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Competition as a Potential Motivator for Blood Donation

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Introduction

Every day, patients depend on lifesaving blood units provided by blood banks, such as the American Red Cross (ARC). Because blood is acquired exclusively through voluntary donation, investigating motivational factors for donation is invaluable to understanding how to augment blood bank reserves. Competition is one factor used to increase donation rates, yet it is remarkably understudied. Research has shown that intrinsic motivators, such as the desire to compete, increase the long term likelihood of persisting with a task.¹ Competitive blood drives could be used to increase blood donation. Our study evaluates the perceived effect of competition as a motivator, and how it may influence one's decision to donate blood.

Methods

Two study populations ("donor" and "medical student") completed anonymous surveys over several weeks in October 2013. For the donor population, a paper survey was distributed to ARC sites in Vermont and New Hampshire. For the medical student population, a similar online survey was administered via representatives identified through the American Medical Association and personal contacts. Demographic data, personal history of blood donation, motivation to donate blood, competitive behavior, and projected participation in a competitive blood drive was collected.

Demographic information, personal history of blood donation, and motivation to donate blood were analyzed using descriptive statistics. Motivation to donate blood was evaluated by participants ranking their top five reasons for donating/considering donating blood. General donor and medical student groups were compared using Chi-square tests. Competitive behavior was evaluated using a previously-validated survey^{2,3}. Answers from the competitive behavior survey were averaged. Higher values indicate a higher competitiveness index (CI) and increased incidence of competitive behavior. T-tests and Mann-Whitney U tests were used to assess difference between CI and likelihood to donate blood in a competitive blood drive. Statistical analysis was completed using SPSS version 20.0⁴.

Table 1: Demographics of donor population and medical students.

	Donor Population % (n=)	Medical Students % (n=)
Gender		
Female	50.6% (372)	57.4 (232)
Age (years)		
21-30	13.0% (95)	93.1% (377)
61+	62.6% (191)	0.0 (0%)
Race/ethnicity		
White	95.0% (696)	75.5% (305)
Donation Type		
Whole Blood	89.2% (633)	45.3% (183)
Total Lifetime Donation		
Never (not interested)	0.1% (1)	4.2% (17)
Never (may in future)	0.4% (3)	27.0% (109)
Once	2.4% (17)	12.7% (51)
2-5 Times	13.3% (96)	27.8% (112)
6-10 Times	15.1% (109)	14.9% (60)
More than 10	68.6% (494)	13.4% (54)

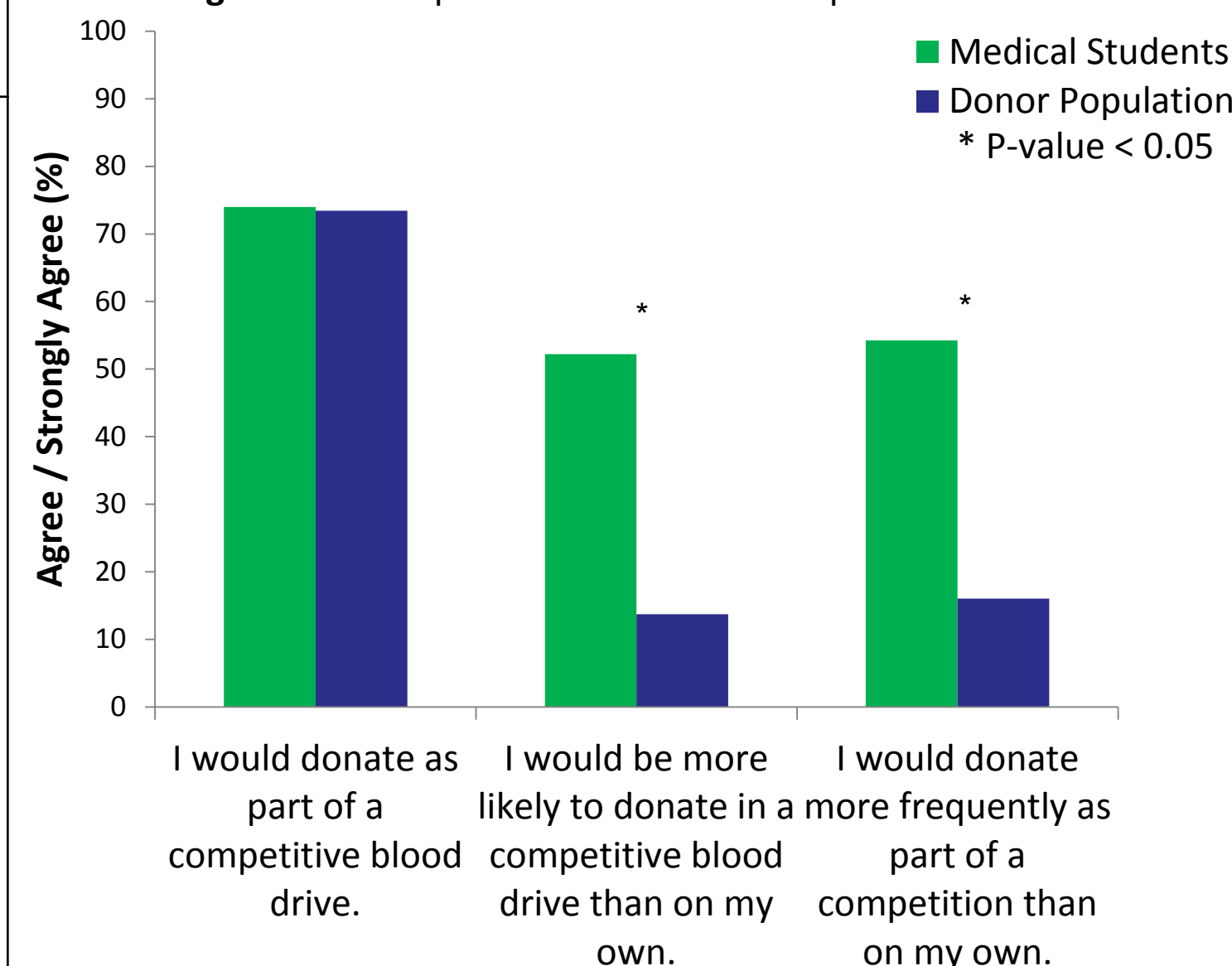
Table 2: Competitive index score and self-reported likelihood to participate in a competitive blood drive.

	Donor Population			Medical Students		
	"Agree"	"Disagree"	P-value	"Agree"	"Disagree"	P-value
I would donate as part of competitive blood drive.	3.62 (± 0.71)	3.08 (± 0.80)	<.001*	3.61 (± 0.69)	3.34 (± 0.79)	.004
I would be more likely to donate in a competitive blood drive than on my own.	3.76 (± 0.65)	3.29 (± 0.78)	<.001	3.69 (± 0.66)	3.34 (± 0.79)	<.001*
I would donate more frequently as part of a competition than on my own.	3.77 (± 0.63)	3.27 (± 0.79)	.004	3.74 (± 0.63)	3.35 (± 0.81)	<.001*

Table 3: Motivation to donate blood.

	Donor Population % (n=)	Medical Students % (n=)	P-value
I donate because I know it is needed after disasters and in hospitals every day.	90.0% (621)	84.0% (305)	.005
I donate to help my community.	83.9% (579)	82.9% (301)	.679
I donate because there is a convenient place to donate.	70.4% (486)	74.7% (271)	.148
I donate because it makes me feel good about myself.	73.9% (510)	65.0% (236)	.003
I donate because I may need it one day, or have received donated blood in the past	59.7% (412)	49.0% (178)	.001
I donate to help others, but receiving a gift, reward, recognition, or time off from work plays a role in my motivation to donate.	20.3% (140)	37.7% (137)	<.001
I donate to help a relative, friend, or acquaintance.	25.5% (176)	33.1% (120)	.010
I donate to learn my blood type or to receive other health information.	7.5% (52)	26.2% (95)	<.001
I donate because I was asked to donate by a peer, friend, or authority figure.	7.5% (52)	25.9% (94)	<.001
I donate because I belong to an organization that hosted a blood drive.	9.6% (66)	21.5% (78)	<.001

Figure 1: Self-reported likelihood of competitive blood donation.



Results

- Both populations ranked the same top five motivators for blood donation.
- The medical student population had a higher competitive index than the general donor population.
- Medical students are a low-frequency donating population (donated 0-5 times in a lifetime).
- Interestingly, unlike the high-frequency and lifetime donors, the low-frequency donors indicated that they would be more likely to donate, and would donate more frequently at a competitive blood drive than on their own.

Conclusions

- The data suggests that a possible way to boost blood donations from low-frequency donors, such as medical students and young adults, could be through a competitive blood drive. For example, a national-level competition between medical schools throughout the country could increase blood donation among medical students.
- Limitations of the study: the general donor population was restricted to the Vermont region; inconsistency with which the surveys were given to the donor population (i.e. before or after donation); possible misunderstanding of the concept of a "competitive" blood drive.

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