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ORIGINAL ARTICLE

Attitude, knowledge and perception of the altruistic donation of blood in a city in Northeastern Mexico

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Abstract
Objectives: To identify the causes due to which potential blood donors do not make voluntary donations: lack of knowledge, attitude, and the perception of blood donations as unwholesome.
Materials and methods: We conducted a transversal, observational, descriptive, prospective, and a survey-based study of 435 subjects in Monterrey, Mexico in November of 2011.
Results: 135 (31%) subjects were already donors, of which only 16 (3.6%) did it altruistically. Of the total amount of subjects, 161 (37%) were associated with some benefits from donating blood, 154 (35%) identified some kind of damage, the most mentioned was transmission of diseases with 77 (50%) mentions. The most common cause of refusal toward donation was ''saving blood for a relative in need'' with 137 (33%) mentions. Of the subjects surveyed, 55% ($n = 240$) refer having very few thoughts for donating blood voluntarily. Also, 360 (86%) subjects will donate without expecting something in return. Finally, 348 (80%) subjects do not remember seeing or hearing any kind of promotional information about altruistic blood donation.
Conclusions: A great deal of people will donate blood altruistically without receiving any reward for doing so. 80% of the subjects do not remember seeing or hearing any kind of advertisement for blood donation which is proof of lack of adequate publicity. The analysis of perception of damages or benefits from blood donation will help in the development of more focused blood donation campaigns.

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Introduction

There are three blood donation modalities: altruistic volunteers, family reposition and paid donors. In Mexico, paid donation is illegal as cited in article 462 of the Health Law.[1] Volunteer non-paid blood donors are vital to ensure safe blood supply and guarantee blood reserves. A well-established non-paid volunteer donation program significantly contributes in reducing the risk of transmission of infections like human immunodeficiency virus (HIV), hepatitis B, hepatitis C and syphilis, which are all attributable to transfusion.[2] In our country these aspects are regulated by the Official Mexican Standard (NOM by its Spanish acronym) NOM-253-SSA1-2012.[3]

In 1999 there were only 26 countries which obtained the totality of donated blood from non-paid volunteer donors, by 2002 this number increased to 39 and by 2005 the number had gone to 50, the following year, 4 more countries joined and the number keeps growing. There are currently 62 countries in the world where the blood supply is 100% or almost 100% (99.9%) by non-paid volunteer donors.[4–6]

This research paper is based on international strategies from the World Health Organization, which recommends the undertaking of the Knowledge, Attitudes and Practice studies (KAP) related to blood donation at a local level. With these studies, one can better know the sector of the population, know the donor, and the potential donor. They provide a solid base to the donation services approach, and are helpful in identifying similarities, finding adequate messages and selecting the most effective channels to reach said audiences.[7]

The World Health Organization's goal is to have the totality of their member countries that obtain the full 100% of their blood supply from altruistic donors by the year 2020. Under this premise, international collaboration groups have been created, as well as a series of strategies and guidelines for its implementation. At the same time, we have identified within our local environment the need to increase the number of altruistic or volunteer non-paid donations, thus it is necessary to identify the causes of why potential donors do not go through with their donations.[8] Once the causes and the potential donors' perception toward volunteer donations have been identified we will be able to create better strategies to reach the goal of 100% of volunteer, non-paid donations by the year 2020.

Materials and methods

A transversal, observational, descriptive, prospective study was conducted. A survey was administered to 435 subjects in a single period in Monterrey, Nuevo León, Mexico during the month of November 2011.

Subjects between the ages of 18 and 65 years were interviewed. Those under 18 years and older than 65 were excluded, as well as subjects who were linked to the health area, because they might be sensitized about blood donation and would probably have technical knowledge on the subject outside the usual among the general population. Other people excluded were those related to people currently admitted in a hospital. Incomplete questionnaires were eliminated.

A preliminary survey consisting of 12 questions was designed and evaluated by an expert panel based on their experience in the field of blood donation.

The instrument was redesigned according to the recommendations of the expert panel, increasing the survey to 14 questions. We trained a group of volunteer non-professional pollsters on the basic requirements of the survey and a preliminary sample of 120 surveys was performed in order to evaluate the instrument and the pollsters' ability to apply it.

Once the preliminary data was collected and analyzed, as well as the people's response to the instrument, feedback, and the pollsters' skill for its application, some questions were redesigned until reaching an instrument which was comprehensible to most people, easy to answer and apply, and flexible.

Having done this, and with the final draft, 600 surveys were conducted, divided into blocks of 50 units by pollster. 133 surveys were not conducted or were conducted improperly. Finally, 467 surveys were collected, of which 32 had incomplete data. The final sample consisted of 435 properly completed surveys.

Population characteristics were described using socioeconomic status based on percentages. Association measures were performed in order to establish causal inference with calculation of relative risk and impact measures with the calculation of attributable risk between the variables of refusal of donation and damages caused by donation. The statistical software SPSS V20 was used.

The anonymity of the respondents was maintained under the confidentiality principle: all obtained information on the present project was considered confidential. The Ethics Committee of the medical area of the Autonomous University of Nuevo León authorized the study to take place in the form of a survey.

Results

Out of the total of the respondents ($n = 435$), 224 (51%) were female and 211 (49%) were male. The relation between the highest level of education and the percentage of blood donation for each studied group was evaluated (Table 1). They were divided into age groups, the group of 18–25 years was the group with the most respondents with 226 (52%) subjects. The percentage of donors for each age group was calculated (Table 2).

Out of the 435 completed surveys, 135 subjects had previously donated, but only 16 (3.6%) had done it altruistically. Out of all surveyed subjects, 161 (37%) linked benefits to donation, 154 (35%) identified some damage associated with

Table 1 Level of education and percentage of donation.

Education level	*n*	Donate (%)
Postgraduate	13	13 (100%)
University	249	78 (31%)
High school	95	28 (29%)
Junior HS	61	18 (29%)
Primary	14	4 (28%)
Illiterate	3	0 (0%)