

**MOTIVATIONAL ASPECTS IN BLOOD DONATION:
An Analysis under the Perspective of Marketing Theories**

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ABSTRACT

The demand for blood donation in Brazil requires the Federal Government to increase to 3% in 2014 the current 2% of the population that has a habit of giving. This article focused on social marketing as a set of principles and technical support to the actions of promotion of blood donations. The quantitative analysis findings provided information about the attributes that shape the experiential and motivational aspects of behavior of individuals in terms of the accession process to the blood donation by regular donors and potential.

Keywords: *blood donation; motivation; marketing; behavior*

1 INTRODUCTION

The demand for blood donation has increased exponentially compared to the fickleness of the supply of donors, including Brazil. The Federal Government aims to increase to 3% by 2014 the current 2% of the population that has a habit of donating it, according to the World Health Organization (WHO), which recommends the percentage of 3% to 5% as the ideal target for the necessary store of blood supplies (World Health Organization, 2013).

Blood donation, under Brazilian law, is a voluntary act, which must happen anonymously. So it is not allowed any type of compensation in exchange for donated blood (Brazil, 2011). Thus, blood just can be obtained by giving a human to another, being it, irreplaceable (Hemominas Foundation, 2013a).

The World Health Organization (2013) observes that the demand for blood donation outstripped supply, mainly due to the increase in life expectancy and the consequent multiplication of cases of chronic diseases associated with aging, including various types of cancer whose treatment requires blood. Other demands blood are due to cardiovascular surgery, transplants, bleeding in the process of childbirth, traffic accidents and blood disorders such as sickle cell, anemia and hemophilia, which patients need to constantly receive transfusion of blood and its blood products.

In this context, it is believed that a trans disciplinary field of research, involving knowledge from the fields of social sciences and humanities, and the social marketing (Andreasen, 1994; Vaz, 2003; Donovan; Henley, 2010; Weinreich, 2010; Kotler; Lee, 2011; Kohran, 2013; Lefbvre, 2013) may contribute to that public organizations to submit projects and action plans that aim to enhance the future donor funding process and the recovery of blood donors who stopped giving and still, the loyalty of regular donors.

Social marketing is regarded by authors as Andreasen (1994), Donovan and Henley (2010) and Weinreich (2010), as a new perspective of marketing, consisting of principles and techniques that can support the actions of promotion of blood donations. This different conception from traditional marketing (or commercial) lies in the

fact that the latter uses techniques to guide the company to promote the sale of a product or providing a service that meets the wishes and needs of the consumer, while the social marketing has principles and techniques that are used to promote a social cause that can offer general well-being for society.

Voluntary blood donors justify their attitude to donate in several ways, from feelings connected with compassion, moral obligation, altruism and need to help a loved one, until curiosity to check what their blood type, opportunity to make a battery of tests and interest to obtain a medical certificate to fertilize a labor shortage (Gontijo, 2007).

Given the arguments presented initially, combined with the understanding that the voluntary blood donors justify their attitude to donate in several reasons emerges an interesting question: what are the main aspects that motivate the individual to donate blood?

To answer this question, the present study aims to identify factors related to adherence to blood donation by regular donors and potential residents in the state of Minas Gerais.

This paper is organized into five sections. The first presents the matter and the overall goal. The second section proceeds to the characterization of the setting in which the study is inserted, consisting of the overall presentation of the organizational environment confined to hematology and transfusion medicine procedures in the state of Minas Gerais and in the discussion of the characteristics and fundamental aspects of the Blood Cycle . The third section develops the theoretical foundation that supports the search arguments. Social marketing, motivation and attitude are worked through this section. In the fourth section, it is described the methodological arrangement of the research, which was guided by the quantitative approach, descriptive, through a field study. In the fifth section proceeds the presentation and analysis of results. In the sixth section, formulates the final considerations, then the references.

2 SCENARIO CHARACTERIZATION

This section presents the organizational structure of a public body responsible for health related to hematology and blood therapy in Minas Gerais and features stages of the blood cycle for the blood donation process.

The Hematology and Hemateraphy Foundation Center of Minas Gerais (Hemominas Foundation) is the institution responsible for health related to hematology and blood therapy in the state of Minas Gerais. The Hemorrede in the Hemominas Foundation is structured by 23 hemotherapeutic units and three outposts external collection. In order to expand from 91% to 100% coverage of hemotherapeutic procedures linked to the Unified Health System (SUS), the Hemominas Foundation serves, via agreements, most health facilities of Minas Gerais, including public hospitals, charitable and individuals (Hemominas Foundation, 2013).

2.1 Blood cycle and types of donors

Every blood donation goes through a systematic process, called "Blood Cycle," which covers the donor procurement, awareness, registration, clinical screening, blood tests, blood collection, laboratory screening of blood samples, distribution and procedures transfusion (Brazil, 2001).

The donor funding comprises a set of activities to plan, execute, monitor and evaluate strategies to raise awareness and educate the population for voluntary, responsible and habitual donation.

Awareness is the stage in which the blood donors who attend the transfusion service for the first time, or those who do not donate more than two years will receive information about the whole process of donation and its importance.

Next step is to register as a donor, comprising a record with the applicant's identification data to the donation (Gontijo, 2010; Brazil, 2013c). After this stage, the volunteer is sent to the clinical screening stage in which the doctor will examine you for the candidate, in order to evaluate the clinical and epidemiological conditions and ensure that it does not show signs of being exposed to risk factors for diseases transmitted by blood. The clinical trial is a safe conduct that considers a period called "window period" in which laboratory tests are unable to detect the presence of donor diseases that can infect the recipient (Gontijo, 2010; Brazil, 2013c; Hemominas Foundation, 2013d , 2013f).

After the clinical trial begins their tests, which is basically an exam done with a candidate's drop of blood to make sure they are not anemic. In this procedure, weighing and measuring their body temperature are required (Gontijo, 2010; Hemominas Foundation, 2013f; Brazil, 2013c). The collection of blood, which is called "whole blood", is the next step, in which the donor donates approximately 450 ml. of blood. The whole blood collected is composed

of a liquid part called "plasma", consisting of water, salts, vitamins, and clotting factors, which are mixed in the solid parts, erythrocytes, leukocytes and platelets. Thus, the total blood stem the plasma, red blood cells and platelets, which are blood components that, when processed, each of which has a hemotherapeutic function (Gontijo, 2010; Hemominas Foundation, 2013b; Brazil, 2013c).

After collection, blood samples collected pass through laboratory screening, which is made by serological tests, nucleic acid testing (NAT) and hematologic immune tests. The blood products are ready to be used and are preserved until the transfusion service make the distribution of blood to a health institution that will transfuse to individuals who, as of the donated blood recipients are patients who require blood transfusion or their blood products as medicine to treat their health (Gontijo, 2010; Brazil, 2013c; Hemominas Foundation, 2013E). During the process of blood Cycle, transfusion services are based on legal criteria to different classifications of the donor, which can range from: Fit; definitive unfit; unfit for an uncertain period; temporary unfit; repetition; first time; and sporadic (Brazil, 2011), as Table 1.

Table 1 – Classification of the blood donors

Classification of donors	DEFINITION
Fit	Donor whose personal data, clinical, laboratory and epidemiological conditions are in accordance with the acceptance criteria applicable to blood donation.
Denitive unfit	Donor who can never donate blood to someone else. In some cases, they can perform autologous donation.
Unfit for an uncertain period	Donor is unable to donate blood to another person for an indefinite period of time based on the current regulations. They can perform autologous donation.
Temporary unfit	Donor who is unable to donate blood for other person for a certain period of time. In some cases can perform autologous donation.
Repetition	Donor who performs two or more donations in the period of 12 months.
First time	It is the individual who donates the first time in the transfusion service.
Sporadic	It is the individual who donated just once in 12 months.

Source: compiled from the MS Order no. 1353 of 13 June 2011 (BRAZIL, 2011).

The next section presents the theoretical foundations that support the research arguments.

3 LITERATURE REVISION

In this section, we focus mainly on social marketing, conceived as a set of concepts and techniques designed to influence motivation, attitude and voluntary behavior of people in order to improve the social well-being.

3.1 Social marketing

In the mid-1970s, as a way to mitigate the negative effects of global crises, internal and external wars, urban conflicts and many kinds of social problems that occurred at the time, emerged in public managers concern for the citizens' to various social causes. The state had to intervene in society to fill the gaps left by the market, which could no longer be responsible for the solution of such problems. It is emphasized that it was around this panorama emerged social marketing expression, formulated by Philip Kotler, co-authored with Gerald Zaltman (Andreasen, 1994; Vaz, 2003; Donovan; Henley, 2010; Weinreich, 2010).

To Andreasen (1994), social marketing originated from the need to expand the concept of consumer behavior and marketing, to cover something unconventional, such as promoting blood donations, which, though it seemed to be a goal marketing, there were goods or services to be offered through monetary payment. Social marketing is presented as an adaptation of commercial marketing for programs designed to influence the voluntary behavior of target audiences to improve their social well-being of both individuals and the society, and not the organization itself.

An elementary difference of social marketing is that this, unlike commercial marketing, has no profit goals (Donovan, 2010). This should provide beneficial relationships for both parts, for example, for government and for the public; involves the exchange of values, which, in general, are not financial, as satisfaction, health, aid and benefits to quality of life and general well-being (Lefbvre, 2013); and requires engagement of both parts, sender and receiver, so you can achieve the stipulated goals (Kohran, 2013).

Social marketing is a gathering effort to influence behaviors that will improve the social areas of public health, safety, environment and community development. The application of the techniques of this type of marketing can be useful in many social programs, such as: reducing child mortality rate, cessation of tobacco use, the spread of

AIDS containment and reduction of garbage dump on the streets (Weinreich, 2010; Kotler; Lee, 2011; Lefbvre, 2013).

The professionals responsible for the development of social marketing strategies should investigate the root of a social problem and identify centers of resistance to change, to then use mechanisms which help to change the company's behavior, questioning or taking people to review their values, beliefs and attitudes, to join a social cause (Kotler; Lee, 2011; Vaz, 2003).

The professional social marketing have a mission to sell behaviors, influencing the target audience to be in one of the four attitudes: accept a new behavior; reject a potentially undesirable behavior; modify a current behavior; and abandon an old undesirable habit. Thus, unlike commercial marketing, in which competition between enterprises, products or services, aimed at the wealth of entrepreneurs, social marketing competition happens between a current human behavior and a desired behavior, oriented to a public benefit. The benefit of a sale in social marketing is the well-being of an individual (Kotler; Lee, 2011).

The objectives of behavior, knowledge and belief considered in social marketing are logically related to the stimulus caused by the motivation and attitude about people's behavior, discussed in the following section.

3.2 *Motivation and Attitude*

According to Mowen and Minor (2003, p. 90) "motivation refers to an altered state of a person, which leads to a goal oriented behavior." Engel, Blackwell and Miniard (2000) state that:

"A person may be motivated when their system is awakened, activated and the behavior is directed to the desired goal. The challenge of marketing is to discover the main motivating influences and design strategies that activate and satisfy the felt needs (Engel, Blackwell; Miniard, 2000, p 266)."

It his turn, there are several definitions for attitude in the psychological literature. According to the basic concept proposed by psychologists and researchers Louis Leon Thurstone and Martin Fishbein, the attitude is the amount of affection or favorable or unfavorable feelings of a person in relation to an object, which, in turn, can be related to products, people, companies and things, regarding in which individuals have opinions and attitudes (Mowen; Minor, 2003; Peter; Olson, 2009).

Notwithstanding the importance of several models developed to analyze attitude, we highlighted three models that consider the behavioral intentions of individuals:

a) Theory of Reasoned Action (Theory of the Thought Action, Theory of the fundamental action or the Theory of Planned Behavior).

Developed by Fishbein, the Reasoned Action Theory that is relevant to complex behaviors and volunteers, assumes that people consciously evaluate the consequences of their behaviors and rationally choose those most desirable. According to the Theory of Reasoned Action, the individual acts influenced by their beliefs about the benefits and costs arising from their behavior and the perceived social norms, that is, by the opinions of their reference groups (Mowen; Minor, 2003; Ramalho, 2006; Sousa, 2007; Peter; Olson, 2009; Kotler; Lee, 2011).

b) Social Cognitive Theory (Theory of Social Learning, Cognitive Theory of vicarious learning or Theory of Learning by modeling-observation).

Authored by psychologist Albert Bandura, the social cognitive theory refers to the process by which people develop a behavior pattern by learning specific skills and observation of social norms, that is, the actions of people in their reference groups and their consequences. The process can be developed by any person or group of people that influences significantly an individual's behavior, providing standards, norms and values that can become the dominant perspective of how a person thinks and behaves (Andreasen, 1995; Engel, Blackwell, Miniard, 2000; Sheth, Mittal; Newman, 2001; Solomon, 2002; Mowen; Minor, 2003; Samara; Morsch, 2005; Peter; Olson, 2009; Kotler; Lee, 2011).

Andreasen (1995) states that learning of new specific behaviors has three components: the sequential approach; repetition; and the effort. The sequential approach recognizes that individuals do not change behavior instantly and sometimes prefer to change gradually. Next, in order to become a permanent behavior, encourages the practice and adopt strategies to strengthen the adopted behavior. According to Solomon (2002), learning, itself, produces a permanent change in individual behavior, caused by experience and observation. Knowledge about the world is reviewed constantly, to the extent that this individual is exposed to new stimuli, which allows you to modify their behavior in similar situations and later.

c) Exchange Theory.

This model postulates that the exchange takes place through a process that involves not only the purchase of tangible goods or services, but also the transfer of something intangible, real or symbolic. The exchange can occur between two or more social actors and the beneficiary of the exchange can be a third part, such as society, that the provision is consistent with the characteristics of social marketing (Mowen; Minor, 2003; Kotler; Lee, 2011).

4 METODOLOGY

In order to identify factors related to adherence to blood donation by regular donors, it was performed a descriptive field research to raise opinions, attitudes and beliefs of the sampled individuals, following a quantitative approach to measuring and analyzing the causal relationships between the investigated variables (Denzin; Lincoln, 2006).

4.1 Collection of data and questionnaire presentation

In the field research, primary data gathering was accomplished by means of a survey. The survey questions were developed based on the following constructs related to the blood donation process: donation campaigns, experience in giving, motivation and attitude.

Before to applying it, the questionnaire was pre-tested in order to investigate possible inconsistencies and ensure clear understanding (GIL, 1999). After the analysis and necessary adaptations, the final questionnaire consisted of 37 Likert scale questions, beyond social demographic issues and questions about opinion and experience of the interviewers about the blood donation process.

The survey sample was selected by a non-probability sampling method knowledge as 'snowball', which provides an opportunity to the researcher to choose a random group of respondents who, successively, disclose and refer to search for other respondents (Malhotra, 2012). The sample size was defined according to the multivariate technique of factor analysis.

According to Hair et al. (2005b), the ideal is to have at least five observations for each variable analyzed in which ten is a greater number. Thus, it was established a minimum sample of 370 questionnaires collected, considering the 37 questions of Likert scale.

The unit of analysis was limited to the state of Minas Gerais, and from the 549 answered questionnaires, 421 were valid for analysis. The sample was approached at a single point over time (Hair JR et al, 2005a; Collis; Hussey, 2005; Sousa, 2007), comprising the collection period of September and October 2013.

4.2 Technique and method of data analysis

The data analysis was developed by means of descriptive statistics and techniques of factor analysis. Factor analysis allowed exploring patterns of relations between the analyzed variables, investigating those who contributed more or less to explain certain behaviors by defining a set of common latent dimensions, calls "factors" (Hair JR et al, 2005b; Roesch, 2005). According to pre-test questionnaire analysis, the Likert scale questions were ranged from 1 (strongly Agree) to 7 (Strongly Disagree). The descriptive measures and the factor analysis were performed employing the statistical software SPSS (Statistical Package for Social Science).

5 PRESENTATION AND ANALYSIS OF THE RESULTS

This section presents the results of descriptive statistics, donor identification and the factor analysis model.

5.1 Results of the descriptive statistic

The final sample consisted of 421 questionnaires with data of gender, age, marital status, education, color, religion, salary range and family income.

Regarding gender, the sample was composed by 270 women (64.1%) and 151 men (35.9%). It was observed that 52.9% of the sample is between 18 and 30 years of age; 35.9% between 31 and 50 years; 10.5% between 51 to 60 years; and 0.7%, 16 or 17 years. Half of the sample (53.7%) is made of singles, followed by married and divorced. The minority falls into the category of widowed or other.

As for education, 39% of the sample attended the 2nd degree complete or incomplete; 25% complete or incomplete 3rd degree; 25% attended Masters and / or PhD; and 11%, specialization courses. None of those interviewed claimed to have attended only the 1st degree.

It was found that 52% of interviewers consider themselves white; 36.6%, browns; 9.7% were black; 1.2% yellow; and 0.5% Indians. As for religion, 54.4% consider themselves Catholics; 19.5%, evangelical; and 9.5%, spiritualists. Consider themselves atheists, 2.6%. Do not follow religion, 9.7%. One considered himself as

Jehovah's Witnesses. The survey did not identify Buddhists and muslims and 4.0% said they follow other religions. The stratification of individual income and family income was prepared in accordance with the value of the minimum wage in 2013, that is, US \$ 678.00, according to results presented in Table 1.

Table 1 – Sample distribution by income

Salary range	Individual Income		Family Income	
	Nº	%	Nº	%
Not currently works / No income	47	11,2	15	3,6
Until R\$ 1.356,00	87	20,7	25	5,9
R\$ 1.357,00 to R\$ 3.390,00	173	41,1	123	29,2
R\$ 3.391,00 to R\$ 6.780,00	66	15,7	120	28,5
R\$ 6.781,00 to R\$ 10.170,00	31	7,4	77	18,3
R\$10.171,00 to R\$ 13.560,00	10	2,4	27	6,4
Above R\$ 13.561,00	7	1,7	31	7,4
Total	421	100	421	100

Source: Research data / elaborated by the authors.

5.2 Donor identification

In order to achieve the goals set for this research, questions were employed to gather information about knowledge and the experience of respondents concerning donation campaigns, experience in giving, motivation and attitude. In respect the variables related to "blood donation campaigns," 416 respondents (98.8%) said they had seen or heard some kind of campaign; 253 (60.1%) said they remember clearly the messages set; and 356 (85.6%) reported having seen the campaign on television. Other channels of communication were informed, such as: internet, radio, print media, schools, lectures, and word of mouth marketing campaigns by companies, by hospitals, churches and the Hemominas Foundation.

Referring to construct "experience blood donation" of 421 respondents, 162 (38.5%) have donated and 259 (61.5%) never donated. According to the classification of the type of donor, 39 (24.1%), have donated and are likely to be clinically classified in the category of "repeat donor"; and 123 (75.9%) in the category of "sporadic donor" or "donor first time." About the continuity of blood donation, 77 (44.5%) continued and 85 (49.1%) stopped.

When asked why they stopped donating blood, of the 85 respondents, 41.2% reported illness or health problem. This result evaluates that, depending on the case, these respondents can be classified clinically as "definitive unfit donor", "unfit indefinitely" or "temporary unfit". It was observed that 34.1% of respondents claimed to be not interested in donating; and 24.7%, justified to have suffered physical damage to donate, such as feeling sick or feel pain. A cross-sample analysis has been made to verify that the respondents who previously claimed to have stopped donating for lack of interest (29 people) would be willing to come back and of this total 24 (82.7%) said yes.

From the 259 respondents who have never donated blood, 12.6% justified not knowing if they can donate; 12.1% complained about difficulties to go to the place of donation; 11.9% believed to be unfit for donation; 11.2% reported being unfit for donation on the day of the donation; 9% said they forgot to donate; 8.6% are afraid of needle; 5.2% had never been asked to donate and therefore not motivated; and 8.2% gravitate toward pretext referring to the time required to donate; the fact that the donation is not remunerated; the unwillingness to donate; and, the following fears: to catch some disease, blood thickens, blood not be reset, to be anemic and lose weight. Respondents who stopped donating blood, or have never donated, were asked if they would be willing to return to donate and become a regular donor. From the 85 respondents who stopped donating and 259 ever donated, 86.4% and 75.3%, respectively, answered yes.

The construct of context "motivation", 162 respondents were asked to offer suggestions on what (s) principal (s) reason (s) that (s) led to donate blood for the first time. Between alleged reasons, 79% went to help a family member, friend or acquaintance; 64.86%, the possibility of respondents own need one day; 61.7%, the feeling of solidarity and charity; 50% to meet the appeal donation campaigns; and; 15.4% said they donate to know if they have any disease; for tests; to catch medium certificate; and for some type of tax, for example, the barracks or the company.

About the construct "attitude", a term that represents the amount of affection or favorable or unfavorable feeling of a person and that shapes their behavior in relation to an object (Engel, Blackwell, Miniard, 2000; Mowen; Minor, 2003; Peter; Olson, 2009), it is inferred that the act of donating blood promotes a positive attitude to donation because, in the search results predominant feelings about the feeling of accomplishment, (70.4%); joy, (44.4%); pleasure (30.2%); and felt important (29.6%). In relation to unfavorable feelings in donating blood, 17.9% of respondents have felt anxiety, fear, pain or irritation.

5.3 Presentation of the model of factorial analysis

The variable which presented the highest average value (4.79) was Q43 (People know the diseases that prevent blood donation), representing a mismatch situation. The lowest medium value (1.52) was found in Q39 variable (Donating blood is important because it can save lives), indicating a broad consensus agreement.

Kolmogorov-Smirnov and Shapiro-Wilk tests revealed asymmetric normality, that is, the absence of normality in the 5% level of significance, which does not represent problems in case of factorial analysis (Hair JR . et al. 2005b). Factor analysis was tested based on the Varimax orthogonal rotation, indicated to maintain a more constant pattern in Kaiser experiment (Hair JR et al, 2005b;.. Sousa, 2007; Field, 2009; Mesquita, 2010; Malhotra 2012).

The common factors analysis model was employed to identify the latent dimensions or constructs represented in the original variables, which met the criteria for determining the factor loadings exclusion of all variables with commonality less than 0, 5 (Hair JR et al, 2005b;.. Sousa, 2007; Field, 2009; Mesquita, 2010). From the 37 variables, 15 attended the commonality criteria greater than 0.5, and an issue with commonality of 0.497 was considered in the analysis of the results due to the fact that values have statistical significance, totaling 16 variables, as shown in TAB. 2.

Table 2 – Commonalities of the variables

Variable	Commonality
Q35 Blood donors like their co-workers / school know when they donate blood.	0,840
Q36 Blood donors like their family members to know they donated blood.	0,784
Q37 Blood donors like their friends to know they donated blood.	0,908
Q38 Blood Donors like to be socially recognized.	0,623
Q39 Donating blood is important because it can save lives.	0,497
Q47 Donating blood is an act of citizenship.	0,601
Q48 Donating blood is a duty of every citizen.	0,688
Q53 Donating blood makes the giver feel good.	0,628
Q54 All fit people should donate blood.	0,711
Q55 Donating blood is good for the health of the giver.	0,612
Q61 The donation campaigns showing the blood as a resource that can save lives and touch more people.	0,585
Q63 Regardless of the appeal of the blood donation campaign, whether tragic or not, these promote blood donation and contribute to increase the amount of donors.	0,552
Q64 Blood promotion campaigns should provide more information about the types of need for transfusion.	0,534
Q67 The campaigns that promote blood donation sensitize more the population to submit as testimonials from people who have been cured after receiving transfusion.	0,619
Q68 The campaigns to promote blood donation sensitize more the population to submit testimonials from people who are blood donors.	0,582
Q71 Providing information online and in real time the need for blood in blood banks motivates people to donate blood.	0,509

Source: Research data / elaborated by the authors.

Based on the Bartlett test of sphericity and the Kaiser-Meyer-Olkin test (KMO) of the adequacy of sampling extent, the use of factor analysis of the data was considered effective. The Bartlett test of sphericity was performed to verify the presence of correlation among the variables, and the KMO test to evaluate adequacy sample if the values are above 0.5 for the entire array or for a given variable (Hair JR et al, 2005b;.. Sousa, 2007; Field, 2009; Mesquita, 2010). It was accepted the hypothesis of correlation among the variables over the null hypothesis of an identity matrix. The chi-square statistic was 3813.579 with 120 degrees of freedom, at 5% significance level. According to the scale of interpretation of KMO, the index calculated 0.887 means that the adequacy of the sample is "admirable" (Hair JR. Et al., 2005b).

Based on the technique of latent roots or eigenvalues were extracted three factors to explain the variance of the 16 variables that met the criteria of commonality. According to the criterion of latent roots, only the factors which have higher eigenvalues "1" are considered significant. To ensure the practical significance for the three factors we adopted the criteria of percentage of cumulative variance, based on the procedure for obtaining factors of social sciences, which provides a solution that explains 60% of the total variance as satisfactory (Hair JR. Et al, 2005b;. Field, 2009; Mesquita, 2010; Malhotra, 2012). The TAB. 3 lists the eigenvalues associated with each factor extracted, based on the criteria of latent roots and a cumulative total variance:

Table 3 – Total variance explained

Factor	Initial eigenvalues > 1	% of the variance	Acumulated variance > 60%
1	6,251	39,069	39,069
2	2,822	17,638	56,708
3	1,199	7,491	64,199

Source: Research data / elaborated by the authors.

To interpret the factors it was used the rotated factor matrix (TAB. 4), which shows the factor loading as a way of interpreting the degree of correspondence between the variable and the factor, according the criterion that loads ≥ 0.50 are considered with practical significance (HAIR JR. et al., 2005b).

Given the adequacy to assign a label to represent the latent dimensions of the extracted factors (Hair et al. (2005b), we labelled the factor 1 as "Motivation", factor 2 as "Reference Group", and factor 3 as "Attitude".

Factor 1, labeled "Motivation", indicates that the vital character of the blood motivates people to donate because they stimulate in themselves the sense of citizenship, social responsibility and personal well-being. This component also shows the influence of donation promotion campaigns to motivate people and points of view of those interviewed about the form and content of the messages set. In this effect, it is clear that the variable with the highest factor loadings of this factor, with absolute coefficient 0.775, indicates that the campaigns would be more effective if they showed evidence of people receiving blood that healed through transfusion.

The factor 2, "Reference Group", showed the variable with the largest absolute coefficient, 0.943, representing the largest factor loading of all three factors. In this component, the responses indicate that people who donate blood like to be socially recognized as donors for their family, friends, co-workers or school. The reference groups are people, groups and institutions that provide standards and values to which individuals result to an orientation of their own behavior and their evaluations, and for which seek approval (Engel, Blackwell, Miniard, 2000; Sheth, Mittal ; Newman, 2001; Solomon, 2002).

The factor 3, "Attitude", had the highest factor loadings, 0.822 and 0.745, respectively, in the variables that indicate that donating blood is a duty of every citizen and that is good for the health of the giver. In this component there was the presence of two variables considered in factor 1 which reinforces the view that the act of donating blood because the welfare giver and that suitable members should donate. Attitude refers to the predisposition for something and represents the amount of affection or favorable or unfavorable feeling of a person in relation to an object (Mowen; Minor, 2003; Sousa, 2007; Peter; Olson, 2009). The rotational matrix is presented in Table 4.

Table 4 – Rotational Matrix

Variable	Factor (component)		
	1	2	3
Q35 Blood donors like their co-workers / school know when they donate blood.		0,909	
Q36 Blood donors like their family members to know they donated blood.		0,859	
Q37 Blood donors like their friends to know they donated blood.		0,943	
Q38 Blood Donors like to be socially recognized.		0,787	
Q39 Donating blood is important because it can save lives.	0,642		
Q47 Donating blood is an act of citizenship.	0,640		
Q48 Donating blood is a duty of every citizen.			0,822
Q53 Donating blood makes the giver feel good.	0,525		0,588
Q54 All fit people should donate blood.	0,509		0,668
Q55 Donating blood is good for the health of the giver.			0,745
Q61 The donation campaigns showing the blood as a resource that can save lives and touch more people.	0,745		
Q63 Regardless of the appeal of the blood donation campaign, whether tragic or not, these promote blood donation and contribute to increase the amount of donors.	0,730		
Q64 Blood promotion campaigns should provide more information about the types of need for transfusion.	0,703		
Q67 The campaigns that promote blood donation sensitize more the population to submit as testimonials from people who have been cured after receiving transfusion.	0,775		
Q68 The campaigns to promote blood donation sensitize more the population to submit testimonials from people who are blood donors.	0,711		
Q71 Providing information online and in real time the need for blood in blood banks motivates people to donate blood.	0,671		

Source: Research data / elaborated by the authors.

After the analysis of the factors, it was performed the validation of the factor analysis based on the precepts of random division of the original sample into two subsets, and to estimate the factor models initially used for each one (Hair et al., 2005b). Based on the calculation of the same variables and the same criteria initially proposed the comparison of the two factorial matrix was stable with the original results of the factor model used.

In order to reduce possible measurement errors inherent in the measured variables and the resulting correlation among factors, we proceeded to the validity of tests, reliability and unidimensionality (Hair JR. Et al., 2005b). The tests indicated reliability, to the extent that the three extracted factors presented values of 0.882, 0.905 and 0.800, higher, thus, of the minimum of Cronbach's Alpha of 0.70. Convergent validity was confirmed by computing Pearson's correlation coefficient, whose results were above 0.80. The discriminant validity showed correlations below 0.5, confirming, thus that each dimension constitutes a concept itself. Last, the unidimensionality was confirmed, since the test based on the variables of each factor evidenced that each multiple scale was consisted of items with high loads of unique factors, indicating, thus, that the items were substantially associated to a single concept.

6 FINAL CONSIDERATIONS

The present work analyzed the Brazilian scene of blood donation, built up in the guidelines of the Brazilian Ministry of Health and of the World Health Organization. In order to do this, it was assumed the perspective of social marketing, a transdisciplinary approach based on Social and Human Sciences.

The findings provided interesting information, indicating a set of attributes that shape the experiential and motivational aspects of behavior of individuals on the process underlying the blood donation by regular donors and potentials.

From the 421 respondents, 162 started or continued to donate blood motivated by the need to help a family member, friend or acquaintance; the possibility of themselves to need the donation one day; the feeling of solidarity and charity; and to heed the call of donation campaigns. It was considered that the signs of solidarity and charity revealed in this result are altruistic feelings, which are in line with the concept of blood donation defended by Brazilian law. The results indicate that the feelings experienced and prevalent in the answers- such as sense of accomplishment, feeling important, feeling joy and pleasure - are by their feelings of affection that motivate the continuity of the donation.

It was found that from the 162 respondents who donated blood, 24.1% meet the regular blood donor profile classification criteria, termed as "repeat donor," that is, one that performs two or more donations in the period of twelve months.

The main reason observed with respect the 85 respondents who stopped donating blood was the presence of some disease or health problem, suggesting, primarily, the unfitness of these respondents for donation. However, survey data are not enough to state it. Other reasons reported for those are related to the lack of interest in continuing to donate or because respondents complain to have suffered physical damage while donating, such as feeling sick or feel pain.

Referring to the reasons why people do not donate blood, 259 individuals answered never have donated due the lack of information on fitness, difficult accessibility to the transfusion service, be able or unable to donate, forgetfulness, fear of needle and never have received any request.

The findings indicated also the strength of advertising campaigns, regarded by respondents as much effective in influence their intentions and decisions to donate blood, especially those transmitted via television, internet and printed materials.

The statistical analysis provided interesting results about the constructs donation campaigns, experience in giving, motivation and attitude. From the 37 variables primarily employed to investigated data from the Likert scale questions, 16 were extracted and clustered in three factors, namely, motivation (factor 1), reference group (factor 2), and attitude (factor 3).

The identification of attributes influencing donation blood evidenced in the present work can contribute to encourage the adoption of techniques of social marketing by public organizations. In this sense, this research contributes to advance in this agenda offering innovative narrative based on the social marketing principles and help public organizations to develop activities that qualify the transfusion services in their blood donor recruitment processes and the development of information campaigns, and to promote blood donation as an attitude necessary to social well-being. To find solutions that enhance the process of attracting citizens who are able to become fit donors of the spontaneous and regular blood donation has been a challenge to public organizations.

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