

For Love or Money? Attitudes Toward Financial Incentives Among Actual Living Kidney Donors

M. C. van Buren^{a,*}, E. K. Massey^a, L. Maasdam^a,
W. C. Zuidema^a, M. T. Hilhorst^b, J. N. IJzermans^c
and W. Weimar^a

^aDepartment of Internal Medicine, ^bMedical Ethics and Philosophy and ^cGeneral Surgery, Erasmus MC, University Medical Center Rotterdam, the Netherlands
*Corresponding author: M.C. van Buren,
mcvanburen@gmail.com

Due to lengthening waiting lists for kidney transplantation, a debate has emerged as to whether financial incentives should be used to stimulate living kidney donation. In recent surveys among the general public approximately 25% was in favor of financial incentives while the majority was opposed or undecided. In the present study, we investigated the opinion of living kidney donors regarding financial incentives for living kidney donation. We asked 250 living kidney donors whether they, in retrospect, would have wanted a financial reward for their donation. We also investigated whether they were in favor of using financial incentives in a government-controlled system to stimulate living anonymous donation. Additionally, the type of incentive deemed most appropriate was also investigated. In general almost half (46%) of the study population were positive toward introducing financial incentives for living donors. The majority (78%) was not in favor of any kind of reward for themselves as they had donated out of love for the recipient or out of altruistic principles. Remarkably, 60% of the donors were in favor of a financial incentive for individuals donating anonymously. A reduced premium or free health insurance was the preferred incentive.

Key words: Donors, financial incentives, living kidney donation

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Introduction

One option to help shorten the wait list for kidney transplantation is to expand the living donor pool (1). This can be achieved by accepting genetically unrelated individuals as donors (2), by kidney exchange (3), desensitization pro-

grams for ABO incompatible pairs (4), cross match positive pairs (5) and by allowing altruistic donors to donate to a stranger (in an anonymous or nonanonymous way) (6). Although these living donation programs, based on the idea of donation being a gift without a financial reward, have certainly resulted in more kidney transplantations, wait lists nevertheless, continue to grow. It has therefore been proposed to introduce financial incentives in an attempt to further increase the number of living kidney donors (7). Arguments for and against financial incentives and regulated organ markets have been debated since the early 1990s (8–12). A recent Dutch report suggested that a regulated organ market should be overseen by a single body that is appointed by the government. In the Netherlands this could be the Dutch Transplant Foundation. It is not certain that financial incentives will increase the number of living donors, therefore it is necessary to hear the opinions of all the parties involved such as the general public who are potential future donors, health care practitioners, end-stage renal disease patients, transplant patients and of course those who have actually undergone living kidney donation. However, relatively few surveys have been published on the opinion of the general public on financial incentives for organ donation (13–17). Comparison of these studies is difficult as different types of incentives were studied. The latest study performed in the Netherlands shows that 25% (n = 550) of the general public is in favor of incentives offered by health care insurance companies (16). Even fewer studies have been conducted among health care workers (13,18). One example is a study by Mazaris, which showed that 18% (n = 108) thinks financial rewards for anonymous donors are desirable. Recently, a survey among end-stage renal disease patients showed that 78.5% are willing to pay for a kidney transplant (19). Remarkably, the opinion of actual living kidney donors has never been investigated. Their attitude toward financial incentives within a regulated system is worthwhile because in contrast to the general public, they have experienced the donation procedure and have witnessed the impact their donation had on the recipient's life. Prior living donors remain a mainstay of the discussion regarding public policy governing living donors in many countries, and for that reason an investigation of their views is of interest. In addition to investigating the donor's opinion on financial incentives, we also studied whether opinions varied according to socio-demographic characteristics and the general health rating of the donor.

Methods

The Dutch situation

In the Netherlands health insurance is obligatory. Part of these costs is covered by the employer and on average the individual pays about €100 per month toward their premium. For living donors all costs of screening, the operation and hospital stay are covered by the health care insurance of their recipient. Travel expenses and loss of income for the first 6 weeks after donation are reimbursed by a special governmental fund. The intraoperative and postoperative complication rate for laparoscopic donor nephrectomy in the Netherlands is 6% (20). We have no reason to believe that the complication rate in Rotterdam is any higher or lower and we have no fatalities to date. In general, the long-term consequences of kidney donation and the effect on renal function are also limited (21). In Rotterdam, donors are offered a life-long free annual check-up performed by nurse practitioners at the outpatient clinic. Costs of these life-long check-ups are covered by the hospital. After their annual check-up, the donors were asked to participate in this study. The study took place over a 9-month period from October 2008 to July 2009.

Measures

Firstly, we assessed participant's gender, age, time since donation, relation to the recipient, race, religion, education level, employment status and marital status. Education was categorized into low, mid and high. Low education refers to no education or primary school, mid education level refers to at least high school and high education refers to college or university level education. Secondly, we assessed donor's opinions regarding financial rewards for living donation. We developed a questionnaire to investigate these opinions (Table 2). An interdisciplinary team advised on the structure and contents of the questionnaire. The following questions were posed: (1) It has been suggested to routinely give living donors some kind of financial reward (by the government), do you agree with this?; (2) at the time of your donation, would you have wanted a financial reward for your kidney donation?; (3) if yes what kind of incentive would you consider to be most appropriate?; (4) if a financial reward for donation was introduced would you like to receive it?; (5) are you in favor of using financial incentives (by the government) to stimulate living anonymous donation?; (6) if yes, what kind of financial incentive would you consider to be most appropriate?; (7) do you have any suggestions to stimulate living kidney donation other than introducing financial incentives? Answer categories for questions 1, 2, 4, 5 and 7 were yes, no or do not know. We also asked the donors to explain their answers. The preferred reward or incentive (questions 3 and 6) was assessed using a choice consisting of reimbursement of actual costs, fixed sums of money or indirect rewards such as reduced or free health care premiums. For this study, we also took in consideration the general health rating both before and 3 months after their donation. Current general health is measured using Visual Analogue Scale ranging from 1 to 10. This is part of the standard procedure for every donor.

Statistical analysis

Data were analyzed with SPSS for Windows, version 17.0 (SPSS Inc., Chicago, IL, USA). For purpose of analysis, we condensed some of the demographic data into broader categories. Relationship to the recipient was grouped into genetically related or genetically unrelated. Employment was grouped into being in paid employment or not. Because the number of donors per religion were small, religion was grouped into religious or non-religious. Marital status was grouped into married/living with a partner or living alone (including individuals who were divorced or widowed). Relationships between donor characteristics and donor opinions were first analyzed using chi-squared analysis. All statistically significant variables were entered into a logistic regression model.

Results

Donor characteristics

Donor socio-demographic characteristics are shown in Table 1. Slightly more women than men were included in the sample. Time since donation was distributed between 0 and 26 years (median 3 years). The majority of donors were genetically related, well educated and married or living with a partner. There were no significant differences in demographic data between the study group (n = 250) and the total living donor population (n = 893), who donated at our centre since the introduction of living kidney donation in 1981. The one exception was that the percentage of non-European donors (7%) was significantly lower (p < 0.05) in the study group compared to the overall donor population (15%). Because this subgroup is small and not representative for the overall donor population this variable was not used for further analysis. The data of

Table 1: Characteristics of the living donors (n = 250)

	Sample Living Kidney Donors n (%) ¹	
Males/Females	119 (48)/131 (52)	
Time since donation (years)	Median: 3	
	Range: 0–26	
Age at donation (years)	18–40	57 (23)
	Median: 51	131 (52)
	Range: 18–79	62 (25)
Genetically related (yes/no)	151 (60)/99 (40)	
	Genetically related	151 (60)
	Genetically unrelated	57 (23)
	Altruistic (anonymous)	20 (8)
	Exchange program	22 (9)
European (white) (yes/no)	232 (93)/18 (7)	
	Asian	7 (3)
	Turkish	6 (2)
	Arabic	2 (1)
	African	3 (1)
Religion (yes/no)	118 (47)/125 (50)	
	Christian	104 (42)
	Islamic	11 (4)
	Buddhism / Hinduism	3 (1)
	Non religious	125 (50)
Education level	Low	64 (26)
	Mid	119 (48)
	High	59 (24)
Employment (yes/no)	161 (64)/83 (33)	
	Fulltime job	106 (43)
	Part-time job	55 (23)
	Retired	37 (15)
	No paid job	46 (18)
Living with partner (yes/no)	187 (75)/63 (25)	
	Married	159 (64)
	Living together unmarried	28 (11)
	Widow	16 (6)
	Single	37 (15)
	Divorced	10 (4)

¹Percentages may not add to 100% due to missing values or rounding up or down.

the general health ratings were not normally distributed; therefore a Wilcoxon signed-ranks test was conducted. This demonstrated that general health after donation (median = 9, range 4–10) was significantly higher ($p = 0.01$) than prior to donation (median = 8, range 5–10). We also compared the positive, negative and tied ranks of this test with the answers to our questionnaire using chi-squared analysis. The donors who reported a lower health rating after donation did not report significantly different opinions regarding financial rewards for donation than other donors ($p > 0.05$).

Rewards in general

In response to the first general question about introduction of rewards by the government, almost half of the donors (46%) were positive, while one-fifth (17%) were undecided (see Table 2).

Financial rewards for oneself

Of the 250 donors, 49 (20%) would have wanted some form of financial reward for themselves. The main reason they gave was that the system of reimbursement of costs is time consuming. A second reason was that donors feel they had benefited society by saving patients from expensive dialysis, so a small financial reward would be fair. The majority were not in favor, because they had donated to their loved ones and their reward was the improved health of the recipient. Some donors reported spontaneously that they already received a reward from the recipient, ranging from weekly meals to exotic vacations, racehorses or paintings. Of the 20 altruistic donors who donate to a stranger and therefore cannot enjoy the health benefits or material gifts from the recipient, five persons reported that they would have wanted some kind of financial reward for their deed. Among the 49 (20%) in favor of an incentive (see Table 2, item 3), 23 donors (47%) preferred a reduced fee or a free health insurance premium, 15 donors (31%) preferred a full reimbursement of costs with less paperwork and eight donors (16%) preferred a fixed sum of money. The amounts chosen varied from €500 to €10 000. If financial rewards for donation were introduced and paid out retrospectively (Table 2, item 4) money would be accepted by 118 (47%) of the donors who participated in the study.

Financial incentives for others

On the subject of stimulating living anonymous kidney donation using financial incentives, the majority (60%) were in favor. Most of them reported that the donation process has been so easy for them and the improvement in quality of life for their recipient so remarkable, therefore everything should be done to stimulate living kidney donation including financial incentives. Eighty-five donors (34%) were not in favor of using financial incentives for anonymous donors; their main reason was that kidney donation should be a gift. They were also afraid that introducing such a system would lead to organ trad-

Table 2: Interview items

Item description	Response options	Results n (%) ¹
1. It has been suggested to routinely give living donors some kind of financial reward (by the government). Do you agree with this?	Yes	114 (46)
	No	94 (38)
	Don't know	42 (17)
2. At the time of your donation, would you have wanted a financial reward for your kidney donation?	Yes	49 (20)
	No	194 (78)
	No opinion	7 (3)
3. If yes, what kind of financial incentive would you consider to be most appropriate?	All expenses	15 (31)
	€500–1.000	3 (6)
	€5.000–10.000	3 (6)
	€25.000	1 (2)
	> € 25.000	1 (2)
	Discount health insurance premium	17 (35)
	Free health insurance premium	6 (12)
4. If a financial reward for donation was introduced, would you like to receive it?	Yes	118 (47)
	No	77 (31)
	Don't know	55 (22)
5. Are you in favour of using financial incentives (by the government) to stimulate living anonymous donation to the wait list?	Yes	150 (60)
	No	85 (34)
	Don't know	15 (6)
6. If yes, what kind of financial incentive would you consider to be most appropriate?	All expenses	8 (5)
	€500–1.000	4 (3)
	€5.000–10.000	11 (7)
	€25.000	6 (4)
	> €25.000	3 (2)
	Discount health insurance premium	47 (31)
	Free health insurance premium	70 (47)
7. Do you have any suggestions to stimulate living kidney donation other then introducing financial incentives? What kind of suggestions?	Yes	129 (52)
	No	98 (40)
	Don't know	21 (9)

¹Percentages may not add to 100% due to missing values or rounding up or down off.

ing and organ tourism. The majority of the donors in favor (117/150, 78%) chose a reduced fee or free health care premium as the preferred incentive (see Table 2). Rated second was a fixed amount of money; the amounts chosen varied from €5000 to €10 000.

Differences in opinion according to donor characteristics

We tested for differences in opinion according to characteristics of the donors. A significant difference was found in attitude toward a financial reward between religious and nonreligious donors ($p = 0.03$). Religious donors were less likely to be in favor of a financial reward for kidney donation

Table 3: Logistic regression question 1

Variables in the equation	B	Significance
Time since donation	0.03	0.34
Male or female ²	0.42	0.17
Paid job yes or no ²	0.16	0.69
Living with a partner yes or no ²	0.55	0.12
Religion yes or no ²	-0.67	0.03
Education level low ² or mid	0.44	0.25
Education level low ² or high	0.36	0.40
Related or unrelated ²	-0.36	0.28
Age at donation 41-59 ² or 18-40 years	-0.22	0.58
Age at donation 41-59 ² or 60-80 years	-0.17	0.70
Constant	-0.63	0.52

Note: Donors in agreement with routine financial rewards for living donors.

¹Nagelkerke R Square 0,095.

²Indicates reference group.

(see Table 3). For attitudes toward financial incentives for anonymous donation there was a significant difference in age ($p = 0.02$). However, this statistical difference was not linear; therefore we divided this variable into three groups following Boulware (14). The group who donated at the age of 41-59 years were more in favor of stimulating living anonymous kidney donation using financial incentives than the groups aged between 18-40 and 60-80 years (see Table 4). Donors who live with a partner were also more positive toward financial incentives ($p = 0.01$) compared to donors who live alone. No statistical differences were found according to gender, employment status, education level or relationship with the recipient.

Ideas on stimulating living donation

We ended the interview by asking the donors if they had any ideas on how to stimulate living kidney donation. Fifty-two percent of the donors answered this question with yes, of which one-third believes that there should be more attention in the media for living donation, and almost one-fifth said that living donors should talk more openly about

Table 4: Logistic regression question 5

Variables in the equation	B	Significance
Time since donation	0.07	0.04
Male or female ²	0.26	0.41
Paid job yes or no ²	0.22	0.57
Living with partner yes or no ²	1.07	0.00
Religion yes or no ²	-0.28	0.37
Education level low ² compared to mid	-0.11	0.76
Education level low ² compared to high	-0.16	0.71
Related or unrelated ²	-0.42	0.22
Age at donation 18-40 or 41-59 ² years	-0.69	0.07
Age at donation 41-59 ² or 60-80 years	0.96	0.02
Constant	-2.40	0.01

Note: Donors in favor of using financial incentives to stimulate individuals donating anonymously to the wait list.

¹Nagelkerke R. square: 0.095 (goodness of fit).

²Indicates reference group.

their experiences. More than a quarter of the donors answered that the donor register system should be changed from an opt-in to an opt-out system so less living donors would be needed.

Discussion

Many countries, including the Netherlands, have a system in which the direct financial costs incurred from donation are covered; however, hidden costs must be borne by the donor (22). This survey describes for the first time the attitude of living kidney donors toward financial rewards and incentives. The majority of the living donors would not have wanted any financial reward for themselves, because they donated a kidney out of love for the recipient or altruistic principles and were already rewarded by the improved quality of life of the recipient. Nevertheless, one-fifth of the donors in this study were of the opinion that some kind of financial reward would have been appropriate. The preferred financial reward for themselves was modest: a reimbursement of actual costs or a discount on their health insurance premium. This was not seen as an incentive but rather as a gesture of appreciation for what they have done. This outcome did not differ according to the characteristics of the donor, including the relationship with the recipient. Approximately, half of the actual donors (Table 2, item 1) were in favor of the introduction of a system in which a reward for living kidney donation would be given by the government. An even higher percentage (60%) was of the opinion that financial incentives could be used to stimulate anonymous kidney donation. Donors often commented that in their experience the donation process had minimal impact, compared to the major improvement of quality of life of their recipient. Religious donors were less positive toward introducing financial incentives. The reason for this may be the belief that the human body is sacred; that a price cannot be put on the gift of a kidney and thus donating a kidney should always be a purely altruistic act. Donors who live with a partner were more positive toward financial incentives for kidney donation. Most likely, many of them had donated a kidney to their partner and had experienced the impact that end-stage renal disease, dialysis and transplantation had on their lives. The group who donated at the age of 41-59 years was also more positive toward financial incentives for kidney donation, compared to the younger and older age groups. A possible explanation could be that this middle-aged group is more dependent on a steady income because they have larger households to support and therefore financial incentives are an important consideration in their decision to donate.

Limitations to the Study

This study aimed to investigate the opinion of donors on using financial incentives to stimulate living kidney donation. It is important to state that we only included donors who had donated in the current system, so individuals who

would donate only if they were paid for this are automatically excluded. In addition, we did not ask the donors if they would still donate if a financial incentive had been offered at the time of donation. We do know that 47% would accept a financial reward if it were to be paid out retrospectively. It could be that some donors would only donate for love and not for money. In our study, we did not investigate whether or not financial incentives would undermine altruistic reasons to donate (23). To make any comparisons between the general public, more information about the outcome of their donation is needed, because this could be of influence on their opinion.

Conclusions

Notwithstanding these limitations we can conclude that although living kidney donors in this study had donated their kidney out of love, one-fifth would nevertheless have wanted a modest financial reward. The majority are positive toward the use of financial incentives to stimulate anonymous donation. The positive effect of their donation may have convinced them that any means of promoting living donation, including financial should be tried to stimulate living kidney donation. The findings of our study suggest that an 'indirect' reward, such as life-long exemption from medical insurance premiums, deemed to be the most appropriate option. This form of reward fits the aim of donation (preventing illness, promoting health and saving costs) (8). In further studies, it would be interesting to investigate the donor's opinion on Titmusses' theory (23) that paid donation would undermine motives like personal involvement, mutuality and altruism or whether a regulated market would reduce the pressure to donate. It is of interest to know whether incentives might discourage some potential living donors. Who would only donate in an altruistic system and who would not donate if others do it for money?

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Disclosure

The authors of this manuscript have no conflicts of interest to disclose as described by the *American Journal of Transplantation*.

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