



## **Organ Donation Posters: Developing Persuasive Messages**

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### **Abstract**

Posters are a general form of mass media that have often been used by organ procurement organizations to promote organ donation; however, to date, there are no studies discussing the procurement efficacy of organ donation posters. The present study collected organ donation posters, analyzed their categories, and discussed the persuasive power of their graphic and text contents using the message-framing theory. Fifty-three professionally designed posters from 15 countries were selected from 2,000-plus organ donation-related websites. The posters were classified into instructional, educational, evidential, and charitable categories, and the methods and contents of their framed messages were analyzed. Results of this study showed that the posters seldom reflected knowledge about effective ways to frame their messages. Most of the posters only directly and plainly presented, but did not promote, donation messages to the audience. Only some of the posters used promotional strategies such as designing the graphics and text specifically for different populations, displaying celebrity endorsements, providing knowledge and statistical data, dispelling myths, using narrative stories, presenting successful transplantation cases, or emphasizing the well-being of others or public welfare. If the above strategies could be combined with gain-framed messages, these posters would be more persuasive. Suggestions for gain-framed message are offered, but these recommendations must be tested empirically.

**Keywords:** Framing message, Organ donation, Persuasion, Posters

## Introduction

Posters are a general form of mass media that have often been used by organ procurement organizations in many countries to promote organ donations. Studies have indicated that the frequency of the appearance of organ donation information is positively correlated with the number of organ donors (Stefanone et al., 2012); however, this correlation is not statistically significant (Conesa et al., 2004), suggesting that in order to be significantly persuasive, the graphic and text contents must be based on established theory or research (Jenner et al., 2005). The message-framing theory is an important theory related to persuasive powers (Kahneman and Tversky, 1979), stating that presenting the same question with the same logic and intent but using different approaches can persuade people to make different decisions. The gain-framed message positively emphasizes the benefits that could be gained or the disadvantages that could be prevented by taking certain actions; by contrast, the loss-framed message negatively emphasizes the disadvantages that could occur by taking certain actions or the losses that could ensue by not taking other actions.

Tversky and Kahneman (1979) further elucidated the relationship between message framing and decision making. They devised a hypothetical situation in which a certain country was experiencing a disease outbreak, and it was predicted that 600 people would die. Scientists proposed two schemes: adopting Scheme A could save 200 people, while adopting Scheme B could have a 1/3 chance to save 600 people and a 2/3 chance that nobody would be saved. The data revealed that 72% of the subjects chose Scheme A, and 28% of the subjects chose Scheme B. Using the same hypothetical scenario, the scientists proposed another two schemes: if Scheme C were adopted, then 400 people would die, whereas if Scheme D were adopted, then there was a 1/3 chance that nobody would die and a 2/3 chance that 600 people would die. The results showed that 78% of the subjects chose Scheme D, and only 22% of the subjects chose Scheme C. The abovementioned example revealed that the participants were affected by the frames; therefore, they made different choices in response to the different positive and negative presentation methods for the same solution scheme.

Studies suggest that, to promote health care behaviors, gain-framed messages should be used for protection behaviors, such as promotion of the use of sunscreen products to avoid skin cancer (Detweiler et al., 1999). Conversely, loss-framed messages should be used for

detection behaviors; for example, although a high level of uncertainty exists for finding lumps on a breast X-ray, receiving this examination can avoid further risk to health (Goodall and Appiah, 2008). Most studies suggest that gain-framed messages should be used for organ procurement, emphasizing the benefits accrued by organ donation in order to increase the willingness of potential donors (Purewal and van den Akker, 2009; Reinhart et al., 2007; Rothman and Salovey, 1997). The purpose of the present study was to collect organ donation posters from various countries, to analyze whether the posters used frame messages, and to determine which frame methods were used. Moreover, the poster categories were also examined. Consequently, the results of this study could provide design guidelines for producing highly persuasive posters for organ procurement organizations.

## **Method**

### **Samples**

Using the Google and Yahoo search engines with Chinese and English key words such as “organ,” “donation,” and “posters,” the links of more than 2,000 organ procurement websites, blogs, and images were searched via different combinations. After amateur poster designs, graphic files that could not be clearly read, and text content that could not be translated by the researchers were excluded, nearly 200 posters produced by professional design units at the request of government agencies or procurement organizations in 15 countries (US, Australia, UK, Pakistan, Japan, Taiwan, etc.) were collected. Ultimately, 53 posters were used as study subjects in this investigation.

### **Data Analysis**

The poster analysis included a message-framing analysis and a category analysis. The message-framing analysis was used to determine whether the 53 posters used message-framing strategies and whether they used gain-framed messages or loss-framed messages. In the category analysis, analysts proposed category suggestions based on the graphic and text content of these posters. As each category was suggested, a file was created, and all of the posters relevant to that category were filed under it and coded accordingly. The created categories were designed to be exhaustive and mutually exclusive at the same level of analysis (Atkins, 1984; Jenner et al., 2005). Finally, the posters were divided into four categories: instructional, educational, evidential, and charitable. The instructional posters

simply requested that the viewers agree to organ donation and fill out a donor card. The educational posters provided general information regarding organ donation. The evidential posters presented clinical cases and stories of successful organ transplantation. The charitable posters attempted to heighten the viewer’s altruistic and moral senses by various strategies. The two analysts included one of the authors (who had published papers regarding the use of message framing on promoting public health) and one graphic designer (who has six years of design practice and had experience designing posters promoting organ donations and vaccinations). The analysts independently examined the framed message content of the posters and categorized the posters. The determinations of these analysts regarding whether the posters used framed messages were completely consistent. During the poster categorization, the analysts’ opinions were consistent for 83% (44/53) of the posters. Nine posters yielded different opinions because they presented multiple-category information; after being discussed by two judges, these posters were classified into categories that were more appropriate.

## Results and Discussion

### Message Framing

Of the 53 posters, 39 were written in English, 10 were written in Chinese, two were written in German, one was written in Hebrew, and one was written in French. The message-framing analysis of these 53 posters is depicted in Table 1.

Table 1 Method of framing the messages (N = 53)

Gain-framed messages, N = 18		Loss-framed message, N = 1		Neither
Attaining a desirable outcome	Risks an undesirable outcome	Risks an undesirable outcome	Attaining a desirable outcome	
18	0	1	0	34
(14 Altruistic)		(1 Altruistic)		
(4 Egoistic)		(0 Egoistic)		

Of the 53 posters, only 36% (19/53) used framed messages: one used loss-framed messages, and the other 18 used gain-framed messages. According to the study by Rothman and

Salovey (Rothman and Salovey, 1997), the gain-framed message is how health promotion messages should be framed. Gain-framed messages can emphasize benefits caused by some actions as well as avoidable disadvantages brought about by other actions (Kahneman and Tversky, 1979). The 18 posters with gain-framed messages all used the benefits of donation behavior as motivations. For example, one poster used the following text: “Someday, I will be lying on the white bed of life. Sometimes, I can continue that fragile respiration. For somebody, I will be the miracle of his hopelessness. Love and life need your irrigation; life and love require your ignition. Because of you, him, and me, love continues to disseminate, and life continues to last.” The gain-framed messages in this description included the fact that organ donation saves lives and implied that if donors die from sickness or aging, their worldly lives can still be continued (Figure 1). One poster had no text but used a picture to present a young woman virtually hugging a deceased donor to express appreciation, demonstrating organ donation can be considered an act of love and showing the gain-framed message of how love expressed via organ donation could save lives (Figure 2).

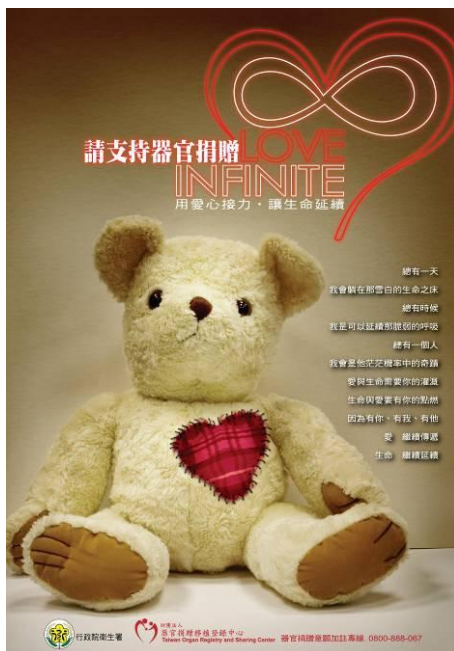


Figure 1 Organ donation poster (Taiwan Organ Registry and Sharing Center, 2013).



Figure 2 Organ donation poster (CLM BBDO, 2013).

Of the 53 posters, only one poster used loss-framed messages. Its main appeal was to show the loss resulting from not supporting donation, and the content included a grimacing African

male waiting for organ donation but who died because he did not obtain the organ in time-presenting a loss-framed message of painful death (Figure 3). None of the 53 posters used positive and negative messages at the same time. Studies of hand-hygiene posters have demonstrated that the presentation of positive and negative messages together may confuse, rather than motivate, the audience (Jenner et al., 2005). Because posters are distinct from other media, they must present their main appeal within a short period. Complex information is not conducive to being briefly read; furthermore, the combined presentation of positive and negative information might appear pedantic, which is not conducive to cognition. Sixty-four percent (34/53) of the posters did not use any gain or loss framed messages. Most of the posters did not use persuasive strategies but only used plain and direct language to instruct people to support organ donation; for example, one poster depicted photos of smiling people from various professions and stated “they all signed donor cards; please sign one too” in the text (Figure 4), without providing strong incentives for the recommended behaviors. Simply instructing the viewer with messages such as “sign a donor card” is not the most effective method of influencing a person to action (Jenner et al., 2005). People need to be persuaded to donate, and this motivation may be accomplished if they are strongly convinced that the behavior change poses benefits.

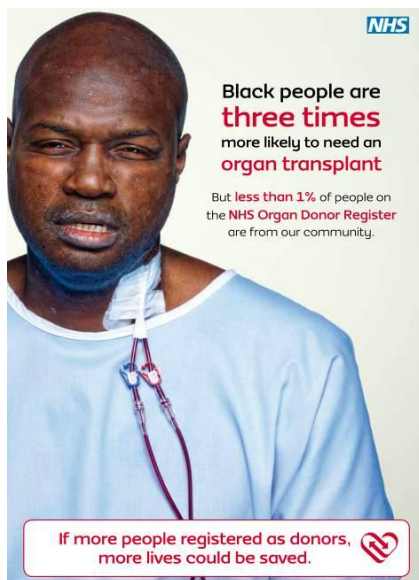


Figure 3 Organ donation poster (NHS Blood and Transplant, 2013).



Figure 4 Organ donation poster (American Hospital Association, 2013).

Of the 18 posters with gain-framed messages, 14 posters used “altruistic” gain-framed

messages (including selfless dedication, spreading love, continuation of life, understanding of happiness, rebirth, and vitality), which emphasized public welfare and charitable behavior. The other four posters emphasized “egoistic” gain-framed messages, which implied that organ donation makes the donor a hero. For example, one poster depicted a young man lying in a pool of blood, and his dying posture resembled a superman flying peacefully (Figure 5). The message-framed theory is based on the fact that people choose egoistic behaviors to obtain maximum benefits when facing choices; however, the organ procurement posters that employed framed messages all used altruism as their main appeal, and only a few used egoistic gain-framed messages. Whether the decision-making behavior of people who agree to donate organs is the same as egoistic behavior is not clear. Studies have indicated that the effective use of altruistic strategies combined with compassionate messages (Horton and Horton, 1991; Kopfman and Smith, 1996; Skumanich and Kintsfather, 1996) can inspire people’s potential willingness to donate organs; therefore, behavioral incentives that emphasize both altruism and egoism are feasible options for increasing the level of persuasion.

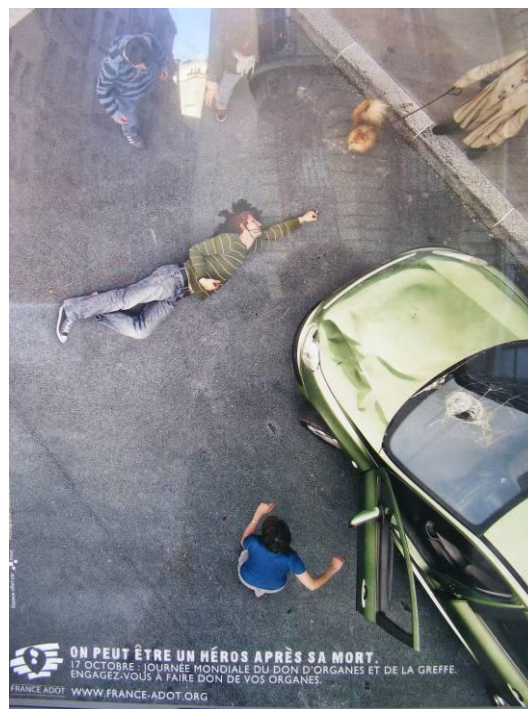


Figure 5 Organ donation posters (France ADOT, 2013).

In summary, the percentage of organ procurement posters that utilize framed messages is not high; thus, it is recommended that framed messages, especially gain-framed messages, be

adopted more often to heighten the posters’ persuasive powers. Providing negative and positive information combined should be avoided, as this may overtax the reader. The information content should balance egoistic and altruistic incentives in order to be more persuasive.

### Categories

Based on the characteristics of the graphical and textual content in the posters, the analysts suggested classifying the posters into four categories: instructional, educational, evidential, and charitable. The gain- or loss-framed messages that were represented by each of the categories are listed in Table 2.

Table 2 Framing of the messages (N = 53), based on category.

Category	Gain-framed messages		Loss-framed messages		Neither
	Attaining a desirable outcome	Risks an undesirable outcome	Risks an undesirable outcome	Attaining a desirable outcome	
Instructional	6				18
Educational	1		1		8
Evidential	6				0
Charitable	5				8
Total (N = 53)	18		1		34

#### Category 1: instructional

The instructional posters simply requested the viewer to agree to organ donation and sign a donor card. Twenty-four (24/53 = 45%) posters belonged to this category, of which six posters used positive messages, and 18 posters did not use framed messages. The difference between using and not using framed messages in posters of this category was that, in addition to instructing the viewers to act, the posters used framed messages and provided gain-type incentives to produce behavior motivations. In addition to using text to suggest that people sign a donor card and agree to donate their organs, two posters in this category also used celebrity images to endorse procurement. For example, one poster showed a soccer star holding a soccer ball stamped with procurement graphics, and the text said, “Please become



an organ donor. To sign a donor card, please contact...” Celebrity endorsement can reduce people’s sense of crisis and strengthen the information’s credibility (Soliha and Dharmmesta, 2012); however, it would be more persuasive if the celebrities concurrently employed framed messages. The instruction of one poster was not to inspire organ donation; instead, it targeted doctors and asked them to spend more time talking about organ donation to the public and to their patients. Because doctors are at the front line of medical care, their professional images are the most appropriate to deliver organ donation information (Figure 6). The posters targeted doctors as advocates because studies have indicated that health care workers need to receive education and training regarding organ donation; indeed, a majority of health care workers do not actively discuss organ donation with their patients, either due to personal ethical beliefs or because organ procurement is considered a sensitive topic (Chen et al., 2007).

In summary, it is recommended that organ procurement posters target different populations and use celebrity endorsements to provide sufficient behavior incentives via framed messages that persuade the viewer to perform organ donation-related behaviors.

talk to your family ... talk to your family ... talk to your family ... talk to your family ... talk to your family ... talk to your family ...

## Doctors and Organ Donation

We as doctors should discuss organ and tissue donation with our adult patients, and should encourage them to talk about it with their family. By talking with patients about donation, doctors can have a significant impact on organ donation rates, and can reduce the time recipients spend on the waiting list.

Patients considering registering as an organ donor confront their own mortality. Rarely do people choose to think about dying, especially when they're healthy. As a doctor, you can play a pivotal role in encouraging patients to think about organ donation now. Not only can you raise awareness of the issue and provide basic information, but as a trusted individual you can alleviate the very real fears and dispel the myths held by many regarding organ donation.

The Australian spirit is generous. According to the Australian Organ & Tissue Donation and Transplantation Authority, 79% of Australians are willing to become organ donors. However, people need to be encouraged to register and communicate their decision. Currently less than 60% of families consent for organ and tissue donation to proceed. The most important factor that helps the family's decision is knowing their relative's wishes; however, 43% of Australians do not know or are unsure of their relative's wishes. Where a relative's wishes are known, 93% of Australians support those wishes.

**The how, when and who of raising the issue of organ donation during a consultation**

We as doctors are in the best position to advise our patients to consider end-of-life issues, including organ and tissue donation decisions.

**HOW** We know that time is important in a normal consultation. However, a 15-second enquiry could save more lives than any register.

- Ask if your patient has considered registering for organ and tissue donation
- Encourage them to discuss it and their decision with their family
- Tell them there are registration forms in the waiting room
- Inform them you are there to answer any questions they may have.

**WHO** This means nearly all adults who are able to attend your surgery. Nearly all consultations would be suitable.

**WHEN** At least once to every patient. Perhaps a box could be put in the hard copy file or the computer record to indicate you have asked. Organ and tissue donation can also be incorporated into any discussion on advance care planning.

**Key Message One – “Talk to your family”**

In any discussion about organ and tissue donation, you should strongly encourage your patient to talk to their family. It is known that, regardless of a patient's status on the Australian Organ Donor Register, encouraging communication between your patients and their families about organ and tissue donation is the most likely way of helping to save the lives of those on the waiting list.

Health professionals who coordinate organ donation and provide support to families of potential organ donors find that families in that traumatic situation are often comforted by knowing what their deceased relative wanted.

Having the family know the relative's decision reduces family stress should the situation arise where they must make a decision regarding organ and tissue donation.

**Key Message Two – “Registering is about your decision, not your medical suitability”**

**Australian Organ Donor Register**

The Australian Organ Donor Register is a register of a person's consent or refusal to donate their organs and tissues. It is a register of their decision, not their medical suitability. The decision regarding suitability for donation of different organs and tissues will be made at the time of death. Medical technology and donor criteria are likely to change significantly over a person's life so you never know what organs or tissues may be suitable to save or improve a recipient's life. No medical condition should prevent an adult from registering their decision regarding their consent or refusal.

The Australian Organ Donor Register is one of consent, where one makes a decision to donate. This consent can be a decision to donate or a refusal to donate.

Even if a person has registered their decision to become an organ and tissue donor, the family will be asked about their loved one's wishes – if the family does not give consent, donation will not proceed. Families generally support a loved one's wishes if they know what they are.

People can register their decision to become an organ and tissue donor:

- at any Medicare branch, or
- at the Australian Organ Donor Register website to register online, or
- by calling Medicare Australia on 1800 777 203

Note that only persons who are aged 18 years or more can register their consent (or objection) on the Australian Organ Donor Register.

For further information on the Register, doctors or patients can call Medicare Australia on 1800 777 203.

If a person is not registered, the family will still be asked about their loved one's wishes. It is important that families are aware of each other's wishes.

Figure 6 Organ donation poster (Australian Medical Association, 2013).

## **Category 2: educational**

The educational posters provided relevant information about organ donation. Ten posters (10/53 = 19%) belonged to this category; only two employed framed messages, with one using positive information and one using negative information. Of the 10 posters in this category, six posters used text or graphics to describe organ donation methods and procedures, provide instructions regarding signing donor cards, explain the definition of brain death, describe organs in the body that can be donated, and clarify misconceptions regarding organ donation. Many investigators have reported that most people have positive attitudes about organ donation but that they lack relevant knowledge and motivation to guide their behavior; thus, providing relevant information regarding organ donation will increase donation behaviors (Evans and Manninen, 1988; McIntyre et al., 1987). One poster used a question-and-answer format to state, “Whether you agree with organ donation or not, it will not affect the quality of medical care, and the medical teams will try their best to take care of the patient to the last moments of life!”—to dispel the notion that organ donation promotes poor end-of-life care. The poster also explained that “all religions support organ donation” to dispel the notion that the whole body must be preserved after death (Figure 7). Therefore, refutational messages, which presented negative consequences of organ donation accompanied by factual counterarguments to those consequences, were more effective in persuading people to complete donor cards (Winkel, 1984). However, this poster did not provide information about filling out donor cards and did not use framed messages.

Four out of 10 posters in this category provided statistical data explaining the importance of organ donation, including the number of people waiting for transplantation, the number of donors per year, and the number of organs each donor could donate. Studies have revealed that messages that provide statistics commonly present a major premise along with supporting evidence in the form of empirical statistics and facts presented as a summary of a larger number of cases; this method efficiently disseminates information (Kotler et al., 1999) and can explain the demand for organ donation using convincing facts.

In summary, providing relevant organ-donation information (Evans and Manninen, 1988; McIntyre et al., 1987), increasing the information credibility through statistical data (Kotler et al., 1999), and providing refutational messages to dispel myths (Winkel, 1984) are all feasible

strategies to promote organ donation. If framed messages were combined at the same time, the presentation would be more highly persuasive.



Figure 7 Organ donation poster (Changhua Christian Hospital, 2013).

### Category 3: evidential

The evidential posters presented successful organ transplantation cases and stories. Six posters (6/53 = 11%) belonged to this category, all of which contained framed messages. Researchers have reported that narrative information influences the sensitive emotions of the audience, which is helpful for persuasion. Narrative information resembles a story, and people enjoy listening to stories, especially stories that use actual cases to elicit emotions (Allen and Preiss, 1997). Consequently, successful organ transplantation stories provide heart-felt evidence that can be forever internalized by the audience and constantly extracted from their memories (Kopfman and Smith, 1996). For example, one poster showed a photo and a quote from a young lady who had successfully received a double-lung transplantation and who described the medical miracles that she experienced (Figure 8); the other poster depicted a story about a woman who received a liver transplantation and become a good friend of the donor's mother. However, some posters in this category only presented cases such as a healthy and active baby after heart transplantation, a girl happily playing jump rope after receiving liver transplantation, and a father joyfully hugging family members after

receiving kidney transplantation; these posters do not use brief and emotional words to describe the importance of these narrative stories to trigger emotion.

In summary, a completely expressed narrative story not only contains gain-framed messages but also can affect the audience's sensitive emotions, which is helpful for persuasion.

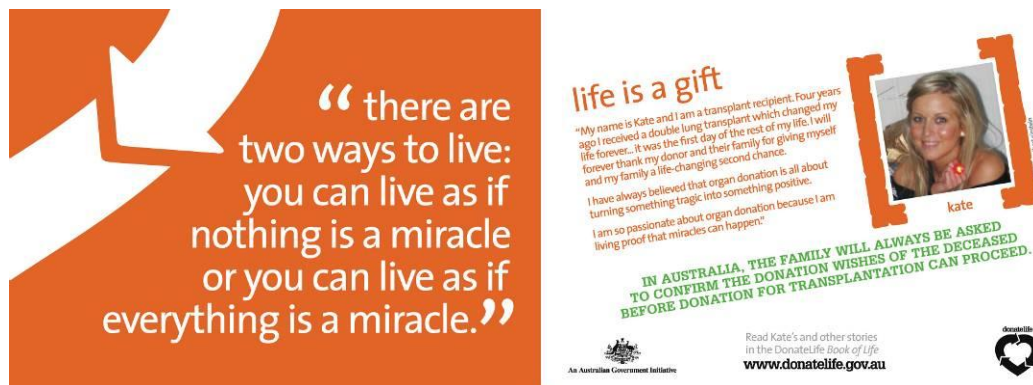


Figure 8 Organ donation poster (The Organ and Tissue Authority, 2013).

#### Category 4: charitable

The charitable posters attempted to heighten the viewer's altruistic and moral senses through different strategies. Thirteen posters (13/53 = 25%) were classified in this category, of which, five posters used positive information and eight posters did not use framed messages. The adopted strategies included statements that could heighten morality and benevolence, such as disseminating great love, helping people become reborn, preventing other families from breaking apart, and engaging in public welfare that promotes greater empathy in the donor. One poster even used the environmental protection and recycling concept by saying "go green, donate life" in its appeal (Figure 9). The charitable posters used altruism as their main appeal. As aforementioned, this method may increase the power of persuasion if the information content provides both public welfare motivations and egoistic incentives.

The categorization of the 53 posters and their methods of using framed messages were summarized. According to above mentioned, the suggested gain-framed messages of organ procurement are presented in Table 3.

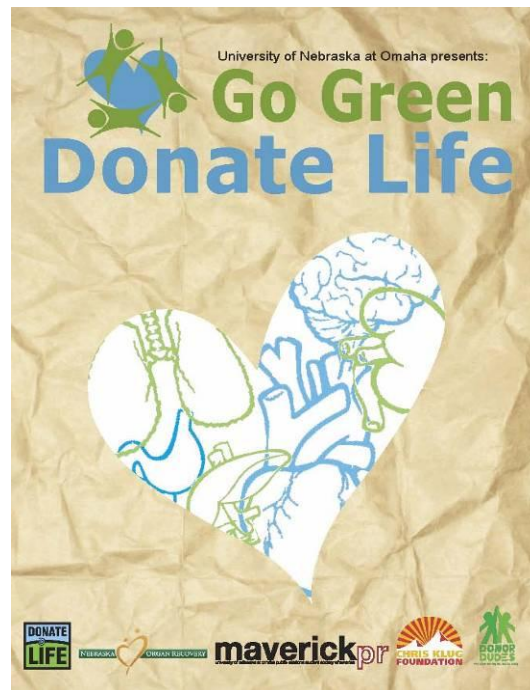


Figure 9 Organ donation poster (Organ and Tissue Donation Blog, 2013)

Table 3 Feasible suggestions for organ donation messages, derived from analysis of the four different poster categories.

Category	Suggestions
Instructional	<ul style="list-style-type: none"> <li>● Designing the poster content for different populations.</li> <li>● Strengthening information credibility via celebrity endorsements.</li> <li>● Using framed messages to provide behavioral incentives to instruct the audience.</li> </ul>
Educational	<ul style="list-style-type: none"> <li>● Increasing organ donation awareness by educating the audience.</li> <li>● Increasing information credibility using statistical data.</li> <li>● Providing refutational messages to dispel myths and increase donation willingness.</li> <li>● Using framed messages to provide sufficient behavior incentives to educate the audience.</li> </ul>
Evidential	<ul style="list-style-type: none"> <li>● Evidential posters usually already contain gain-framed messages.</li> <li>● In addition to photos, narrative descriptions of successful transplantation cases should be added.</li> </ul>
Charitable	<ul style="list-style-type: none"> <li>● Public welfare motivation and egoistic incentives should be</li> </ul>

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provided in combination.

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### **Conclusions**

Posters are one of the major forms of media used to promote organ donation. Most posters plainly and directly emphasize saving lives; however, whether this approach is sufficient to induce behavior motivation must urgently be reconsidered by design units and advocacy institutions. Some of the posters employed effective strategies, such as celebrity endorsements, statistical data, refutation of myths, successful transplantation cases and stories, and public welfare appeals. If these techniques are combined with message framing and if the persuasive power of the posters is clinically studied, then the persuasive power might be strengthened and the willingness of individuals to sign organ-donation consent cards might increase.

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