

Empowering Humanity Behavior Among University Students Through Blood Donation Activity

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ABSTRACT

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Involvement of young people, especially university students as blood donor is crucial in maintaining an adequate blood supply to the country. They could serve as blood donors for a longer time if they start donating in their early 20s. Therefore, the objective of this study is to identify psychological resources that contribute to the intention of blood donation among university students as well as to understand their motivation in this activity. This is a correlational study using survey approach. Data were collected randomly from 71 students (39 non-blood donors; 32 blood donors). Findings showed that, both groups of respondents have moderate level of intention to donate blood. The Pearson Correlation Analysis revealed that, for non-donors, their intention to donate blood was derived by ihsan, social awareness and anticipate regret. As for blood donors in this study, they exhibit the same psychological resources as the non-donors with the addition of subjective norms and identity as blood donors. Finally, Regression Analysis found that, anticipate regret was the main factor that motivated the intent to donate blood to both groups. This study implies that blood donation campaigns in campus area should focus on empowering feeling of anticipate regret as the motivation factor among university students. Future study is needed to explore the effectiveness of campaign strategies using psychological resources, especially anticipate regret in motivating university students to become blood donors.

Contribution/Originality: The paper's primary contribution is finding that social networks is a significant contributor to the psychological factors in strengthening the intention to donate blood among the university students. This finding portrayed that for

a university student, having a good and quality networking during their study duration could become a pushing factors in volunteerism activity.

1. Introduction

In general, society views involvement in blood donation as a humanistic act which portrays positive behaviour for the survival of other people. This positive image resembles values such as selfless act, empathy and also the sense of social responsibility to the blood recipient. This supply is required for the survival of blood recipient such as sickle anemic patients who are in need for a regular blood transfusion. In similar vein, the contribution of voluntary blood donor groups is regarded as a safe and less risky source of blood supply. In line with [Mishra, Sachdev, Marwaha and Avasth \(2016\)](#) opinion, people who stood up as volunteers in donating blood are more likely those who maintain a healthy and a safe lifestyle. This practice helps to lower the risk of blood supply for the recipient.

Given that recruitment of blood donor is important, past researchers have tested various psychological aspects to enhance the intention to donate blood among donors and non-donors. In this context, intention towards this activity has been reported as the key factor toward the involvement in blood donation ([Wevers, Wigboldus, Baaren & Veldhuizen, 2014](#)). Whilst intention was reported as the key to encourage people to donate blood, this aspect is related to other psychological factors such as positive attitudes, social responsibilities, social awareness and empathy ([Bagot et al., 2015](#); [Mirutse et al., 2014](#)). For individuals who have been successful in donating blood, emotion such as happy, satisfied and proud are the feelings felt by these donors. This can be explained as blood donation is synonymous with helping behaviour. For experience donors, it is possible for them to feel negative feelings such as regret and disappointment if blood donation cannot be performed as planned. In addition, study conducted by [France and France \(2018\)](#) reported that, donors tend to execute their plan in donating blood to avoid being frustrated, shameful or guilty. In other words, the failure to execute the intended action will lead to emotions that are contrary to the expectation of a positive feeling.

In the context of blood donation studies, anticipate regret has been tested along with the Theory of Planned Behaviour. The theory pioneered by [Ajzen \(1991\)](#) assumed that, intention plays an important role in motivating individual to donate blood. The stronger the intention on planned behaviour, the higher the probability that particular action will be taken. This point is particularly relevant to the decision-making process. In this process, individuals will generally choose to avoid disappointment and regret because of the unperformed action. Action will be determined and executed when one considers rewards such as positive feelings after donating blood. [Brewer, DeFrank and Gilkey \(2016\)](#) viewed that, individuals tend to blame themselves if they cannot execute a planned action. However, [Itzchakov and Van Harreveld \(2018\)](#) argue that, individual with ambivalent attitude might be facing a dichotomous decision whether or not to execute the intended plan. For a non-blood donor, since they did not have any experience in this activity, they might be facing this issue even though they might hold positive perception towards this activity. Given that adequate blood supply is an important part of the blood supply center, especially in ensuring the survival of periodic blood transfusions, it is important to identify the motivating factors that can lead potential groups to engage in this activity. Young people can be seen as groups that serve as potential psychological resource to donate blood for a longer time. By definition, [Lamont, Quinn, Nelis, Martyr et](#)

al. (2019) relates the term of psychological resource as psychological attributes such as attitude, self-esteem or self-efficacy.

Looking in a worldwide context, changes in global climate has its own effect on human activity. In the context of human activity, [Cegolon, Heymann and Lange \(2017\)](#) argued that climate change has caused people to migrate or travel, thus could lead to the spreading of vectors. Furthermore, [Flaherty, Moran and Higgins \(2017\)](#) speculate that vectors such as Malaria, Dengue and Chagas disease could be transmitted due to minimal health screening which possibly threaten the public health. For example, in Australia, the demand to get blood supply increased due to an outbreak of Dengue fever ([Bambrick, Woodruff & Hanigan, 2009](#)). Whereas in Malaysia, the number of Dengue cases remains unstable within 10 years (2010 to 2019), with 130 101 cases in 2019, as compared to 80, 615 cases in 2018 ([Ministry of Health Malaysia, 2020](#)). One of the alternatives to curb the issue is through blood transfusion. Patient that suffers severe Dengue fever might need to receive prophylactic platelet transfusion from voluntary non-remunerated blood donors. This lead to the dependence towards voluntary blood donors to control the public health problem caused by the vector due to the climate change.

In Malaysia, individuals who started to donate blood as early as age of 17 years old could help to supply blood within the next fifty years. This is because, the maximum age limit of donors in Malaysia is 70 years. By having a large pool of people that donates blood in their early age, this could help in terms of cost-effective in blood donation campaigns. In that sense, university could be seen as the ideal platform for recruiting young blood donors. University students are not only fit physically and mentally, but they are capable to be motivated into prosocial behaviour. Therefore, this study aims to identify psychological resources as factors towards the intention to donate blood among university students.

2. Methodology

This is a correlational study using survey approach. Students at local university were invited to become respondents in this study. Data collection took two weeks before the blood donation campaign on 21st August 2017. A total of 71 students (39 non-donors; 32 donors) agreed to answer questions via online survey. The online questionnaire contains 50 items related to psychological factors and the intention to donate blood ([Table 1](#)).

Table 1: Example of Items

Items
Attitude: For me, blood donation is risky-not risky.
Subjective Norms: Many people will be disappointed if I stop donating blood
Self-Efficacy: I will find alternative ways to go to donate blood when I have transport problem (i.e call a friend, use taxi)
Anticipare regret: I will feel regret if I am unable to donate blood at Gallery (Block 11) IUKL on 21 August 2017.
<i>Ihsan</i> : I smile when I see many people queuing for donating blood.
Identity as Blood Donor: For a blood donor, the blood donation record book is important.

Social Awareness:

News on shortage of blood supply urge me to donate blood.

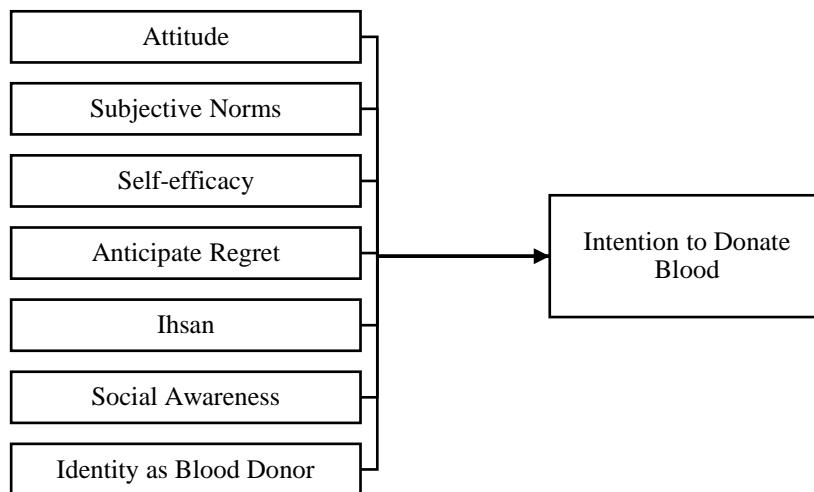
Intention to donate blood:

I have imagined myself donating blood at Gallery (Block 11) IUKL on 21 August 2017.

Seven independent variables including psychological aspects such as attitude, subjective norm, social awareness, self-efficacy, anticipate regret, *ihsan* and identity as blood donor. On the other hand, the dependent variable is the intention to donate blood. Attitude towards blood donation was evaluated through 11 items related to an evaluation on blood donation activities (for example: 1= highly risky to 5 = not risky). Meanwhile, other psychological aspects comprise of five choices of answers using the Likert scale (1 = strongly disagree to 5 = strongly agree). Items used in this study were a combination of interview with blood donors and literature reviews.

Conceptual framework of this study is as in [Figure 1](#).

Figure 1: Factors Related to the Intention to Donate Blood



3. Results

A total of 71 students were involved in this study (44 = males; 27= females). Based on this number, 39 students (54.9%) were non-blood donors and 32 students (45.1%) were blood donors. Respondents' age ranges from 18 to 34 years old. [Table 2](#) shows the value of reliability for the psychological aspects in this study (Cronbach alpha, $\alpha = .69$ to $.92$).

Table 2: Reliability Value for the Variables

Psychological Aspect	Number of items	Reliability (Alpha Cronbach)
Attitude	11	.80
Self-Efficacy	3	.69
Subjective Norms	9	.85
<i>Ihsan</i>	5	.78
Social Awareness	8	.83
Anticipate Regret	3	.92
Identity as Blood Donor	8	.83
Intention	3	.86

In this study, it was found that students in the blood donor group have a higher mean value than non-blood donor groups for most of the psychological aspects (Table 3). These psychological aspects include attitude, self-efficacy, social awareness, *ihsan*, anticipate regret and identity as a blood donor. In contrast, subjective norms that represent the social pressure was found to be higher for the non-blood donors as compared to the other counterparts.

Table 3: Mean Value for Psychological Aspects among Respondents

Psychological Aspects	Non-Blood Donor	Blood Donor
Intention	3.14 (SD=.80)	3.56 (SD=.98)
Attitude	4.00 (SD=.47)	4.21 (SD=.43)
Self-Efficacy	3.69 (SD=.66)	3.73 (SD=.64)
Subjective Norms	3.04 (SD=.55)	3.01 (SD=.75)
<i>Ihsan</i>	3.78 (SD=.59)	4.06 (SD=.65)
Social Awareness	3.78 (SD=.55)	4.15 (SD=.47)
Anticipate Regret	3.52 (SD=.90)	3.58 (SD=.92)
Identity as Blood Donor	3.02 (SD=.58)	3.45 (SD=.83)

Pearson Correlation Analysis has been carried out on psychological aspects towards the intention to donate blood among donors and non-donors (Table 4). Findings indicated that, for donors group, the intention to donate blood is driven by subjective norms which were *ihsan*, social awareness and anticipate regret. As for non-donors, the intention for donating blood is motivated by three psychological aspects, namely as *ihsan*, social awareness and anticipate regret.

Table 4: Correlation Between Psychological Aspects Towards the Intention to Donate Blood

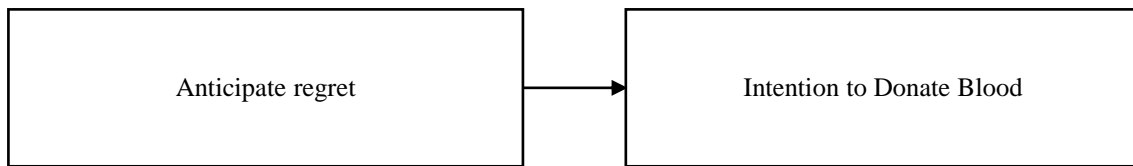
Psychological Aspect	Intention to Donate Blood (Non-donors)	Intention to Donate Blood (Donors)
Attitude	.22	.16
Self-Efficacy	.29	-.03
Subjective Norms	.22	.58**
<i>Ihsan</i>	.38*	.41*
Social Awareness	.42**	.37*
Anticipate Regret	.45**	.73**
Identity as Blood Donor	.28	.44*

* Correlation is significant at the 0.05 level (two-tailed)

** correlation is significant at the 0.01 level (two-tailed)

Regression analysis was carried out to identify the unique contributing factor of psychological aspect towards the intention to donate blood among respondents (Figure 2). The regression analysis for both models are significant whereby in both models, anticipate regret contributes 19.6 percent and 52.0 percent towards the intention to donate blood for non-donors and blood donors groups, respectively.

Figure 2: Regression Model on Psychological Factors towards the Intention to Donate Blood



3.1. Non-Blood Donor

The model as a whole explains 19.6 percent of the variance in the intention to donate blood and it is significant [F (1, 36) =8.77, p<.005]. The result of multiple regression analysis on the motivation to donate blood among non-blood donors is illustrated in Table 5. The finding showed that when anticipate regret among non-blood donors increased by .40 units, the intention to donate blood would increase by 1 unit.

Table 5: Motivation to donate blood among non-blood donors (n=39)

Regression paths	B	t	p
Anticipate regret	.40	2.96	.005

B = unstandardized coefficient.

Model fit R²=.19.6, Adjusted R²=.17, F (1, 36) = 8.77, p<.001.

3.2. Blood Donor

The model as a whole explains 52 per cent of the variance in the intention to donate blood and it is significant [F (1, 29) =33.80, p<.001]. Table 6 showed the result for multiple regression on the motivation to donate blood among donors in university. The finding pointed that, when the score of anticipate regret increased by .76 units, the intention to donate blood among blood donor increased by 1 unit.

Table 6: Motivation to donate blood among blood donors (n=32)

Regression paths	B	t	p
Anticipate regret	.76	5.55	.001

B = unstandardized coefficient.

Model fit R²=.52, Adjusted R²=.50, F (1, 29) = 30.80, p<.001.

5. Discussion

The findings of this study provide an overview of psychological motivational aspects towards the intention to donate blood among university students. One of the rationales selecting university students as respondents is because it serves as an ideal platform for the recruitment of more blood donors. Furthermore, donors among young people will provide a consistent blood supply for a long period of time if they donate consistently. This indicates that efforts to get more blood donors are expected to be easier if the blood

donation campaign is being held in a suitable place to attract healthier young people to be motivated as blood donors.

In general, the donors group exhibit stronger intention to donate blood as compare to their other counterpart. This is in line with [Piersma et al. \(2017\)](#) point of view, whereby individual with blood donation experience generally tend to repeat the same action. However, this might be applicable for donors with positive experience since the success of performing these activities will often produce a sense of happiness, proudness and joy. Meanwhile, in the context of blood donation in Malaysia, blood donors will receive a certificate of appreciation for their donations after executing the donation. As for young people, especially university students, the certificate of appreciation is important for them as it is considered as an evidence for their involvement in the society. This could lead to positive enhancement of feelings such as joy, selfless and happiness among young people. In short, for university students, involvement in blood donation is a form of engagement that covers a broader scope of community. Other than enhancement of positive feelings, involvement as blood donors among university level could provide a positive image in their social networking. This involvement could lead to the development of identity as a blood donor. [Ringwald et al. \(2010\)](#) explains that, for individuals who feel that they have been identified as blood donors will have a higher probability of repeating the same action in the future. Individuals who perceive themselves as blood donors will try to relate themselves to any activity involving blood donation to strengthen their identity as donors. For example, university donors might feel obligated to invite other members to join blood donation campaign in the campus area. Through such involvement, they do not only maintain their positive image as blood donors in the social media, but in the same time repeating the action could help to strengthen their identity as donor. Therefore, for these young donors, their higher intention to donate blood could resemble their positive experience in the previous donation as well as their identity as donors, thus lead them to the desire to repeat this act.

Interestingly, for the non-donors, our finding showed that, they similarly exhibit their intention to donate blood. Although this group has yet been involved in blood donation, they had imagined themselves donating blood on the day of blood donation campaign on campus. This finding suggests that students, who are not blood donors could be motivated as blood donors. According to [Fonte et al. \(2017\)](#), factors such as needle fears, worry, anxiety or no time to donate blood could become barriers for healthy individual to donate blood. Furthermore, false perception towards blood donation might turn out to be an obstacle for healthy individual to become a blood donor ([France, Kowalsky, France, McGlone, Himawan, Kessler & Shaz, 2014](#)). Blood donors, on the other hand, they often have a strategy to overcome fears or anxiety while donating blood. For the other counterpart, the blood donors, they have better time management and coping strategy that enables them to perform this activity ([Jaafar, Chong Desa, Alavi & Kam, 2016](#)). Furthermore, individuals who have been involved in blood donation, have generally found a way to overcome the possible problems encountered during the blood donation process.

In addition, recent findings also reported that blood donor students showed more positive psychological value to blood donation activities than non-blood donors. For example, for blood donor students, they showed more positive attitude towards the activity. Donors in this study have more positive attitude towards blood donation by perceiving this activity as less painful, not risky and not tiring. This situation is different from non-blood donor groups. This situation could lean support to the experience factor

whereby it plays an important role in the formation of their positive attitude towards the activity. For non-blood donors, this situation is different. This is due to the fact that for non-donors, they tend to have false perceptions such as the transfer of fluid-borne virus in blood transfusions which lead to a higher risk in blood donation (Bhopal, Mcewan, Madhok & McCallum, 1992). Note also that, our findings reported that blood donors exhibit higher awareness over other individuals' needs. Blood donors are seen as individuals who are concerned with the virtues and needs of other individuals. This finding is not unique as Ferguson, Atsma, De Kort and Veldhuizen (2012) once reported that, social awareness is associated with the intention to help others and it is significant among blood donors. However, social awareness in this study does not only reflect the sense of social responsibility towards other people, but in the same time it depicts concerns toward the donors' wellness. Our study highlighted that social concern in blood donors also involves psychological rewards for the donors themselves such as happiness after donation.

In this study, it seems clear that social networks play an important role towards the intention to donate blood among the university students. According to Ajzen (1991), social pressure, which is subjective norm represent the perception of pressure received from other individuals. As for blood donors among university students, it is possible that their involvement in this activity is noticeable in their social networks. Giving that involvement in blood donation could lead to the formation of positive images, and in order to maintain this image, blood donors often assume that they should continue to engage in such activities. This could be perceived as a part of their responsibility as blood donors. Moreover students' involvement in blood donation can be easily known by others, especially when the campaign is in campus area (Muhammad, Halain, Geok & Soh, 2018). One of the possible explanations is the rapid use of social media among these youngsters in updating their activities, such as Instagram, WhatsApp or Facebook. In addition, Raghuwanshi, Pehlajani and Sinha (2016) argues that social networking could serve as a platform lead to the formation of support among these donors by encouraging others to do the same act. This suggests that, as a university student, who is capable in engaging with society and also known for their involvement in blood donation, these factors could be seen as a psychological resource to engage continuously in this altruistic activity

Another important finding in this study is the factor of *ihsan* as one of the psychological resource as a motivator towards the intention to donate blood. *Ihsan* does not only focus on the benefits of a blood recipient, but at the same time includes positive psychological rewards to the donors. This concept is closely related to the term benevolence proposed by Ferguson et al. (2012). In this term, Ferguson et al. (2012) describes benevolence as helpful actions that produce positive emotions to the blood donor themselves. Recently, *ihsan* was conceptualized as the quality of a task and effort to improve it (Sarkam et al. 2018). In this study, *ihsan* comprises of three aspects which are altruism, charity and empathy, which could represent the quality of individuals in executing this behaviour. This finding reflects that *ihsan* could play an important role to motivate university students towards their intention to donate blood. Other than *ihsan*, other important feature in this study regarding the motivational factors towards intention to donate blood is the anticipate regret. In this recent study, intention to donate blood among university students was predicted by anticipate regret. In particular, regret is the feeling that people try to avoid for not engaging in a planned behaviour (Brewer et al., 2016). In this study, anticipate regret explains more than fifty percent towards the variance in the intention to donate blood among blood donors. The most likely explanation is based on the aspect as experience in blood donation. Donors with positive experience during the process of

donation are in higher possibilities to repeat the action and will try to avoid the feeling of regret if they did not succeed in donating blood (Bednall et al. 2013). This is due to the fact that these donors will try to compare the anticipated positive feeling when they donate, as compared to the situation if they fail to execute the act. In the same time, this study found that, anticipate regret also plays a significant role towards the intention to donate blood among non-donors. In the non-donors' regression model, the anticipate regret explains nineteen percent of the variance in the intention to donate blood. This might portray the sense of involving in prosocial behaviour and helping the society as a common desire for a healthy individual, whereby failing to do so might lead to the feeling of guilt. This result showed similarity with Faqah, Moiz, Shahid, Ibrahim and Raheem (2015) study, whereby anticipate regret was reported to contribute to the intention to donate blood in the general population among university students. By adopting the point of view from Brewer et al. (2016), anticipate regret plays an important role in health behaviour study by strengthening the intention towards the particular behaviour. Higher anticipate regret will result in a stronger intention to execute the planned behaviour. In short, anticipate regret could become a potential psychological resource that motivates university students to donate blood.

6. Conclusion

Overall, this study found that psychological resource within an individual could be strengthen to motivate people to donate blood. The result from this study is supporting other previous research in identifying factors toward the intention to donate blood (Bednall et al. 2013; Bagot et al., 2015; Mirutse et al., 2014). One of the most highlighted findings in this current study is the new psychological aspect, namely as *ihsan* that covers three internal factors which are altruism, charity and empathy. Whilst for social awareness, this study supports the importance of anticipate regret in motivating young people to donate blood. In terms of appropriate blood donation campaigns. Transfusion Medical Services could collaborate with the organizers in campus to emphasize the psychological factors in motivating university students as blood donors. Appropriate slogans or motto in flyers highlighting social awareness, *ihsan* and anticipate regret could be used as the key factors towards the intention to donate blood for both groups, donors and non-donors. This can also be achieved through the use of infographics that can be passed through social media platforms. By using media social as a networking platform, additional knowledge can be conveyed on blood donation as well as creating awareness regarding the activity. Moreover, blood donation campaigns held at campus could emphasize on strengthening the social networks among university donors. Based on our findings, young people in campus feel the pressure regarding involvement in this altruistic action. Therefore, social pressure could serve as a good resource to reinforce and to motivate university students to donate blood.

There are two limitations in this study. First, the data collection period in this study lasted for two weeks. This gives a limited period of time to get more respondents. Last but not least, this study did not differentiate donors' number of donations. Therefore, we could only identify the motivational factors based on the status of students' involvement in blood donation, which are blood donors and non-blood donors. Motivational factors towards the intention to donate blood might differ depending on donors' career (first timer, novice or regular donors). Future study needs to identify the effectiveness of slogans using the aspect of *ihsan*, social awareness and anticipate regret to promote the blood donation campaigns at university. Furthermore, more research is needed to explore the role of anticipate regret as motivational factor towards the intention to donate among

university students. By exploring the role of these psychological factors that lead to the intention to donate blood, the results are expected to assist the National Blood Centre in developing more effective and efficient blood donation campaign among young people. Through appropriate campaign strategies, not only new donors could be recruited, but at the same time motivating the current donors to become regular blood donors.

Ethics Approval and Consent to Participate

The researchers followed the research ethics provided by the Research Ethics Committee of Infrastructure University Kuala Lumpur (IUKL). All procedures accomplished in this study were conducted in accordance with the ethical standards of the institutional research committee.

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Conflict of Interest

The authors reported no conflicts of interest for this work and declare that there is no potential conflict of interest with respect to the research, authorship, or publication of this article.

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