Cronbach's alphas of the instrument

5

10 | 11 | 12 | 13

.24\*\* .23\*

.72 .73

.74\*\*

2

M SD

2.63 .98

3.25 .85

3.10 .94

.89 | .76 | .74 | .85 | .83 | .84 | .85

Notes: na = not applicable

11. Norms Colleagues/

Classmates

12. Identification

13. Integration

Cronbach's Alpha

Table 2 shows the results of the multiple linear regression in which the DV is satisfaction with AVIS and the IV's are the motivations that spur people to donate blood and social norms. As regards the former, social motivations, those related to values, growth and understanding turn out to be statistically significant; as regards the social norms, instead, friends, parents, and one's partner turn out to be statistically significant. The variances explained (R<sup>2</sup>) is .44.

<sup>\*\*</sup> p <.01

	E.S.	ß	t	p
(Constant)	.07		10.43	.00
Social Motivation	.02	.11	3.99	.00
Value Motivation	.02	.19	7.55	.00
Protection Motivation	.02	05	-1.65	.09
Self-Enhancement Motivation	.02	.22	7.31	.00
Career Motivation	.02	01	69	.49
Understanding Motivation	.02	.25	7.72	.00
Norms Friends	.02	.05	2.05	.04
Norms Parents	.02	.04	2.30	.02
Norms Partner	.01	.04	1.99	.04
Norms Colleagues/Classmates	.01	03	-1.41	.15

Table 2. – Results of the multiple linear regression in which the DV is satisfaction with AVIS and the IV's are the motivations and social norms

Table 3 shows the results of the simple linear regression in which the DV is integration and the IV is satisfaction with AVIS, whose relationship turns out to be statistically significant. The variances explained (R<sup>2</sup>) is .37.

Table 3. – Results of the simple linear regression in which the DV is integration and the IV is satisfaction with the organization

	E.S.	ß	t	p
(Constant)	.06		13.14	.00
Satisfaction with Avis	.02	.60	35.82	.00

Finally, Table 4 shows the results of the simple linear regression in which the DV is identification and the IV is satisfaction with AVIS. Also, in this case the relationship turns out to be statistically significant. The variances explained  $(R^2)$  is .43.

Table 4. – Results of the simple linear regression in which the DV is identification and the IV is satisfaction with the organization

	E.S.	ß	t	p
(Constant)	.05		18.91	.00
Satisfaction with Avis	.01	.65	40.99	.00

#### 5. DISCUSSION AND CONCLUSIONS

The present research aimed to verify: first, the links between Omoto and Snyder's six motivations and subjective norms relative to parents, partners, friends and colleagues and satisfaction with the organization; and, second, the link between satisfaction with the organization in and identification with the organization in a group of blood donors belonging to AVIS.

The analyses reveal that social motivations and those of values, understanding and self-enhancement are linked to satisfaction with the organization while the motivations of ego protection and career are not.

These results, read in light of Omoto and Snyder's functionalist approach (1995), show that whenever donation and the associative life of AVIS allow people to reach a goal such as: expressing a humanitarian interest in others (values); putting into practice abilities, capacities, and knowledge that would otherwise remain unexpressed (understanding); developing meaningful relationships with others (social); and using positive ego resources to increase trust in oneself and self-esteem (self-enhancement), donors feel satisfied, probably because they think that a non-profit association such as AVIS can and should have these aspects in its mission or, at least, as its goals.

On the other hand, the possibility of deriving advantage for one's career from the donation activity (career) and of protecting the ego from feelings of guilt caused by sensing that one is more fortunate than others or to distract oneself from one's problems (protection) do not turn out to be influential. We can hypothesize that donors do not see these two functions as being important for an association such as AVIS, which has as its goal not only blood donation, but also the spread of a culture of solidarity.

The findings also show the importance of approval and, in consequence, of support by the people with whom the donor has close relationships – friends, parents, and partners – for developing satisfaction with AVIS. Less important are the people with whom the donor has developed perhaps less meaningful relationships such as colleagues and classmates. It is evident here that a personal choice such as that of donating blood is rooted in a relational fabric – family, marital, and friendship – which, by promoting satisfaction with the donation act, fosters and supports the maintenance of the donor's engagement. As Wilson (2000) clearly demonstrated, the choices of volunteers, including of donors, are always relational decisions: for example, if a husband or a wife can devote him or herself to volunteerism, it is because the partner approves of and supports this choice.

Finally, the present work shows how important satisfaction with the organization one belongs to is for developing integration and identification, two crucial factors for donor retention. This study also has some limitations. In the first place, all the participants reside in the north of Italy: it could be interesting to verify the durability of these findings in other areas of Italy as well. In the second place, the work does not have a longitudinal nature: it would be important to carry out a follow-up study in a year to verify whether these variables have determined donor retention.

Several future developments of this work are possible and recommended, such as, for example, the analysis of the data by gender and generation, in consideration of the fact that the participant group encompasses a broad spectrum of ages. We know, in fact, that motivational configuration varies both in relation to the volunteer's personal history and to his/her age (Guiddi et al., 2015; Marzana, Marta and Pozzi, 2012; Marta et al., 2014).

In conclusion, the present work has important applicative implications as it can give guidance to blood donation organizations regarding factors determining attraction and maintenance of donors over time as well as possible strategies for recruitment of young people who, understanding the importance of this gesture, may be drawn to the process of blood donation (Alfieri et al., 2013; Zito et al., 2012).

#### REFERENCES

Alfieri S., Saturni V., Marta E. (2013). Looking to the future by acting on the present. Intention to donate blood and risk behavior: a research on adolescents. *Asian Journal of Transfusion Science*, 7, 2, 130-134. DOI: 10.4103/0973-6247.115573

Alfieri S., Guiddi P., Saturni V., Marta E. (2016). Economic Crisis and Blood Donation: How are Donors' Motivations Changing? *Transfusion and Apheresis Science*. DOI: 10.1016/j.transci.2016.03.001

Callero P.L., Howard J.A., Piliavin J.A. (1987). Helping behavior as role behavior: Disclosing social structure and history in the analysis of pro-social action. *Social Psychology Ouarterly*, **50**, 247-256, DOI: 10.2307/2786825

Chamla J.H., Leland L.S., Walsh K. (2006). Eliciting repeat blood donations: Tell early career donors why their blood type is special and more will give again. *Vox Sanguinis*, **90**, 302-307. DOI: 10.1111/j.1423-0410.2006.00756.x

Clary E.G., Snyder M., Ridge R.D., Copeland J., Stukas A., Haugen J. (1998). Understanding and assessing the motivations of volunteers: A functional approach. *Journal of Personality and Social Psychology*, **74**, 1516-1530. http://dx.doi.org/10.1037/0022-3514.74.-6.1516

Godin G., Sheeran P., Conner M., Germain M., Blondeau D., Gagné C., Beaulieu D., Naccache H. (2005). Factors explaining the intention to give blood among the general population. *Vox Sanguinis*, **89**, 140-149

Guiddi P. (2013). Quando uno vale due. La Scuola, Brescia

Guiddi P., Alfieri S., Marta E., Saturni V. (2015). New donors, loyal donors, and retained donors: Which motivations sustain blood donation? *Transfusion and Apheresis Science*, **52**(3), 339-344

Healy K. (2000). Embedded Altruism: Blood Collection Regimes and the European Union's Donor Population. *American Journal of Sociology*, 105, **6**, 1633-1657

Healy K. (2006). Last best gift: Altruism and the market for human blood and organs. University of Chicago Press, Chicago

Istituto Superiore di Sanità (2015). Attività del sistema trasfusionale italiano, 2012. Rapporti ISTISAN, 15/23, Roma

Lucchini M. (2005). Doni di vita. La Nuova Italia, Parma

Marta E., Pozzi M. (2008). Young people and volunteerism: A model of sustained volunteerism during the transition to adulthood. *Journal of Adult Development*, 15, 1, 35-46. DOI: 10.1007/s10804-007-9033-4

Marta E., Manzi C., Pozzi M., Vignoles V. (2014). Identity and the theory of planned behavior: Predicting maintenance of volunteering after three years. *Journal of Social Psychology*, 154, **3**, 198-207. DOI: 10.1080/00224545.2014.881769

Marzana D., Marta E., Pozzi M. (2012). Young Adults and Civic Behavior: The Psychosocial Variables Determining It. In E. Marta, F. Cristini (Eds). Journal of Prevention & Intervention in the Community, Special Issue "Civic Involvement & Volunteerism in Italy", Routledge-Taylor Francis Group, 49-63. DOI: 10.1080/10852352.2012.633067

Masser B.M., White K.M., Hyde M.K., Terry D.J. (2008). The Psychology of Blood Donation: Current Research and Future Directions. *Transfusion Medicine Review*, 22, 3, 215-233. DOI: 10.1159/000365016

Omoto A.M., Snyder M. (1995). Sustained Helping Without Obligation: Motivation, Longevity of Service, and Perceived Attitude Change Among Aids Volunteers. *Journal of Personality and Social Psychology*, **68**, 671-686. http://dx.doi.org/10.1037/0022-3514.68.4.671

Omoto A.M., Snyder M., Martino S.C. (2000). Volunteerism and the life course: Investigating age-related agendas for action. *Basic and Applied Social Psychology*, **22**, 181-198

Piliavin J.A. (1990). Why do they give the gift of life? A review of research on blood donors since 1977. *Transfusion*, 30, 5, 444-459

Saturni E., Marta E. (Eds) (2009). In vena di solidarietà. I mille volti della donazione in Avis. Franco Angeli, Milano

Schreiber G.B., Schlumpf K.S., Glynn S.A., Wright D.J., Tu Y., King M.R., Higgins M.J., Kessler D., Gilcher R., Nass C.C., Guiltinan A.M. (2006). Convenience, the bane of our existence, and other barriers to donating. *Transfusion*, 46, 4, 545-553

Stukas A.A., Snyder M., Clary E.G. (1999). The effects of "mandatory volunteerism" on intentions to volunteer. *Psychological Science*, 10, **1**, 59-64. DOI: 10.1111/1467-9280.-00107

Thomson R.A., Bethel J., Lo A.Y., Ownby H.E., Nass C.C., Williams A.E. (2002). Retention of "safe" blood donors. The Retrovirus Epidemiology Donor Study. *Transfusion*, 38, 4, 359-367

Wilson J. (2000). Volunteering. Annual Review of Sociology, 26, 215-240

Zito E., Alfieri S., Cremonesi G., Marconi M., Saturni V. (2012). Blood donation from adolescents point of view. *International Society of Blood Transfusion (ISBT) Science Series Special Issues*, 7, 1, 230-234. DOI: 10.1111/j.1751-2824.2012.01590.x