EXPERIENCE AS FACTORS ASSOCIATED WITH REPEAT BLOOD DONATION AMONG UNIVERSITY STUDENTS IN MALAYSIA

Juliana Rosmidah Jaafar[1], Sheau Tsuey Chong[2] and Khadijah Alavi[2]

[1]Faculty of Applied Science and Foundation Studies, Infrastructure University Kuala Lumpur, Kajang, Selangor Darul Ehsan; [2]Faculty of Social Sciences and Humanities, The National University of Malaysia, Bangi, Selangor Darul Ehsan, Malaysia

Abstract: Experience can either motivate or hinder someone from repeating blood donation. However, having Repeat Blood Donors (RBDs) is important to ensure a sustainable blood supply over time. Therefore it is important to understand the experiences of RBDs that lead them to donate blood on regular basis. A total of 8 RBDs were interviewed (4 males, 4 females). The subject ages ranged from 20 to 26 years. All the subjects were university students. Each subject had donated 3 to 6 times during the previous two years. Data from the interview revealed two major themes in the experiences that faced by the subjects, which were positive and negative. Positive experiences that acted as motivational factors to RBDs' were: perceived support from peers and competent phlebotomists. These positive experiences encouraged donors to continue donating. Negative experiences that were related to adverse effects on donating blood were incompetence phlebotomist and feeling unappreciated by the blood collection staff. Those who continued to donate blood in spite of having a negative effect or experiences while donating used coping skills to change their negative feelings into a positive experience. In this study, having social support to encourage blood donation, knowledgeable phlebotomists and good coping skills were factors associated with RBDs. Further studies are needed to determine the best way of applying this knowledge to improve RBDs and to define the coping skills used to overcome negative experiences among RBSs in the student population.

Keywords: students, young people, blood donation, experience, intention

INTRODUCTION

"Homo economicus would not give blood unless he was paid enough money; real-life donors do not reason in this way."

(Healy, 2000)

Correspondence: Juliana Rosmidah Jaafar, Faculty of Applied Science and Foundation Studies, Infrastructure University Kuala Lumpur, 43000, Kajang, Selangor Darul Ehsan, Malaysia.
Tel: +60 176081006
E-mail: juliana.rosmidah@gmail.com

It is important to develop efficient strategies to recruit and retain voluntary non-remunerated blood donors in order to maintain a sustainable adequate blood supply. The recruitment program needs to deal with fear of needles and stigma associated with donating blood, the biggest challenges to developing Repeat Blood Donors (RBDs). RBDs are an important source of blood and are cost-effective in terms of data management and campaign promotion (Ringwald *et al*, 2010).

Young adults are a good potential source of RBDs. They can potentially donate blood up to 40 years if they begin donating in their 20s. In Malaysia, nearly a quarter of blood supply comes from university student donors who are in their early 20s (National Blood Centre, 2014). This statistic suggests participating in campus held blood-donation programs is an important recruiting platform for university students. The motive for these young first time donors participating in this activity varies, and includes: experiencing something new, peer pressure, pursuing personal benefits, such as free health check-ups (Bani and Strepparava, 2011). For some, repeat donation creates an identity of being a RBDs (Glynn *et al*, 2002). Having a strong sense of identity as a donor can increase the likelihood of repeat donation.

For young blood donors, positive experiences can act as motivating factors. Nguyen *et al* (2010) found donors who were satisfied with the donation process were more likely to donate again. Merav and Lena (2010) found having a positive attitude and strong self-confidence were associated with repeat donation. Donors with a positive attitude about blood donation often see donating as altruistic behavior, a social responsibility or showing concern for others. Positive perceptions can motivate donors to donate again (Ferguson *et al*, 2012). Having a positive attitude and a good experience in donating helps strengthen motivation to donate again. Peers may also create a positive pressure to donate blood. Previous studies suggested social networks can play a significant factor (Masser *et al*, 2008; Hanson and France 2009). Having support can increase the self-confidence among young donors.

Experience can also help as a hindrance toward repeat blood donation. Bednall and Bove (2011) found donors who had a negative experience or an adverse reaction to donating blood were less likely to donate again. Newman *et al* (2006) interviewed donors and found having a negative experience donating blood created a barrier to repeat donation. Negative experiences reported in that study included fatigue, syncope, sweating and diaphoresis; these reduces the chance of repeat donation by 86%.

We conducted face-to-face interviews with RBDs who were university students to determine factors associated with repeat blood donation. We speculate experience plays an important role in motivating young blood donors, especially in university students, to donate blood repeatedly.

MATERIALS AND METHODS

This study was conducted during a blood-donation campaign at a public university in Malaysia. Eight RBDs were recruited to participate in the study. They were defined as those who had donated blood at least three times in the previous two years (WHO, 2012). Due to a poor response rate with the invitation recruitment method, we used the snow ball technique. Respondents were asked to recruit RBDs among their university friends to participate in the study. Each subject was then interviewed for 30-69 minutes. The interview was qualitative; the topics covered were experiences encountered before, during and after blood donation and intention to donate again. The interviews were audio-recorded and transcribed. Respondents were given a copy of the transcripts to review to ensure accuracy. Data from the interviews were analyzed using thematic analysis. The researcher reviewed the responses and

Table 1
Profile of respondents.

Respondent	Gender	Age in years	Number of times donated blood (2009-2010)	Blood type
A	Male	20	4	B
B	Male	21	4	O
C	Female	20	3	B
D	Male	22	3	B
E	Male	26	6	B
F	Female	26	5	A
G	Female	23	3	O
H	Female	26	4	A

compared them with similar responses in the literature. All subjects gave informed consent prior to participation in the study. The study protocol was approved by the ethics board of the Malaysian Ministry of Health (NMRR 12-863-13361).

RESULTS

Respondent backgrounds

A total of 8 respondents were included in the study. All of them were Malay university students; 4 males and 4 females. The mean standard deviation (SD) age of respondents was 23.00 (2.70) years. Each respondent had donated three to six times, from January 2009 to December 2010 (Table 1).

Classification of interviews

The data obtained during the interviews were divided into two section; factors motivating the respondent to donate blood (Motivating Factors) and factors that were barriers to donating blood (Barrier Factors).

Motivating factors

Factors positively associated with repeated blood donation were: having a positive feeling about the donating blood, peer encouragement to donate blood, the crowd effect and having a positive experience with the phlebotomist.

Positive feelings associated with donating blood

Several respondents reported having positive feelings about donating blood. Respondent E reported feelings well and having good health when donating blood:

> *"I feel happy because when my blood was drawn, it felt like something new was injected into my body. For me, the replenishment of blood inside me creates a positive feeling of increased health. In addition to feeling healthier there is happiness from having donated. I do enjoy the experience of donating."*

Respondent H reported having satisfaction when helping others:

> *"When I donate, I feel satisfied. It's because I get to help people with sincerity."*

Peer encouragement to donate blood

For the respondents of this study, the support from the peers was not necessarily in donating themselves, but in group support and the positive atmosphere created for those who did donate. Con-

sequently, blood donations became more exciting in the presence of one's friends. Respondent D stated:

> "*It feels fun when surrounded by friends. We laugh and look at each other while donating blood. Yeah, it's a good feeling, that support, I mean.*"

Respondent F reported receiving support from friends, both donors and non-donors alike:

> *"We attended the campaigns and signed up. Some of the girls in our group were not donors, you know, but they were with us during the whole process. Donating in the company of these friends engendered a shared good spirit."*

In this study, in addition to receiving support and providing support to peers who donated was also a positive experience reported by respondents. Respondent C stated:

> *"I once donated with my friend Liena who was donating for her first time. She was afraid and wanted to sit next to me. I helped her. Her hands were cold so she held my hand. She said 'I'm afraid.' I said, 'It's alright, just relax.' After donating, I asked her, 'How was it? Was it ok?' She said, 'Ok.' 'Was it fun?' I asked her. 'It was.' she said. After that I asked 'You want to do it again in the future?' She said yes. That's why I feel like I was providing her support."*

The above statement illustrate the emotional support experienced by respondents provided by their social network in the form of actions and words, including being accompanied during blood donations. These statements were common among respondents of both genders, with both male and female donors being positively influenced by peer support which prompted them to donate again.

Crowd effect during the blood-donation campaign

Large numbers of people donating also influenced blood donation by respondents. Respondents D, E and F stated that the presence of the crowd during the campaign encouraged them to donate. The intent to donate blood was influenced and reinforced by seeing other people donating. Respondent E stated:

> *"To me, my biggest influence was when I saw a lot of other people donating. As a result, I too felt compelled to donate. Every time I see a crowd of people at a blood donation campaign, there is an urge to join in."*

Positive experience with phlebotomist

According to Respondent E, having an experienced and skillful phlebotomist perform the procedure greatly enhances the donation experience. Respondent E felt lucky that his initial and subsequent donations were performed by a skilled, competent phlebotomist, unlike the experiences of other friends:

> *"In all of my donations, the nurses assigned to me were pros; they easily found the vein in my arm. I only had to pump my fist for around 10 minutes, each time, to fill the bag. So I really didn't have any bad experiences during the procedures. It was different with my friends who had to deal with more junior and less skilled nurses, the ones that lacked experience in getting the right vein."*

A related but perhaps, less commonly held view was reported by Respondent A who stated the physical attractiveness of the phlebotomist was a motivating factor to donate blood:

> *"I feel kind of attracted to the activity because the nurses are pretty, you know. That drives me to donate blood."*

However, it was not ascertained from the interview whether the respondent was similarly impressed with the skills of the nurses involved.

Barrier factors

The factors negatively associated with repeat blood donation were: having an adverse reactions during blood donation and a negative experience with the phlebotomist.

Adverse reactions

When respondents were asked about obstacles to blood donation, most of them stated feeling afraid of adverse reactions. These adverse reactions included: dizziness, sweating, weakness, hypotension and syncope.

Respondents B, E and F reported being afraid of experiencing adverse reactions with blood donation. For example, Respondent B stated:

> *"I was afraid every time I wanted to donate blood. I can't say it was not present. I was afraid of many things that might go wrong–passing out, vomiting. I didn't know what to expect. I tried as quickly as possible to regain my calm, to relax and donate and told myself that my fears were only in my mind."*

Respondent C reported seeing other donors in the past fainting or vomiting, causing her to be anxious and afraid:

> *"I felt worried. Will it hurt? Because after donating blood, some people passed out, so, I was afraid. How will this go? What will happen to me? What should I do if it happens? Maybe I'll grab my friend's hand, hold her tight."*

For first-time donors, seeing an unpleasant scene during blood donation can create a negative experience. Respondent E reported experiencing negative reaction after donating blood, but stated this was merely a natural reaction by his body to donating:

> *"That day, shortly after donating, I went to the mosque for Friday prayers. After praying, I did feel a bit dizzy. So after I got back home I just took a little rest. After that I ate some liver to help produce more hemoglobin in my body. It was nothing much. I know that it is usual for a donor to feel that. I know that I just need a good rest after donating. I know my body."*

Negative experience with a phlebotomist

In addition to having a positive experience with a phlebotomist, having a negative experience with a phlebotomist can influence a donor's future decisions to donate blood. Examples of a negative experience included having problems finding a vein, resulting in multiple needle sticks. Respondents E, F, G and H reported these negative experiences: tragedy, worst procedure ever and tragic. Respondent F stated:

> *"The nurse had trouble finding the correct blood vessel. She tried one arm first and failing, she tried the other. My arm got bruised, it didn't heal even after a week. All because she didn't find the right blood vessel. They were supposed to find the correct blood vessel and not cause undue trouble."*

Respondent H showed more tolerance in describing her particular experience:

> *"I faced a tragic experience with this blood donation. Before this I never felt any pain after the injection, but for the first time recently, I felt the needle didn't enter at the correct spot and I could feel it in my epidermis. Maybe the staff was new, so she didn't really know how to handle the donation procedure. Even though I felt the pain, I tried to tolerate the situation."*

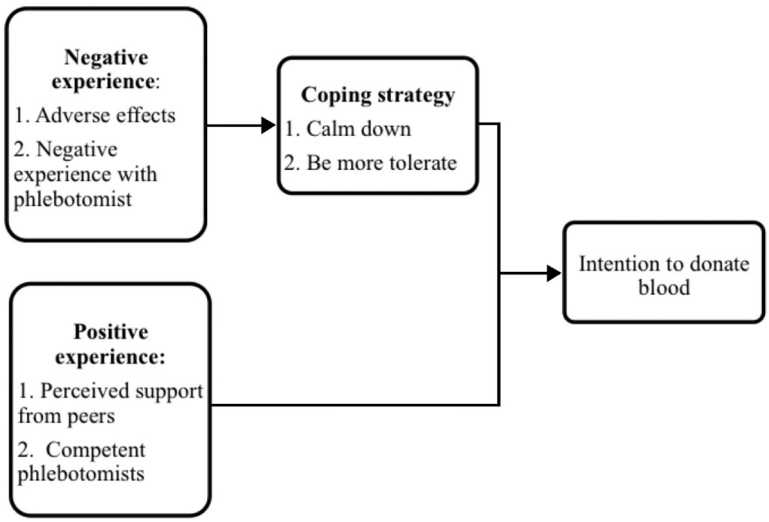

Fig 1–Summary of experience, coping strategy and intention to donate blood among RBDs.

Some respondents reported receiving unfriendly treatment from phlebotomists. Respondent A reported the phlebotomist had a cold facial expression that was demotivating:

> *"I wanted to donate blood, so when I got that kind of treatment from the nurse, I felt sad and also a little disappointed."*

The respondent did not share what he did to deal with the disappointment.

Intention to donate blood

The intention to donate blood in the future was expressed by our respondents through phrases such as *"continue to do so"*, *"I can do it"* and *"will donate again*". All our respondents had a positive attitude about intending to continue donating blood. Even RBDs who had negative experiences intended to donate again because they used effective coping strategies to deal with the negative situation. For example, even though some RBDs experienced discomfort during donation, it was not something they considered significant enough to change their intent to donate in the future. Fig 1 shows the experiences, coping strategy and intention to donate blood among our sample.

DISCUSSION

Previous studies reported encountering problems during donation can cause donors to withdraw from donating (Shaz *et al,* 2010). However, donors who are satisfied with the procedure are more likely to donate again (Bednall and Bove, 2011). In our study, respondents did encounter negative experiences: incompetent phlebotomists and adverse reactions due to donation. The adverse reactions reported included: dizziness, syncope and bruises. Dongen (2015) reported these symptoms are usually experienced by novices and young donors. In our study, respondents were young university students. Wiersum-Osselton *et al* (2012) reported to retain these young donors, it is important to record adverse reactions encountered by each blood donor and take steps to reduce their recurrences.

Having strong social support during donation increase the likelihood they will donate again, especially among university student donors where it is important to incorporate the social aspects with donation. RBDs in our study reported the support they received created an enjoyable atmosphere during blood donation campaign and encouraged them to donate in the future during subsequent campaigns. Prinstein (2007) stated peers exert a posi-

tive influence on one's choice of activity, resulting in a higher likelihood of choosing an activity that involves one's friends, such as volunteerism. Peer pressure can be positive in motivating volunteerism, such as blood donation (Hubner and Kaiser, 2006). Our study findings support Carpenter and Myers (2010) findings that imitation of a particular behavior is important to be accepted in certain group. In our study, respondents were in their early 20s; they likely had a motivation to imitate their friends in donating blood to be accepted by their peers. Blood donation is an altruistic activity. Social image is important for students at an institute of higher education, where altruistic behavior is considered desirable.

In our study, the phlebotomist's skill and attitude during the blood donation influenced the desire to donate blood. Previous studies found a phlebotomist with a pleasant manner, a caring attitude and appropriate facial expressions can influence donors to donate again (Vavic *et al*, 2012; Vuk *et al*, 2015). Buciuniene *et al* (2006) found appreciation expressed by the blood collection staff significantly affected the donor's experience. They found a simple "thank you" was a more meaningful than material reward. Our respondents reported a similar response to the feeling of appreciated after donating blood. For respondents who had a negative experience during blood donation reported they tried to maintain a positive attitude toward the phlebotomist as a coping mechanism. Our respondents stated these negative experiences did not weaken their intention to donate again in the future. These results are similar to the Theory of Planned Behavior (TPB) that focus on behavioral-intention (Ajzen, 1991). According to this theory, intention leads to action and is modulated by three factors: attitude, perceived behavioral control and subjective norms. If a person perceives the act of donating blood as being good and feels capable of controlling any obstacles, then the intention to donate will be stronger. The stronger the intention towards a particular act, there is a greater probability of executing that behavior. The respondents in our study had a positive attitude towards blood donations, felt they had control over obstacles and received social supports from their network. Other studies reported having a good experience in donating blood strengthens the positive attitudes towards donating again in the future (Schlumpf *et al,* 2008; Sinclair *et al,* 2010).

Our study findings suggest blood donation campaigns among university students should strengthening social support from peers in recruiting RBDs. Blood donation organization should encourage appropriate coping strategies when donor experiencing negative events during blood donation. Providing education about coping strategies should help university student to deal with negative experiences in blood donation. Further studies are needed to determine the effectiveness of coping strategies among university student donors.

There were two limitations in our study. First, it involved a snowballing approach. Thus these findings cannot be generalized to the other populations. Second this study involved respondents of a single race: Malays. Findings may differ by race and religion. Third in this study, we only interviewed RBDs. Therefore, their experiences and intentions might differ from first-time donors.

Future studies are needed to determine the best ways to apply the knowledge obtained in this study to improve repeat blood donation rates, especially

among university students. Future studies are also needed to determine appropriate coping mechanisms used to deal with negative experience occurring during blood donation.

ACKNOWLEDGEMENTS

The authors wish to thank the National Blood Centre (NBC), Kuala Lumpur, Malaysia; the National University of Malaysia and the participants of this study.

REFERENCES

Ajzen I. The theory of planned behavior. *Organiz Behav Hum Decis Processes* 1991; 50: 179-211.

Bani M, Strepparava MG. Motivation in Italian whole blood donors and the role of commitment. *Psychol Health Med* 2011; 16: 641-9.

Bednall TC, Bove LL. Donating blood: a meta-analytic review of self-reported motivators and deterrents. *Transfus Med Rev* 2011; 25: 317-34.

Buciuniene I, Stoniene L, Blazeviciene A, Kazlauskaite R, Skudiene. Blood donors' motivation and attitude to non-remunerated blood donation in Lithuania. *BMC Public Health* 2006; 6: 166.

Carpenter J, Myers CK. Why volunteer? Evidence on the role of altruism, image, and incentives. *J Public Econ* 2010; 94: 911-20.

Dongen A, Easy come, easy go. Retention of blood donors. *Transfusion Med* 2015; 25: 227-33.

Ferguson E, Atsma F, de Kort W, Veldhuizen I. Exploring the pattern of blood donor beliefs in first time, novice, and experienced donors: differentiating reluctant altruism, pure altruism, impure altruism, and warm glow. *Transfusion* 2012; 52: 343-55.

Glynn SA, Kleinman SH, Schreiber GB, *et al*. Motivations to donate blood: demographic comparisons. *Transfusion* 2002; 42: 216-25.

Hanson SA, France CR. Social support attenuates presyncopal reactions to blood donation. *Transfusion* 2009; 49: 843-50.

Healy K. Embedded altruism: blood collection regimes and the European Union's donor population. *J Sociol* 2000; 105: 1633-57.

Hubner G, Kaiser FG. The moderating role of the attitude-subjective norms conflict on the link between moral norms and intention. *Eur Psycholog* 2006; 11: 99-109.

Masser BM, White KM, Hyde MK, *et al*. The psychology of blood donation: current research and future directions. *Transfus Med Rev* 2008; 22: 215-33.

Merav NB, Lena G. Investigating the factors affecting blood donation among Israelis. *Int Emerg Nurs J* 2010: 641-9.

National Blood Centre. Statistic. 2014. Kuala Lumpur: National Blood Centre, 2014.

Newman BH, Newman DT, Ahmad R. The effect of whole-blood donor adverse events on blood donor return rates. *Transfusion* 2006; 46: 1374-9.

Nguyen DD, DeVita DA, Hirschler NV, *et al*. Blood donor satisfaction and future donation. *Transfusion* 2010; 48: 742-48.

Prinstein MJ. Moderators of peer contagion: a longitudinal examination of depression socialization between adolescents and their best friends. *J Clin Child Adoles Psychol* 2007; 36: 159-70.

Ringwald J, Zimmerman R, Eckstein R. Keys to open the door for blood donors to return. *Transfus Med Rev* 2010; 24: 295-304.

Schlumpf KA, Glynn SA, Screiber GG, *et al*. Factors influencing donor return. *Transfusion* 2008; 48: 264-72.

Shaz BH, James AB, Demmons DG, *et al*. The African American church as a donation site: motivation and barriers. *Transfusion* 2010; 50: 1240-8.

Sinclair KS, Campbell TS, Carey PM, *et al*. An adapted postdonation motivational interview enhances blood donor retention. *Transfusion* 2010; 50: 1778-86.

Vavic N, Pagliariccio A, Bulajic M, Marinozzi M, Miletic G, Vlatkovic A. Blood donor satisfaction and the weak link in the chain of donation process. *Transfus Apher Sci* 2012; 47: 171-7.

Vuk T, Cipek V, Jukić I. Blood collection staff education in the prevention of venepuncture failures and donor adverse reactions: from inexperienced to skilful staff. *Blood Transfus* 2015; 13: 338.

Wiersum-Osselton JC, Marijt-van der Kreek T, de Kort WL. Donor vigilance: what are we doing about it? *Biologicals* 2012; 40: 176-9.

World Health Organization (WHO). Screening donated blood for transfusion-transmissible infections: recommendation. Geneva: WHO, 2012. [Cited 2013 Mar 15]. Available from: http://www.who.int/bloodsafety/publications/WHOguidelinesblooddonoselection2012.pdf