USING A MOTIVATOR AND DETERRENT QUESTIONNAIRE TO PREDICT ACTUAL DONATION RETURN BEHAVIOR AMONG FIRST-TIME BLACK BLOOD DONORS

SANBTEC
Sun City, South Africa
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Background

SANBS Donors not representative of SA population (2013)
Aim & Methods

Aim
To understand how self-reported motivators and deterrents predict actual return of newly recruited low HIV risk Black Donors

Methods
Prospective cohort study linking questionnaire responses to actual return for donation within one year.

Target sample size
- 3000 first-time Black donors
- Aged 18-35 years

Eligibility
- Viral Negative
- All first-time Black new donors from April 1, 2014 until sample size was met
Methods (2)

Study instrument:
- Telephonically administered questionnaires on motivators and deterrents
- Questions were derived from local focus groups during 2013

Telephone interviews and data-capturing was done by trained field workers from Topline Research Solutions
- Administered within 14 days of 1st donation

1. Muthivi et.al. Transfusion Medicine 2015
Motivators

**Altruism**
- Save lives
- Right thing to do
- My blood type in high demand
- Easy to make a difference
- UBUNTU
- SA needs blood

**Incentives**
- To receive money, gifts, incentives
- Blood credits, for future use
- Get test results
- Relatives / friends need blood
- Good for my health
- Get school credit or time off
- I feel good

**Marketing**
- Peers asked me to donate
- Adverts and/or Campaigns
- Blood drive where I am

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SA needs blood

UBUNTU

Blood drive where I am
Deterrents

Fear
- I had bad reaction
- Scared of needle, pain
- Afraid of contracting HIV while donating
- Afraid of finding out about my HIV status
- Afraid of sight of blood
- Scared of bad reaction

Negative attitudes
- Don’t do something for free
- Don’t want to complete Questionnaire

Lack of Awareness
- Didn’t know blood is needed every day
- My blood is for ‘rich’ people
- Don’t know where to donate
- Don’t know where blood goes
- Against religion/culture
- Don’t treated well
- Takes too long
- SANBS might throw my blood away because of my race
Methods (3)

Statistical analysis

- Donor return ascertained in the REDS-III Donor-Donation database containing all SANBS donations from 2012-2016.
- Study population described using counts and proportions.
- Questionnaire Likert scale responses tabulated and presented graphically according to return/non-return status.
- Associations between questionnaire responses and return/non-return status were assessed using multivariable logistic regression. One question (“My blood type is in high demand” had a large proportion of “don’t know” and was excluded from the multivariable analysis.
Study Population

3231 Donors Approached

- 244 Refused

2987 Consented

- 52 Subject IDs don’t match; missing donation type and repeat donors

2935 Eligible

- 33 donors with donation to Qaire > 56 days

2902 Final sample size
Results: Study versus 2014 new donors

Sex

<table>
<thead>
<tr>
<th></th>
<th>Study</th>
<th>New Donors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>41%</td>
<td>44%</td>
</tr>
<tr>
<td>Female</td>
<td>59%</td>
<td>56%</td>
</tr>
</tbody>
</table>

Age

<table>
<thead>
<tr>
<th></th>
<th>Study</th>
<th>New Donors</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-22</td>
<td>36%</td>
<td>42%</td>
</tr>
<tr>
<td>23-26</td>
<td>24%</td>
<td>22%</td>
</tr>
<tr>
<td>27-30</td>
<td>19%</td>
<td>19%</td>
</tr>
<tr>
<td>31-35</td>
<td>21%</td>
<td>17%</td>
</tr>
</tbody>
</table>

Geography

<table>
<thead>
<tr>
<th></th>
<th>Study</th>
<th>New Donors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Egoli</td>
<td>23%</td>
<td>21%</td>
</tr>
<tr>
<td>KZN</td>
<td>20%</td>
<td>21%</td>
</tr>
<tr>
<td>Northern</td>
<td>18%</td>
<td>18%</td>
</tr>
<tr>
<td>Mpumalanga</td>
<td>14%</td>
<td>9%</td>
</tr>
<tr>
<td>Vaal</td>
<td>13%</td>
<td>14%</td>
</tr>
<tr>
<td>FS / NC</td>
<td>6%</td>
<td>7%</td>
</tr>
<tr>
<td>East Cape</td>
<td>6%</td>
<td>10%</td>
</tr>
</tbody>
</table>
Results:
1786 (62%) of 2902 donors returned within one year

<table>
<thead>
<tr>
<th>Donors</th>
<th>Returned</th>
<th>Non-Return</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>1,089 (64%)</td>
<td>626</td>
<td>0.009</td>
</tr>
<tr>
<td>Male</td>
<td>697 (59%)</td>
<td>490</td>
<td></td>
</tr>
<tr>
<td>Age* 18-22</td>
<td>583 (56%)</td>
<td>449</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>23-26</td>
<td>431 (61%)</td>
<td>280</td>
<td></td>
</tr>
<tr>
<td>27-30</td>
<td>375 (67%)</td>
<td>182</td>
<td></td>
</tr>
<tr>
<td>31-35</td>
<td>394 (66%)</td>
<td>203</td>
<td></td>
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</tbody>
</table>

How likely to donate blood at SANBS within 1 year?

<table>
<thead>
<tr>
<th></th>
<th>Returned</th>
<th>Non-Return</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unlikely</td>
<td>208 (56%)</td>
<td>162</td>
<td></td>
</tr>
<tr>
<td>Likely</td>
<td>1577 (62%)</td>
<td>951</td>
<td></td>
</tr>
</tbody>
</table>

* 5 donors refused to give an age
<table>
<thead>
<tr>
<th>Motivator</th>
<th>Disagree</th>
<th>Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Makes me feel good about myself</td>
<td></td>
<td></td>
</tr>
<tr>
<td>My blood type in high demand *</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blood drive at school or workplace</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helping others is the right thing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SANBS advertisements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Friends or relatives need blood</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Donation is good for my health</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asked by friends or relatives</td>
<td></td>
<td></td>
</tr>
<tr>
<td>For loyalty incentives</td>
<td></td>
<td></td>
</tr>
<tr>
<td>School or work credit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Easy way to make a difference</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Future blood credit for me or family</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blood will be avail when I need it</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Help the community: &quot;Ubuntu&quot;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>To get my test results</td>
<td></td>
<td></td>
</tr>
<tr>
<td>South Africa needs blood</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I donated blood for money</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blood donation saves lives</td>
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</tr>
</tbody>
</table>

* Excluded from the MV analysis
I don’t like to do something for free
I had a bad reaction
I was scared of the needle
Blood donation against my religion
Afraid of contracting HIV
Didn’t know there was a daily need
Afraid of knowing HIV status
Times are not convenient
Afraid of knowing HIV status
Blood donation against my religion
I was scared of the needle
I had a bad reaction
I don’t like to do something for free
Most donors agreed with altruism-associated statements but these responses were not associated with return.
Results: Secondary analyses

Treating the Likert scales as 2-level categorical variables (Agree vs Disagree) revealed:

- Donors who agreed with the statement: “I donated in response to adverts/campaigns on the radio/TV/Newspapers from SANBS” were more likely to return (OR=1.26, 95% CI 1.05-1.50).
- Donors who disagreed with the statement: “I think blood mostly goes to people who have money” were more likely to return (OR=1.26, 95% CI 1.02-1.55).

Treating the Likert scales as 4-level categorical variables revealed generally similar results, with the additional finding that donors who disagreed with the statements

- “If I give blood then blood will be available when I need it” and
- “I don’t know where the nearest blood collection point is”

were more likely to return.
Conclusions

Among new donors, females and those aged 27-35 years were more likely to return than males or those aged 18-26 years.

Self-reported intention to return was a poor, albeit statistically significant, predictor of actual return.

Only a few questions remained significant in the MV model:

Surprisingly, self-efficacy (“donation is an easy way to make a difference”) and SANBS marketing predicted return better than altruism.

Key deterrents - including fear, poor customer experience, misperception about class bias and lack of knowledge about collection sites - could be addressed by management change and educational campaigns.
Way forward

Insights gained from this study will be used in future randomized trial designs for recruitment interventions.
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