



Original Article

Blood Donors Recruitment and Incentives in Bangladesh

M Mahbub-ul-Alam¹, Mamun Ur Rashid², A R M Saifuddin Ekram³

Abstract

The potential effectiveness of various donation incentive programs may vary by demographics and first time or repeat status. Attitudes towards future incentives were obtained from 2,897 whole blood donors among 5,357 allogenic donors who return a questionnaire (54.08% response rate). Majority were first time donors 67.59% (1,958) with 32.41% (939) repeated donor. Majority of the respondents were male 68.52% (1,985), female 31.48% (912). Responses to incentives were compared between first time and repeat whole blood donors.

Incentives most likely to encourage donation return among all 2,897 whole blood respondents were blood screening test (B.S.T), against transfusion transmitted infection (T.T.I) 71.65%, blood credits- 61.55%, cash to charity- 43.35% and gift- 27.6%. The incentives that would be least likely to encourage return were a token or award of appreciation- 15.85%.

Few donors would be discouraged to return if offered B.S.T against T.T.I (0.25%), other miscellaneous incentives (1.31%), a gift (2.15%), a token of appreciation (1.95%). Compensatory incentives could potentially have a more negative impact because 7 to 9 percent of donors reported they would be discouraged for donating if they received cash or lottery or raffle ticket.

Young (18-25 years old) donors were encouraged by B.S.T against T.T.I (58.4%) and older (51 years old) donors (58.4%); more than 2 hours off work (46.2% and 13.7%); community service and / or education credits (44.2% and 10.7%); or compensatory incentives (56.9% and 15.8% for cash to charity 57.8% and 26.7%); gifts (39.6% and 11.4%) or a token of appreciation (27.4% and 10.0%) respectively.

Blood screening and blood credits would be well received at all donation sites. Gift, compensatory incentives and token of appreciation appeal more to younger donors. These data may allow blood centers to optimize recruitment by tailoring limited incentive recourses more effectively.

TAJ 2007; 20(2): 129-135

Introduction

The margin between blood supply and demand increases. The number of whole blood (WB) and RBC units collected needs to significantly increase to maintain a sufficient margin of blood adequacy, considering the new deferral criteria for Safe Blood Transfusion, Bangladesh (SBTB) and the increasing the demand for blood resulting from an

aging population and an increase number of transfusion requiring medical procedures. Further, an over all positive balance in supply and demand may not preclude blood type specific shortages or cancellation of postponement of elective surgeries in some hospitals. Hence, increasing blood collection is a priority issue for most blood centers. An understanding of what influences

¹ Assistant Register, Transfusion Medicine Department, Rajshahi Medical College Hospital, Rajshahi.

² Professor, Department of Pharmacology, Rajshahi Medical College, Rajshahi.

³ Professor, Department of Medicine, Rajshahi Medical College, Rajshahi.

donors donate will facilitate improvements in requirement and retention programs.

Altruism, appeals for blood, and social pressure friends and family are key factors in the decision to donate.^{1,2} Donation incentives are often used to enhance the effectiveness of recruitment and retention campaigns,³ although their role in encouraging donors to return has not been clearly established. There is also concern that incentives may detrimentally affect the safety of the blood supply by differently attracting at-risk donors who may conceal some risk behaviors at time of donor screening to obtain the incentives. Further, it is possible that some incentives may discourage further donation from current donors who primarily donate for altruistic reasons. Two reports^{4,5} in the late 1950 showed a higher incidence of post-transfusion hepatitis in paid donors and engendered a debate over paid donations that raged for the next two decades. By the early 1970 most organization supported an all-volunteer blood-donor system.⁶ In 1978, the FDA required that all blood and blood products intended for transfusion be labeled as 'paid' or 'volunteer'. With paid donors defined as donors who receive cash or any item that can be readily converted to cash.⁷ The Compliance Policy guide⁸ recently issued by the FDA describes how to evaluate whether an incentives is readily convertible to cash and provides some illustrative examples. Although the debate over paid versus volunteer donations has largely abated, increasing demands for blood components and concerns about shortages have lately received debates on the issue (Research and Progress session at the 2001 AABB annual meeting). Donors' attitude towards compensatory incentives may have changed in the last 20 years and need to be received in the context of an all-volunteer system. Additional, attitudes toward incentives may be different if an incentive is offered to a first time versus repeat donor, to a younger versus an older donor, or if donation occurred at a college or university site.

To increase our understanding of factors that could enhance donation return in community whole blood donors. Response to future incentives in first

time and repeat donors, in various demographic groups and donation sites and complements a previous analysis that contrasted response to incentives in repeat whole blood and aphaeresis donors.⁹

Materials and Methods

The study was done in the Transfusion Medicine Department, Rajshahi Medical College Hospital. From April'2005 to March'2006.

Donor classification

This analysis was restricted to community WB donors who responded to the survey. These donors denied last giving an aphaeresis or a directed donation on the questionnaire and were by default assumed to have given a WB donation (autologous donations were not eligible for sampling). Repeat donors are defined as donors who either had indicated at the time of donation that this was not the first time they gave blood at the centre or had prior donations documented in the other blood centre. In contrast, first time donors indicated this was the first time they donated at the centre and had no prior donation record in the data base.

Response to incentives

Response to incentives (encouraged, discouraged, makes no difference) were evaluated using questionnaire data. Incentives were classified into four major groups based on an AABB report as follows

1. '*Miscellaneous*' incentives including B.S.T against T.T.I such as HBsAg, Anti-HBC, Anti-HIV, VDRL, and Malaria parasite testing and other miscellaneous type of incentives such as receiving *blood credits* (a credit given to donors , or other designates , to be applied toward the fee they need to pay if they receive blood in the future). Cancellation of a '*replacement fee*' (the fee charged a patient for receiving blood components when other donors [i.e., friends or family members] do not replace the blood used by he patient), receiving more than 2 hours *off from work, community service or education credits*.

2. '*Compensation-payment*' incentives including *cash payment* to the donor , cash payment to

organization such as social or fraternal club to which the donor the donor belonged, *lottery tickets, discount or free merchandise* from a store or a restaurant, and *tickets to concerts*, sporting event, or some other type of event

3. ‘*Gift*’ including T-shirt, coffee mugs, and other small items and

4. ‘*Token of appreciation*’ including items such as pins of recognition, certificates, and a bumper stickers.

Statistical analyses

The data collected were transferred to the master tabulation sheet after proper checking, verifying and editing as per the specific objectives and key variables, Analysis of the data were done finally with the SPSS/PC Program of computer on the basis of different variables. Tables were made available data and statistical procedures were applied in analysis the data whenever felt necessary.

Results

We identified 2,897 WB donors among 5,357 allogenic donors who return a questionnaire (54.08% response rate). The majority were first time donors 67.59% (1,958) with 32.41% (939) donating for the repeat. Majority of the respondents were male 68.52% (1,985) and female 31.48% (912).

Overall attitudes toward future incentives are presented in figure-01. Donors are most likely to report they would be encouraged to return if offered B.S.T against T.T.I -71.65%, blood credits-61.55%, cash to charity-43.35 and gift-27.6%. The incentives that would be least likely to encourage return were a token or award of appreciation-15.85%.

Few donors would be discouraged to return if offered B.S.T against T.T.I (0.25%), other miscellaneous incentives (1.31%), a gift (2.15%), a token of appreciation (1.95%). Compensatory incentives could potentially have a more negative impact because 7 to 9 percent of donors reported they would be discouraged for donating if they received cash or lottery or raffle ticket.

We then evaluated whether attitudes toward potential incentives differed by demographics, first time versus repeat status. There was a strong inverse association between age and level of encouragement for all other incentives (Table-I). Younger (18-25 years old) donors were encouraged by B.S.T against T.T.I (58.4%) and older (51 years old) donors (58.4%); more than 2 hours off work (46.2% and 13.7%); community service and / or education credits (44.2% and 10.7%); or compensatory incentives (56.9% and 15.8% for cash to charity 57.8% and 26.7%); gifts (39.6% and 11.4%) or a token of appreciation (27.4% and 10.0%) respectively.

First time donors were more likely to be encouraged by B.S.T against T.T.I (71.8%), other Miscellaneous incentives: blood credits (62.8%), >2 hours off work (36.8%), community service/Education credits (22.4%), except for cancellation of a replacement fee(43.4%), compensatory incentives: cash to donor (38.4%), cash to charity (45.8%), discounts (36.0%) , tickets to movies, concerts (35.8%), except for lottery/raffle (28.7%), Gift (28.9%) and a Token of appreciation (19.1%) than *repeat donors* B.S.T against T.T.I (71.5%), other Miscellaneous incentives: blood credits (60.3%), >2 hours off work (32.3%), community service/Education credits (16.6%), except for cancellation of a replacement fee (46.1%), compensatory incentives: cash to donor (31.8%), cash to charity (40.9%), discounts (33.2%) , tickets to movies, concerts (32.1%), except for lottery/raffle (36.7%), Gift (26.3%) and a Token of appreciation (12.6%) (Table-2).

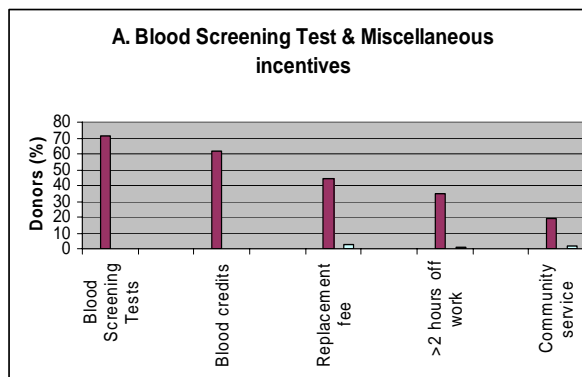


Table-I: Attitudes (% encouraged, % discouraged) to ward incentives by age.

	Age (years)				
	18-25	26-35	36-45	46-55	≥56
Blood Screening Tests					
Encouraged (%)	58.4	63.2	61.2	61.6	58.4
Discouraged (%)	0.2	0.1	0.1	0.1	0.2
Miscellaneous					
Blood credits					
Encouraged (%)	63.5	58.5	58.6	59.3	57.7
Discouraged (%)	0.3	0.3	0.2	0.2	0.1
Replacement fee					
Encouraged (%)	38.0	38.8	42.9	47.6	42.9
Discouraged (%)	2.2	2.0	2.1	2.0	3.1
>2 hours off work					
Encouraged (%)	46.2	44.6	38.6	31.9	13.7
Discouraged (%)	1.6	1.3	1.0	0.8	0.7
Community service / Education credits.					
Encouraged (%)	44.2	25.7	21.5	17.3	10.7
Discouraged (%)	0.9	1.1	1.3	1.6	2.1
Compensatory					
Cash to donor					
Encouraged (%)	56.9	44.3	33.9	24.4	15.8
Discouraged (%)	4.5	5.6	7.1	9.2	10.2
Cash to charity					
Encouraged (%)	57.8	47.4	41.2	36.9	26.7
Discouraged (%)	2.3	3.0	3.6	4.5	6.2
Lottery/raffle					
Encouraged (%)	39.4	31.3	26.8	18.9	12.0
Discouraged (%)	6.5	6.6	8.7	10.2	12.2
Discounts					
Encouraged (%)	54.7	44.2	33.6	27.3	18.6
Discouraged (%)	3.2	3.2	4.5	6.3	8.5
Tickets to movies, concerts					
Encouraged (%)	58.5	43.5	35.4	28.3	17.7
Discouraged (%)	1.9	2.0	2.9	3.8	4.4
Gifts					
Encouraged (%)	39.6	33.2	25.7	17.9	11.4
Discouraged (%)	1.6	1.3	1.8	2.8	3.4
Token					
Encouraged (%)	27.4	19.5	14.2	12.0	10.0
Discouraged (%)	1.3	1.6	1.7	2.2	2.7

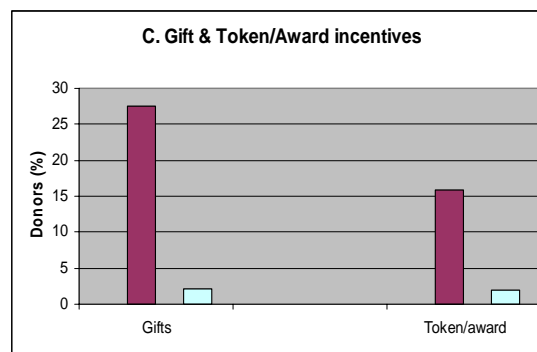
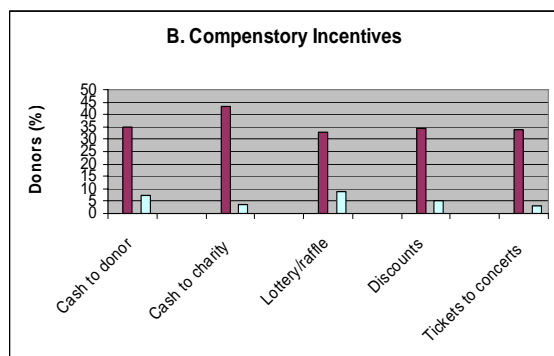


Fig. 1. Potential response to blood screening test & miscellaneous incentives (A), Compensatory incentives (B), Gift and Token/Award incentives (C). Bar show the percentage encouraged (dark) or discouraged (light) by the incentives.

Table-II. Attitudes (% encouraged, % discouraged) to ward incentives by donor status (first time, repeat).

	Total Number of Donor	First time donor	Repeat donor
Blood Screening Tests			
Encouraged (%)	71.65	71.8	71.5
Discouraged (%)	0.25	0.2	0.3
Miscellaneous			
Blood credits			
Encouraged (%)	61.55	62.8	60.3
Discouraged (%)	0.3	0.4	0.2
Replacement fee			
Encouraged (%)	44.75	43.4	46.1
Discouraged (%)	2.35	2.7	2.0
>2 hours off work			
Encouraged (%)	34.55	36.8	32.3
Discouraged (%)	1.2	1.5	0.9
Community service / Education credits			
Encouraged (%)	19.5	22.4	16.6
Discouraged (%)	1.4	1.4	1.4
Compensatory			
Cash to donor			
Encouraged (%)	35.1	38.4	31.8
Discouraged (%)	7.25	7.0	7.5
Cash to charity			
Encouraged (%)	43.35	45.8	40.9
Discouraged (%)	3.85	3.8	3.9
Lottery/raffle			
Encouraged (%)	32.7	28.7	36.7
Discouraged (%)	8.9	9.1	8.7
Discounts			
Encouraged (%)	34.6	36.0	33.2
Discouraged (%)	5.1	5.2	5.0
Tickets to movies, concerts			
Encouraged (%)	33.95	35.8	32.1
Discouraged (%)	2.95	2.9	3.0
Gifts			
Encouraged (%)	27.6	28.9	26.3
Discouraged (%)	2.15	2.2	2.1
Token			
Encouraged (%)	15.85	19.1	12.6
Discouraged (%)	1.95	2.1	1.8

Discussion

Most donors reported they would be encouraged to donate if offered B.S.T against T.T.I report or blood credits. Attitudes toward these incentives did not seem to significantly vary by demographics, first time versus repeat status. B.S.T against T.T.I report has been demonstrated to be an effective recruitment tool that also has beneficial health effects because it alerts some donors to seek medical evaluation and treatment. In 2005, only two volunteer organizations, Badhon

and Swazon in our study offered B.S.T against T.T.I and two volunteer organizations, Sandhani and Rotaract offered Blood credits. Hence some donors may have in part favored these incentives because they would be novel. Finding that a token of appreciation that is routinely offered at all volunteer organizations was associated with the lowest level of encouragement reinforces this possibility. Donors who would be encouraged by B.S.T against T.T.I report had similar unreported deferrable risk levels than donors who are not encouraged. Hence these B.S.T against T.T.I

report incentives offered to donors of appropriate age would probably be well received without detrimentally affecting blood safety. We found that the highest level of discouragement was obtained for compensatory- type incentives, in particular lottery or raffle tickets and cash to a donor. Donors who give primarily for humanitarian reasons and in response to appeals for blood.⁴ May not want to be compensated for what they perceive is a charitable action, monetary incentives may deter future donation by negatively affecting intrinsic motivation.^{10,11}

Using data from the present survey, we also observed that repeat whole blood donors who reported they would be encouraged to donate by cash 70% more likely to have a unreported deferrable risk than donors who would be discouraged to the incentives. This association was not present in first time donor. Thus these findings suggest that cash compensation could negatively impact on the safety of the blood supply.

The potential impact (if any) of other nonmonetary types of incentives on blood safety has not been as well evaluated. We had previously observed that unreported deferrable risk was higher in repeat whole blood donors who would be encouraged to donate if offered nonmonetary incentives. This increase was not seen in first time donors. The use of nonmonetary incentives would probably not negatively impact on blood safety. The use of compensatory incentives (other than the cash) should, however, be viewed with caution because of the relatively higher degree of discouragement (up to 9% of all donors for lottery or raffle tickets) they may engender.

Age appeared to be the major demographic determinant of responses to ward incentives.

Except for B.S.T against T.T.I, blood credits or cancellation of a replacement fee, Donors 25 years old or younger were 3-4 times more likely to be encouraged to donate by tickets to events, discounts, lottery or raffle tickets, gifts or a token of appreciation than donors of 52 years of age or older.

Conversely, younger donors were less likely to be discouraged by incentives. This inverse

association with age was very strong and appeared to explain most difference observed between first time (who are younger) and repeat donors (who are older).

Conclusion

These data may help blood centers optimize retention programs by more effectively tailoring limited incentive recourses. For example, blood centers may want to consider preferentially targeting incentives to first time donors and at donation sites where young donors predominant such as College, Universities. Further, they may need to more thoroughly evaluate whether compensatory incentives (if used) enhance or detrimentally affect the effectiveness of their retention campaign especially if these incentives are offered to repeat or older donors. Incentives may play an important role in ensuring the adequacy of the blood supply and it is important to share data on their potential effectiveness in recruitment and retention.

Acknowledgement

I would like to thanks all the directed donors, donors of voluntary blood donor organization (Badhon, Swazon, Sandhani, Rotaract and Friends.) and the officers and staffs of Transfusion Medicine Department, Rajshahi Medical College Hospital. Without their help, this study would not have been possible.

References

1. Glyn SA, Kleinman SH, Schreiber GB, et al. Motivations to donate blood: demographic comparisons. *Transfusion* 2002; 42:216-25.
2. Piliavin JA, Callero PL, eds. Giving blood: the development of an altruistic identity. Baltimore: The John Hopkins University Press, 1991.
3. Jason IA, Jackson K, Obradovic IL. Behavioral approaches in increasing blood donations. *Eval Health Professions* 1986; 9:439-48.
4. Kunin CM. Serum hepatitis from whole blood: incidence and relation to source of blood. *Am J Med Sci* 1959; 237:293-303.
5. Allen JG, Dawson D, Sayman WA, et al. Blood transfusion and serum hepatitis: use of monochloracetate as an antibacterial agent t in plasma. *Ann Surg* 1959; 150:455-68.

6. Domen RE. Paid versus-volunteer blood donation in the United States: a historical review. *Transfus Med Rev* 1995; 9:53-9
7. Title 21. US Code of Federal Regulation, Section 606.121(c) (5).
8. USFDA. Office of Regulatory Affairs compliance references. Compliance policy guide, Compliance policy guidance for FDA staff and industry. Chapter 2, Sub chapter 230, Sec230.150. Blood donor classification statement, paid or voluntary donor 2002.
http://www.fda.gov/ora/compliance_ref/cpg/cpgbio/cpg230-150final.htm
9. Glynn SA, Smith JW, Schreiber GB, et al. Repeat whole blood and platelet pheresis donors: unreported deferrable risks, reactive screening tests and response to incentive programs. *Transfusion* 2001; 41:736-43.
10. Piliavin JA. Why do they give the gift of life? A review of research on blood donors since 1977. *Transfusion* 1990; 30:444-59.
11. Aronson E. Cognitive evaluation theory: perceived causality and perceived competence. In: Deci EL, Ryan RM, eds. *Intrinsic Motivation and self-determination in human behavior*. New York: Plenum Press, 1985:43-51.

All correspondence to:
M Mahbub-ul-Alam
Assistant Register
Transfusion Medicine Department
Rajshahi Medical College Hospital
Rajshahi.