Abstract

Attraction factors of Blood transfusion centre analysis is paramount however, the donor’s profile cannot be neglected. Therefore, 2 goals can be mentioned:

Before the donation: how to encourage donors to come by knowing their motivation, providing adequate direct communication and using alternative forms of communication;

After the donation: how to retain donors and encourage them to give more regularly by a quantitative study will be conducted using a half structured questionnaire

Key words: blood donation, blood transfusion centre, Loyalty of donors, motivation of donation

Résumé

L’analyse des facteurs de centre transfusion sanguine est primordiale ainsi que le profil des donneurs qui ne peut être écarté de cette étude. Cependant, On soulève deux différents objectifs :

Avant le don : comment inciter les donneurs à venir en connaissant mieux leurs motivations, en proposant une communication directe adéquate et en utilisant des formes alternatives de communication ;

Après le don : comment fidéliser les donneurs et les inciter à donner plus régulièrement à partir d’une étude quantitative est réalisée à l’aide d'un questionnaire semi-structuré

Mots clés : don du sang, centre de transfusion sanguine, fidélisation des donneurs, motivations du don
Introduction

We live in a country with a high rate of accidents, crime and medical emergencies for violent trauma, but in Rabat the main cause of deaths of people between 15 and 44 years is violence, for each violent death, between 8 and 10 people require blood products to save their lives.

About 70% of the blood collected in the city is for trauma services, which increases the blood deficit for other services in need. Rabat now has a population of more than eight hundred thousand inhabitants, with an average donation of 5 to 6 units for each 1,435 people, a figure that has remained constant over the past three years. Compared with the international standards of 40 units per 1,000 inhabitants we are on a deficit of 36 points for each 1,000.

The absorption mechanisms of blood donation and supply should meet demand of blood and its derivatives, mainly by improving existing systems without harming the quality.

However, the current crisis shows us a dark panorama, based on a very high production cost because there are no economies of scale to optimize the process and ensure quality. In this context, the generated socio-economic problem has a very strong impact, and leads mainly the loss of lives and to costs exceeding the limits of the budget allocated by the state to blood transfusion.

So how to reduce the gap? and how to improve the quality of the collection and distribution of blood? To answer this question, it is necessary to dwell on explaining the concept of quality in public sector.

The quality of the public sector can only be assessed in a context where the state plays a significant role in accomplishing it. If the public sector allows the state to fulfill its objectives in an effective and successful way, we can say that it is of a high quality (Nassera Touati, 2009). However, objectives must be realistic, because the public sector can achieve the highest degree of efficiency, it would still be impossible to fulfill unachievable goals. So generally, the quality of the public sector cannot be measured by the quality of the results of the policy, but the two are closely linked, especially in the long term.

In general, an efficient public sector should be able to achieve the state's objectives with minimum distortion of the market by generating the lowest possible tax burden, as well as a
reduced number of employees and a small absorption of economic resources to the public sector. Referring indeed the topics covered in recent years by the majority of journals in public administration, quality management is hardly a fashionable topic, supplanted by other issues such as governance issues (Frederickson, 2005).

The public sector must be transparent in its processes and results. Corruption should not play a role in the decisions made by bureaucrats and political leaders. The resources managed by the public sector should be used to maximize their social rate of return.

The quality of public sector can be influenced by the absence of some key institutions or the poor performance of existing ones. For example, in many countries there are no institutions responsible for competition, or those who control financial institutions and requiring them to report all of their operations. Therefore, the market can operate negatively because of the cronyism influence, or the monopoly powers. The performance of public institutions depends on many factors: 1) tradition and reputation; 2) available resources; 3) a clear definition of their mandates; 4) their organizations; 5) the incentives they offer; 6) the quality of their leadership and staff, and 7) the leeway they have in terms of reorganization, (Aldo Perissino, 2011).

The quality of the public sector is also important in achieving the objective of equity, considered as one of the fundamental objectives of the State. A public sector that allows the achievement of equity at all levels should be considered of a higher quality than the one who does not (Alberto Alesina, Michele Battisti, Joseph Zeira, 2015). A public sector of a high quality should enable the achievement of equity at lower cost in terms of efficiency.

The citizen judges the quality of public service by measuring the difference between the expected service and the received service (matching supply and demand) (UNESCO, Bangkok, 2007).

The quality in public services is the ability of a company to meet the implicit and explicit needs. In the general interest of an organization, they must meet the necessities of users at four levels: The usual needs (hospitalization, electricity, education, security ...) the needs for associated services (information, rapid processing of applications ...) the societal needs (social cohesion, citizenship, development ...) Just cost mastery of public spending (efficient management), (G Baruch, 2010).
To deal with the quality of the Moroccan public sector, we have chosen to focus on the public health sector.

Quality is a constant reference in today's society, which is converted to a sought challenge in health services in recent years.

Health organizations should seek to satisfy not only the technical requirements, but also other aspects that enable the health service to be competitive and profitable, by minimizing costs to a maximum. Management is carried out according to the criteria of effectiveness, efficiency and customer satisfaction. The quality management models must switch from the conceptual framework to the evaluation systems that will be the determining factor in the management of health systems.

This article aims to shed light on blood donation; its necessity is to propose actions to take to promote it to the Moroccan population.

The interest in this topic comes from the fact that it is still very little treated or neglected despite its paramount importance for every individual. Indeed, blood donation affects nearly every citizen and every human being, as it contributes to its survival in case of a serious loss of blood, every person, at one time or another might need it. Here comes the importance of a good sensitization campaign.

Therefore, our question is

"Research question: how to optimize the process of collection and distribution of blood?"

The precious red liquid

Blood is a liquid substance that circulates through the arteries and veins of the body and which is essential for life. In the lungs, the blood gives carbon dioxide that is captured from the tissues, receives a new entry of oxygen and begins a new cycle. This circulatory movement of blood occurs through the coordinated activity of the heart, lung and blood vessel walls.

Blood is composed of a yellowish liquid called plasma, in which are suspended millions of cells representing approximately 45% of total blood volume. In healthy adults, the blood volume is from 4.5 to 6 liters. Much of the plasma is composed of water that represents a means of facilitating the movement of many essential factors forming blood. A millimeter of human blood cube contains about 5 million red blood cells or blood cells called erythrocytes; between 5,000 and 10,000 white blood cells or cells that are called leukocytes, and between 200,000 and 300,000 platelets, called thrombocytes. Blood also carries many salts and dissolved organic substances.

Red blood cells have a rounded shape, and biconcave with a diameter of about 7.5 micro disks. Hemoglobin is a protein in red blood cells, and is also the most important specific blood pigment; its function is to carry oxygen from lungs to the body cells, which captures carbon dioxide led to the lungs to be removed to the outside.
1. Blood classification

The group typing is a blood transfusion requirement. The most important of the various blood classification systems is the ABO blood group. The four types of bloods considered in this ranking are the A, B, AB and O.

The Rhesus system contributes to a sharper classification of the blood system based on the existence of an antigen on the wall of the red blood cell; it is negative in the absence of this antigen or positive in its presence.

2. Blood transfusion

Blood transfusion is the process by which the blood of a donor is assigned to another person (Receiver). In some cases, the receiver may receive the same blood he gave earlier: we call this an autologous transfusion.

There are 3 types of blood donors:

• Unpaid voluntary donors;

• Donors for a family member / compensation;

• Paid donors.

The blood collected in an anticoagulant may be stored and transfused to a patient as such. This is what is called a "whole blood" transfusion. However, the blood can be used more efficiently if it is fractionated into its various components, such as red blood cell concentrates, platelet
concentrates, plasma and cryoprecipitate. This way it is possible to meet the needs of more patients.

Low-income countries face difficulties to provide patients with the different blood components they need: 45% of the blood collected in these countries is fractionated, against 80% in middle-income countries and 95% in high-income countries.

All transfusion services nationally must develop an effective quality system that enables the implementation of these strategies. The quality system should cover all aspects of these activities and ensure traceability, from recruitment and selection of donors to the transfusion of blood and blood products. The key elements of the quality system include:

- Management of the organization
- Standards
- Documentation
- Training
- Assessment.

3. The National Center of Blood Transfusion

Blood transfusion is a discipline on the borders of hematology and immunology; it involves medicine, biology, bio-industry and sociology, also it is based on ethics. In a broad sense, it includes blood donation, processing, conservation and reinjection. Regarding Morocco, there are 17 commercial centers, 24 antennas of transfusion and 13 blood banks and equipped with appropriate human resources. The CNTSH Rabat includes all regional centers except for the CRTSH Casablanca which is autonomous. Blood safety is ensured by controlling all stages of the transfusion chain from the collection of blood, its preparation and biological qualification, until the completion of the transfusion act, and even the monitoring of recipients in order to collect and assess information on unexpected or undesirable effects resulting from the therapeutic use of labile blood products and to prevent the occurrence. However, the national transfusion system is struggling for its operation, especially in terms of organization, equipment and staff management and in terms of the blood supply and the promotion of donation. Moreover, the CNTSH has challenges as to ensure the continuity and strengthening of actions on blood safety and the development of operational TS structures, through a strategic development plan covering all the organizational aspects and aiming to a nationally TS systemic improvement.
Blood banks participate significantly in the healthcare of population, to cover the transfusion needs of the community. These needs are met by a system depending on Hospital and clinic blood banks, a center for collecting, processing and distributing of blood products. The responsibility for providing blood for transfusion and patient support in Rabat corresponds to hundreds of people who donate their blood, as well as three Rabat blood banks owned by the state, ensure activities and watch over the safety and efficiency of blood components to make them available to necessity.

The decree regulating blood-banking activities in Morocco does the Ministry of Health regulate (Law No. 03-94).

"Blood donation must, in all circumstances, be voluntary. No pressure of any kind should be exerted on the donor who must give his consent to the donation in full freedom and conscience. Non-governmental organizations can conduct under the control of the administration, campaigns to promote blood donation."

Box 1: Regulatory core business "Blood Bank in Morocco" (Law No. 03-94)

Blood donation in Morocco is below the standard. Indeed, the number of donors does not exceed 2% of the overall population. Knowing that every day there are on average 10 deaths and 120 injured in traffic accidents, most of which are losing a lot of blood, as well pediatrics in maternity, hemodialysis centers and others. The need for blood increases from one day to another. Every year the demand increases by 12%, although there was an increase of 10% on gifts.

Demand exceeds supply and blood banks cannot cover the national needs; in addition to this, the Moroccan citizens are not sufficiently initiated into the culture of blood donation and its importance for saving lives.

4. Aspects of donation

There are many factors to consider that relate to the nation and have a strong impact on the system efficiency. The first refers to the percentage of donors’ rejections for medical conditions, namely, because they are carrying an infection or a restriction that does not allow them to be able to donate. The total rate of exclusions in 2013 was 22.34%, where the main causes are: Hepatitis, Malaria, HIV, low Hemoglobin, and active infection, other...
5. Infection and quality

Over the past 15 years, efforts were redoubled to improve transmitted infections testing for transfusion to blood donors. The main effort has been in the development and implementation of new tests for infectious agents (HIV, HCV, HTLV), they show that there's an undeniable increase in the safety of the blood supply. While in the US only 3% of donations were reactive in the detection tests unconfirmed, in Morocco they reached 10% three times higher. These estimations show that the state of the blood supply in Rabat has never been as safe, although the risk of infection through transfusion has diminished. We are far from ideal, as well as epidemiology can differ between countries. A good reason to explain these differences is the source of blood collection for example, while in the US 100% of the donation is voluntary and donors are repetitive for 80%, in our region, only 26% of donations are voluntarily done. Given that there is evidence that voluntary donors units have a lower risk of infection with HCV and HTLV) than the coercive donors.

In recent years blood banks have made efforts to improve safety and quality of blood products, they have introduced strategies and concepts of good manufacturing practices (GMP) involved in the pharmaceutical industry, insurance and other initiatives series as special procedures and sophisticated at the time of operation (apheresis, irradiation, leukocyte depletion, etc.). Each of these strategies requires a significant investment in human and financial resources to obtain or have healthy and safe donors. The atomization system does not allow an efficient and productive operation to dispose of the expensive technology, in addition to irregularities of demand and lack of education and information.

6. Education and Culture

Within the collection and handling of blood, there are factors such as education and cultural context, summarized as follows:

- The lack of training in transfusion and blood banking medicine.
- Lack of protocols for the rational use of blood products.
- Lack of continuous training programs of medical personnel on the indication of blood products.
- The lack of information and education to the community.
TOWARDS CREATIVE TOOLS FOR PROMOTING BLOOD DONATION: THE CASE OF PUBLIC HEALTH IN MOROCCO

- Low level of marketing programs for voluntary unpaid donation of blood and blood products.
- The ignorance of the culture of donated tissues and organ transplantation.

CNTSH in collaboration with a group of anthropologists developed a methodological guide, to investigate the knowledge, attitudes and practices of the population in general regarding blood banks and people working in them, to understand factors that encourage and discourage voluntary blood donations. Finding some myths and misconceptions as to give blood makes lose weight, gain weight or diseases can spread ideas.

7. Social Marketing

In developing countries, social marketing has become an important modality for the distribution of health products and services for the poor, and to encourage the use of these products and services and other healthy behaviors. A key ingredient for successful social marketing is effective communication to encourage the adoption of good health practices. This is accomplished by advertising specific brand and by generic educational campaigns, which use a combination of strategies and channels, including mass media and interpersonal communication to reach the target.

The methods traditionally used to deliver health products and services in developing countries often fail to reach a large segment of the population, especially at the low end of the monetary economy. Ministries are limited in the type and nature of the campaigns they can offer.

The CNTSH wants to retain blood donors with regular donors who come every two months for men and every three months for women to ensure a nationwide safety stock for the entire year.

For this HM King Mohammed VI, made a gesture of donating blood, is not new nor surprising, as the Sovereign has always been very close to the people, especially those sick and vulnerable.

HM the King has always been at the center of all actions of social and humanitarian kind, and already in March 2013 and in February 2015. The Sovereign had donated his blood and gave the start of the promotion campaign of blood donation, and this allowed achieving results well above forecasts, the campaign raised more 70,500-blood bags, referred to 40,000, a rate of 176 % of expectations. Urging Moroccans to follow the path of HM the King and donate blood, "and the campaign wished to recall that it is safe to donate blood, which is the only drug that
cannot be manufactured or replaced. A donor can save the lives of 3 people, although in Morocco, we hardly reach 1 pc of the population donating blood, which remains well below the rate recommended by WHO, which is at least 3 per cent of the population who should regularly donate blood.

To reassure on this operation, the minister said that each donor has a compulsory medical examination and almost fully recovers donated blood starting from the 72 hours following the donation, plus a donor card with the results of blood tests free with reductions in hospitalization tariff when he needs it. The royal gesture will encourage citizens and boost blood donation in the Kingdom, in the same way he had done in 2013 when the results had exceeded expectations. This act is part of the Royal Initiatives aiming to promote volunteerism and encourage blood donation for feeding the stocks of blood centers that experience significant deficits.

The campaign launched two messages to draw public attention as:

- Giving blood does not affect the donor's health, but helps save the lives of beneficiaries and to alleviate their suffering by helping them live a normal life.
- By donating blood, the donor is among the beloved of Creator, adding that the Almighty is generous and that we are called to follow God's example of generosity.

This urgent call aims to face the big lack from which suffer some regional transfusion centers in several cities of the Kingdom, and to highlight the saving role of national blood transfusion.
and hematology which ensures storage and good distribution of this vital liquid to beneficiaries requiring urgent transfusions.

Taking advantage of the awareness campaigns and perseverance in the effort of communication and popularization, the act of blood donation in Morocco is gaining more and more like a revealing initiative of a high moral and the status of full responsible citizenship. Because, simply, the challenge is to ensure the lives of hundreds of people whose fate depends on the generosity and compassion of their fellow citizens. Immediately after the call by the National Blood Transfusion Centre, a virtual spontaneous momentum has made the buzz of social networking during the campaign, uniting under the same banner young and old to donate their sound and save a life.

8. Fractionation and costs

Draws attention lack divide the collected blood. This reveals a lack of capacity or a low need to produce other blood components, which limits the usefulness of this scarce resource and increases treatment costs. The whole blood fractionation is considered essential to dispose of components with adequate quantity. The average treatment of a red blood cell bag (RBCs), which is 200cc, costs between 350dh - 500DH which is the value transferred by patient who should bring 2 blood donors from his family, by the fact that a non-profit activity is eventually paid. This cost, compared to CNTSH and studies by researchers is high, and achieving economies of scale and efficiency in the production process can reduce this value.

9. The 7 P’s of the Marketing Mix

The 7P’s are a kind of dashboard; they can highlight the positives and negatives in the services fields, in our case the service of Rabat Regional Centre
For “Physical evidence” the flagship is a display which is a reassuring element for the potential donor, the uniform is presentable, stories are positive and reflect reality, but the bill does not represent an encouraging cost and the physical support that does not fit enough to perform the job.

The process at this level of welcome is up to the customer expectations, while consulting and appropriate times to the availability of the customer are absent.

“People” shows only negative points: the interaction between the employee and the customer is weak, lack of blood donation culture and no customer service. “Product” has advantages regarding its usefulness, its quality and guarantee, while the negative point is technology because they do not use new technologies used elsewhere. For “Price”, it is high, which is a negative point.

“Place”, is the regional blood transfusion centers and hematology and transfusion antennas. As for Promotion, there are special offers such as the donor card that allows discounts in hospitals.
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However, there is no advertising apart during the campaign, but that does not reach all the population, no presents to donors.

10. Field study:

In order to make a descriptive analysis of habits and preferences of Rabat’s population towards the blood donation, the study focuses on the donation frequency.

The objectives of the quantitative study of blood donors and non-donors are as follows:
- Understanding and quantifying motivations / obstacles to blood donation
- Understanding and quantifying people's expectations of collections
- Developing a typology of donors and non-donors
- Identifying donors' loyalty levers and increase the number of donations per donor.

The purpose of the analysis of these questionnaires was to identify loyalty levers:
- Before the donation: how to encourage donors to come by knowing their motivation, providing adequate direct communication and using alternative forms of communication;
- After the donation: how to retain donors and encourage them to give more regularly.

Presentation of the sample

Response 1:

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>% valid</th>
</tr>
</thead>
<tbody>
<tr>
<td>No-donors</td>
<td>81</td>
<td>43.09%</td>
</tr>
<tr>
<td>donors</td>
<td>107</td>
<td>56.15%</td>
</tr>
</tbody>
</table>

Response 2:

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>% valid</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 time</td>
<td>62</td>
<td>57.94</td>
</tr>
<tr>
<td>2 à 3 times</td>
<td>27</td>
<td>25.23</td>
</tr>
<tr>
<td>4 à 6 times</td>
<td>15</td>
<td>14.02</td>
</tr>
<tr>
<td>+ 6 times</td>
<td>3</td>
<td>2.80</td>
</tr>
</tbody>
</table>
First, it appears that the majority of respondents who qualify as "donors" have a low rate of donation; in fact, the vast majority (83.18%) have given less than 3 times in the last two years. These results highlight a lever of action on which it is essential to work on the incentive to give more often.

**Response 3:**

In this perspective, it seemed useful to analyze the preferred types of collection by donors. It appears that there is a very homogeneous distribution of the places of donation between fixed collections, mobile at the place of residence or at the workplace.

<table>
<thead>
<tr>
<th>Number</th>
<th>% valid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed Collections</td>
<td>43</td>
</tr>
<tr>
<td>Mobile in the city</td>
<td>43</td>
</tr>
<tr>
<td>Workplace</td>
<td>44</td>
</tr>
</tbody>
</table>

**Response 4:**

More precisely, the motivations of the donors in their approach, show that: the "institutional" reasons (being useful, following their education, doing their duty) tend to be more dominant.

<table>
<thead>
<tr>
<th>Average</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>I said to myself that I was lucky to be in good health and that I had to benefit the others</td>
<td>4.12</td>
</tr>
<tr>
<td>It was part of my education</td>
<td>3.06</td>
</tr>
<tr>
<td>I said to myself that one day I might need it too</td>
<td>3.97</td>
</tr>
<tr>
<td>I considered giving was a duty</td>
<td>2.85</td>
</tr>
<tr>
<td>I had been touched by the communication on blood donation</td>
<td>2.25</td>
</tr>
<tr>
<td>I had confidence in the donation center</td>
<td>3.34</td>
</tr>
<tr>
<td>It was important to save lives</td>
<td>4.41</td>
</tr>
</tbody>
</table>
Towards Creative Tools for Promoting Blood Donation: The Case of Public Health in Morocco

My friends urged me to do it 1.52
I used to give to charities 1.63
Curiously 1.92
I knew that my blood group is rare and sought 1.72
This would allow me to do a health check 1.70
It pleased me 3.41
A collection was organized at my place of work/study 3.15
A collection was organized near my home 2.74

Response 6:
Among the non-donors, we notice an attention, or even a real reflection towards the donation of blood. Although it appears that the intention is there, the act is not effective. Thus, the majority of non-donor respondents confirm having already thought about donating blood. On the other hand, while some claim a medical reason to justify their non-donor status, others do not have real arguments but rather good intentions. Concretely, they are few to be informed but not willing to seek information on this subject! It is therefore essential to lead important campaigns to transform their awareness or interest into a genuine gift.

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>% valid</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have already thought about giving my blood</td>
<td>27</td>
<td>33.33</td>
</tr>
<tr>
<td>I cannot give my blood for medical reasons</td>
<td>16</td>
<td>19.75</td>
</tr>
<tr>
<td>I think about giving my blood soon</td>
<td>15</td>
<td>18.52</td>
</tr>
<tr>
<td>I have seriously considered giving my blood</td>
<td>11</td>
<td>13.58</td>
</tr>
</tbody>
</table>
TOWARDS CREATIVE TOOLS FOR PROMOTING BLOOD DONATION: THE CASE OF PUBLIC HEALTH IN MOROCCO

I have never thought of giving my blood | 8 | 9.88
---|---|---
I have inquired about the donation of blood | 4 | 4.94

**Response 7:**

When respondents were asked to globally assess a list of potential brakes on blood donation, they highlighted:
- first, all the brakes linked to the medical procedure (fear of needles, blood, inadequacy of the donor profile or fear of viral transmission):
- then, the constraints linked to the collection (waiting time, place, day, schedule, etc.).

<table>
<thead>
<tr>
<th>Brake</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fear of blood</td>
<td>3.701</td>
</tr>
<tr>
<td>Fear of needles</td>
<td>3.171</td>
</tr>
<tr>
<td>Fear of transmission</td>
<td>3.090</td>
</tr>
<tr>
<td>Fact of having learned how this happens</td>
<td>3.022</td>
</tr>
<tr>
<td>Loss of time</td>
<td>2.925</td>
</tr>
<tr>
<td>Confidence in the donation center</td>
<td>2.715</td>
</tr>
<tr>
<td>Fear of being disappointed</td>
<td>2.715</td>
</tr>
<tr>
<td>Requirement of too much effort</td>
<td>2.609</td>
</tr>
<tr>
<td>Places of collection</td>
<td>2.358</td>
</tr>
<tr>
<td>Times of collection</td>
<td>2.343</td>
</tr>
<tr>
<td>Days of collection</td>
<td>2.119</td>
</tr>
<tr>
<td>Quality of the welcome</td>
<td>2.051</td>
</tr>
<tr>
<td>Waiting time before collection</td>
<td>1.793</td>
</tr>
<tr>
<td>Need to &quot;declare&quot; each time they change regions</td>
<td>1.761</td>
</tr>
<tr>
<td>Inadequate profile of the donor</td>
<td>1.616</td>
</tr>
</tbody>
</table>
Response 8:
Regarding the donation intentions, logically, we note that donors have a stronger intention to donate blood in the coming years than non-donors do. Among non-donors, there is a significant proportion of people saying they are ready to donate their blood in 1, 2 or 5 years (between 25 and 30%). One can also note a large share of undecided, which is increasing along with the remoteness of the deadline. These findings support the view that a majority of non-donors are not refractory to donating blood and are just passively waiting to be motivated.

<table>
<thead>
<tr>
<th>Probability Donation a 1 year%</th>
<th>Probability Donation a 2 years%</th>
<th>Probability Donation a 5 years%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-donors</td>
<td>Donors</td>
<td>Non-donors</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>46.05</td>
<td>20.19</td>
</tr>
<tr>
<td></td>
<td>11.84</td>
<td>5.77</td>
</tr>
<tr>
<td></td>
<td>13.16</td>
<td>21.15</td>
</tr>
<tr>
<td></td>
<td>15.79</td>
<td>15.38</td>
</tr>
<tr>
<td>Totally agree</td>
<td>13.16</td>
<td>37.50</td>
</tr>
</tbody>
</table>

Response 9:
The support that is considered ideal for a campaign to raise awareness of blood donation is television through advertisement. Then come the national press and Internet banners.

<table>
<thead>
<tr>
<th>responses</th>
<th>N</th>
<th>%</th>
<th>observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Television advertisement</td>
<td>138</td>
<td>31.94</td>
<td>82.63</td>
</tr>
<tr>
<td>Press</td>
<td>75</td>
<td>17.36</td>
<td>39.52</td>
</tr>
</tbody>
</table>
11. Research limitations and recommendations

According to the Dahir article, Law No. 03-94 relating to the donation, collection and use of human blood, adopted by the House of Representatives on 20 Muharram 1416 (19 June 1995) says:

"Blood donation is free and cannot result in favour of the donor to any remuneration of any kind whatsoever. The disposal of blood, plasma, red blood cells and platelet pellets gives rise to the perception of compensation offset for the cost of operations done for blood collection, laboratory testing, storage, processing and packaging of the product ".

In this context, I see a business opportunity for large companies because they have the financial and technical ability to make inroads as suppliers and blood bank partners where they would make increased sales in its lines of blood products used in the sector (reagents, blood bags, the apheresis equipment, etc.). However, to achieve their objective these firms should ensure that existing blood banks achieve economies of scale through high levels of absorption, so these organizations should consider:
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- Implementation of a marketing plan by the blood bank, which aims to drive the development of the culture of voluntary donation and enlargement of the target. This plan should be developed in parallel with the programs already implemented;

- Achieve economies of scale in production, using a network system between blood banks, which would increase the purchase volume and lower the cost of charges;

- Implementation of quality management systems, HACCP and BPM seeking to minimize the risk of contamination of blood caused by processes’ failures while ensuring increasing productivity;

- Positioning as a unique network of blood banks at national and regional level, instead of keeping an independent banking system because it is not profitable;

- This activity should be conducted by the private sector, as the government has high deficits in other areas which negatively impacts its involvement in the health sector;

- Educate people to donate blood, while instilling values with an educational vision: Instead of having donors mostly looking for blood test while donating, there should be an ability to attract healthy donors whose primary purpose is donation and helping others.
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