



**Research Article:**

***'It could be easy if they would explain the experience': A Qualitative Study of Perceived Facilitators to Donating Blood Among Adults in Harare, Zimbabwe.***

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**Abstract**

*In Zimbabwe, though adults use 80% of donated blood, their contribution to the national blood bank remains low. Considering that blood is an essential but scarce national resource, it is important to gain insights into the factors that may facilitate adults' decision to donate. We, therefore, sought to identify and describe the factors facilitating adults' blood donation intentions in Harare. We used a qualitative study design. We interviewed 32 participants using a semi-structured questionnaire. The responses were audio-recorded and transcribed verbatim. We analysed data thematically. With respect to perceived facilitators, we found six themes, namely, donor convenience, personal health factors, effective communication, tokens of appreciation, experiencing donation benefits and considering donation as a personal decision. Variations in the factors that facilitate adults' motivation to donate blood from this study suggest that adult blood donor recruitment and retention strategies should be client-centric and evidence-based.*

**Keywords:** *adult blood donor, donor recruitment, facilitators, motivation, themes.*

**Introduction**

**Background**

There is a growing global blood shortage with maximum concentration in developing countries (Fasola, 2017; Umeora et al., 2005). Considering that there is currently no effective and efficient man-made substitute for human blood (Bukar et al., 2020), the need for blood remains apparent in health facilities across the world. In Zimbabwe, adults use 80% of donated blood and yet, historically, their contribution to the national blood bank remains low (National Blood Service Zimbabwe, 2013; Nyambiya et al., 2020) thus, exacerbating blood scarcity in the country (Ministry of Health and Child Welfare, 2010a, 2010b). In the absence of research evidence concerning the factors that facilitate or deter adults from donating blood

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in Zimbabwe, it is difficult to develop strategies that can optimise their recruitment and retention.

Donation motivators and barriers are particularly relevant because the interaction among them affects donation behaviour (Martin-Santana et al., 2019). In this paper, we focus on facilitators, that is, conditions or situations that are perceived to make it easy for one to perform a given behaviour (Kaprzyk et al., 2018; Montano and Kasprzyk, 2008; Nyambiya, 2020). A recent study by Rael et al. (2021) demonstrates that facilitators to blood donation essentially function as behavioural motivators. Gaining insight into these factors can contribute towards optimising donor recruitment and retention with supporting marketing strategies (Bednall and Bove, 2011). However, depending on research evidence generated outside Africa presents challenges as some findings from high-income countries are often inappropriate for low-income settings (Bates, 2013; Dunn, 2011) - hence our thrust towards building local empirical evidence upon which to base recruitment and retention strategies (Nyambiya, 2020; Nyambiya et al., 2020). Considering that the removal of barriers is insufficient on its own to motivate blood donation (Bednall and Bove, 2011; Mohamed and Essel, 2018), there is therefore need to gain insight into facilitators that can be leveraged to effectively recruit and retain adult blood donors.

In Zimbabwe, the need to understand the factors that facilitate adults' willingness to donate blood has been brought to the fore by the restrictive protocols of the Covid-19 pandemic that have made young people – the traditional, major contributors to the blood bank – less accessible for blood donation. In a recent public appeal for blood, the NBSZ Communications Officer highlighted that 'Learning institutions, which are our major source of donors who contribute about 75% of the blood in the national blood bank are closed. There has been low donor turnout...' (The Sunday Mail, 2021:8). Considering that a proportion of adults still have the leeway (under Covid-19 lockdown regulations) to move to and from their places of work, it may be the case that they are better-placed to contribute towards the restocking of the much-needed blood.

Although this study was conducted before the onset of Covid-19, insights into the factors that could make it easy for adults to donate blood can go a long way in assisting the national blood bank to reconfigure their recruitment and retention strategies, and appropriately target adults especially during the period where school and college-based blood drives have been temporarily rendered impractical. In a resource-poor country battling with the challenge of blood scarcity (MOHCW, 2010a, 2010b), understanding blood donation facilitators is essential because such "understanding is the primary intervention on which all other interventions are inescapably based" (Sandelowski, 2004:1373).

## Theoretical framework

According to Fishbein and Cappella (2006), behaviour change theories are useful because they provide a framework for identifying the determinants of any given behaviour, an essential first step in the development of successful interventions to change that behaviour. The current study is based on the Integrated Behavioural Model (IBM), an eclectic theoretical



model that incorporates the key psychosocial constructs of a number of leading theories of behaviour and behaviour change (Montano and Kasprzyk, 2008). The IBM was deemed appropriate for this research because it is a general theory of behavioural prediction that is

applicable to the understanding of any given behaviour (Fishbein and Cappella, 2006; Montano and Kasprzyk, 2008).

Although the IBM allows for the exploration of multiple factors that affect human behaviour (e.g., feelings, normative beliefs, behavioural beliefs, self-efficacy, and barriers) this paper focuses on facilitators only, as alluded to in the background of this paper. Research findings on other factors affecting adults' motivation to donate blood in Harare have been reported elsewhere (Nyambiya, 2020; Nyambiya et al., 2020).

## Statement of the problem

In Zimbabwe, adults aged 30 – 65 years consistently contribute a relatively small proportion of blood donors compared to youth such that demand for blood continues to exceed supply (NBSZ, 2013), especially during school closures. When in short supply, blood units remain costly and hence, unaffordable to most Zimbabweans because 63% of them are considered poor (United Nations, 2016). Though gaining insight into factors that can facilitate adults' motivation to donate blood are critical in formulating evidence-based donor recruitment strategies (Nyambiya, 2020), there is currently a dearth of information on such factors in Zimbabwe. In turn, the paucity of data regarding such a key factor can exacerbate morbidity and mortality that is associated with blood shortage in health facilities in Zimbabwe.

## Research question

What situations or conditions could make it easy for adults to donate blood?

## Methodology

### Research design

Undertaking research, in an area where little previous research has been conducted in Zimbabwe (Nyambiya, 2020), a qualitative study design was considered most suitable to address the study objectives. Marshall (1996:522) asserts that qualitative studies aim 'to provide illumination and understanding of complex psychosocial issues and are most useful for answering humanistic 'why' and 'how' questions.' Such an exploratory approach enables the capturing of multiple perspectives about the phenomenon of interest direct from members of the study population (Middlestadt et al., 1996). The nuanced insights gained will then form the basis for more targeted and effective adult blood donor motivation interventions.

We used a semi-structured questionnaire to elicit participants' responses. Since the study involved going to members of the target population to interview them, the qualitative data generated was rich in that it gave programmers terminology in the language of the



population of interest (Orford, 1992). We obtained ethical approval for the study from the Medical Research Council of Zimbabwe (MRCZ/ B/1395).

## Sampling

Based on the premise that community norms and prior research can establish useful rules of thumb for estimating sample sizes in qualitative research (Vasilileiou et al., 2018), we determined that 32 participants would be adequate, in line with Morse's (2000) approximate number of interviews required for one to expect to reach theoretical saturation when using a semi-structured interview approach.

We used a multi-stage sampling strategy to draw a household-based sample of men and women resident in the selected suburbs of Harare, aged between 30 – 65 years. A detailed description of the sampling strategy used has been published elsewhere (Nyambiya et al., 2020).

## Data collection procedure

Using our recruitment script, we explained the objectives of the study to the prospective participants. For individuals interested in participating, we administered a written consent in the language that the participant preferred (i.e., English or Shona). After obtaining written consent, we interviewed participants using a semi-structured questionnaire. The key elicitation question about facilitators to donating blood was: 'What are the things (for example, situations or conditions) that you think could make it easy for you to donate blood when an NBSZ mobile blood collection team visits your neighbourhood in the next four months?' Where necessary, we augmented the primary question with probes so that participants would elaborate on their responses. All responses were audio-recorded with the permission of the participants. Data were collected data from 12 December 2017 to 3 January 2018.

## Data analysis

We used Braun and Clarke's (2006) six-phase guide to doing thematic analysis. This guide was deemed suitable because it is a flexible and systematic analytic approach, allowing the drawing of both (i) semantic (or explicit) themes that closely reflect participants' actual statements and (ii) latent (or interpretative) themes that group semantic themes into distinct clusters, making it possible to present thematic patterns in a succinct and holistic form.

## Participant demographic characteristics

Half of the 32 participants interviewed were male (n=16). The majority of participants were of the Shona ethnic group (n=26) while very few of them (n=2 and n=4) were of the Ndebele or other ethnic groups respectively. Most of the participants were married (n=26) and a few of them were either separated/divorced (n=2) or widowed (n=3). Participants were mostly of the Christian religion (n=30) while the other two reported belonging to Traditionalism and



Islam respectively. Seven participants reported that the highest level of education they attained was primary school, while two attained Junior Certificate, 13 attained Ordinary level and nine completed Tertiary level education. Fifteen of our participants reported that they had donated blood at some point while 17 of them had never donated blood. Study participants' mean age was 42 years while the median age was 39 years.

## Findings

In this study, we found six themes, namely, donor convenience, personal health factors, effective communication, tokens of appreciation, experiencing the benefit of blood transfusion and considering donation as a personal decision. We provide descriptions and illustrative quotes for each theme.

### Donor convenience

#### ***Convenience of blood collection venue***

Several participants (n=7) highlighted that it would be easy for them to donate if the blood collection venue is convenient for them in terms of its accessibility and nearness:

If they come for instance at the hospital that is near our residential area, we would be free to donate blood (P23, Male, 31 years).

The team should be stationed at a nearby place... so nearby that I do not think a person would experience a problem such as feeling dizzy before reaching home (P21, Female, 32 years).

It has to be close by. I don't have to walk long to give my blood (P28, Male, 36 years).

#### ***Convenience of donation time and duration***

Some participants (n=6) highlighted that it would be easy for them to donate blood if convenience is ensured in terms of the donation time and duration:

If they come near my workplace when I have time during my lunch hour, I will then be able to donate, if I have free time (P23, Male, 31 years).

If you obtain our phone numbers so that you can contact us and enquire about whether we will be free and then we will tell you whether we will be free or tied up (P23, Male, 31 years).

They should just take a few minutes and finish with us, and then we can go back and carry on with what we would have been doing (P31, Male, 38 years).

#### ***Time to prepare***

Several participants (n=6) highlighted that it would be easy for them to donate if they are given sufficient time to prepare for the procedure physically and psychologically:



Some good information sent in advance... so you can physically and mentally prepare. You don't have to drive, and somebody will be with you, and you have something to eat (P32, Female, 52 years).

If they inform us about the time and the place where they are found... then we can arrange our time accordingly (P31, Male, 38 years).

## Personal health factors

### *Perceived good health*

Several participants (n=7) highlighted that they would be motivated to donate blood if they are healthy. Good health was construed in terms of general body fitness, being stress-free, having blood free from infections and having sufficient blood in one's body:

If I am healthy and if I am not sick, nothing will hinder me from giving blood (P04, Female, 39 years).

What would help me... just being stress-free (P13, Female, 41 years).

As long as I have sufficient blood such that I am able to donate at that time...there is nothing that will be problematic (P25, Female, 31 years).

### *Healthy food and drinks*

Some participants (n=3) indicated that it would be easy for them to donate blood if they have access to healthy food and drinks before and after donating:

We would have to continue taking things like drinks, things like Mazoe. Yes, and also eating healthy food so that one's blood becomes abundant in the body (P05, Female, 46 years).

I will need proper food, like supplements that help you [sic] to stay healthy, that add blood...to the body (P14, Female, 31 years).

## Effective communication

### *Using suitable multi-media*

Some participants (n=4) highlighted that NBSZ should increase the degree of reach of its messages through suitable multi-media platforms:

Making more like roadshows... passing through our neighbourhood (P01, Male, 46 years).

Sometimes we don't even have time to listen to the radio or television, but social media gets some information that you can't get otherwise (P14, Female, 30 years).



I would wish that they advertise quite a bit on ZBC and in the press. Honestly, I am yet to come across any information (P24, Female, 36 years).

### **Communicating importance, advantages, and disadvantages of donating blood**

Some participants (n=8) indicated that they would be more inclined towards donating if they are given clear messages about the importance as well as the advantages and disadvantages of donating blood:

A good background education, I mean being educated [on] why they should donate blood, where it goes to, why hospitals later on charge them about [sic] that blood they would have given freely (P09, Male, 64 years).

If maybe there is a lot of campaigns and reasons are given as to the advantages... and disadvantages to an individual – because what we lack is information sometimes (P01, Male, 46 years).

### **Communicating about the procedure**

Some participants (n=6) highlighted they would be encouraged to donate blood if NBSZ gives specific information about the procedure and possible health effects that one can encounter in the immediate term:

A person should first of all be told about the procedure to be followed. For instance, 'We are now opening the injection, we are now pricking, we are now drawing the sample (P31, Male, 38 years).

I think it could be easy if they would explain the experience: how long it takes (P28, Male, 36 years).

I would like to be educated again on the aspect of what my health condition will be like after I donate blood (P04, Female, 39 years).

### **Engaging prospective donors in groups**

Some participants (n=6) highlighted that it would be easier for them to decide to donate blood if NBSZ communicates the message to them in groups, at suitable venues:

If you approach groups... then people talk to each other and I say, I am doing it and you do it too, because individuals are harder to persuade (P32, Female, 52 years).

If they are at a clinic or at a public place, where others are being attended as well, I will feel free because that would be good (P18, Male, 63 years).

It's very very (sic) rare to see adults, you know, in their large numbers unless they are in church services or any other (P01, Male, 46 years).



## Expressions of gratitude

One participant reported that receiving a phone call or text message that expresses gratitude would be motivating:

A call just to say, “How are you?” or even a message. A message can actually make a person feel...important, recognized. Yes, so the act of recognizing someone will make the person feel elevated (P11, Female, 30 years).

## Tokens of appreciation

Several respondents (n=7) indicated that they would feel encouraged to donate if they are appreciated or incentivised through being given blood free of charge or at an affordable price, being offered free blood tests and being offered symbolic gifts:

When we donate our blood free of charge, we should be able to get it free of charge as well when we need it. That could actually make me willing to donate (P17, Male, 32 years).

I expect them to test me to see whether my blood is alright...what my blood group is. That is what I expect (P19, Female, 55 years).

I remember in the olden days, they used to give tokens to say if you donate blood, they could give you T-shirts, caps, you know (P09, Male, 64 years).

## Experiencing the benefit of a blood transfusion

Some participants (n=5) mentioned that they would be motivated to donate through experiencing the benefit of a blood transfusion:

I have a relative who once lost blood and blood was needed and we ended up buying it in hospital so that the person could receive a blood transfusion. That incident touched me at that time and then I appreciated the importance of donating blood (P26, Male, 30 years).

You know being that it's actually a new thing, those who have not yet experienced how it benefits will find it a problem but not those who have once experienced that it really benefits (P22, Male, 63 years).

## Considering donation as a personal decision

Some participants (n=6) indicated that donating is easy for them because they consider the decision to donate as a function of personal choice:

I take this as a personal issue. When I say personal, I mean a person should make considerations as an individual and make a decision on his or her own, and I would regard it as one's personal secret (P26, Male, 30 years).



I choose that on my own, myself (P31, Male, 38 years).

I am an individual and as such, it's a matter of thinking on my own that it's good to donate blood (P03, Female, 36 years).

## Discussion and conclusion

This study sought to identify and describe perceived facilitators to adults' motivation to donate blood in Harare. The identification of such facilitators is a step in the right direction because it will enable the blood service institution to develop context-specific donor education and motivation strategies based on contemporary evidence.

Findings from our study clearly indicate that convenience in terms of venue, time and duration can facilitate adults' donation decisions. Several previous studies attest to the role of convenience in bolstering donation motivations (Bednall and Bove, 201; Piersma and Klinkenberg, 2018). The fact that some participants underscored that they would be motivated to donate blood by prompt service provision suggests that donation services are not expected to disrupt adults' routine work schedules. Participants' responses reflect that some adults cannot relegate their daily work commitments to the periphery to accommodate blood donation. Therefore, adult-based blood drives should be configured to reflect this reality. As Suen et al. (2020) pointed out, donation motivations can be enhanced through efficient service delivery and time management. The state of hurry that some adults find themselves in point to the need to adopt blood drive approaches based on the concept that ethics becomes a luxury as the speed of our daily lives increases (Darley and Batson, 1973).

To cater for the preference for donation venues to be near workplaces requires service re-configuration, perhaps in the form of more extensive work-place based blood donor drives. According to Basavarajegowda et al. (2020), being requested to donate blood in the work setting may be a strong motivator because it is very convenient for the donor as possible barriers such as childcare or the need for transportation are removed. Additionally, participants' quest for time to prepare suggests that adults value being given space to get physically and psychologically ready to donate blood, hence, the need for timeous communication to be sent to targeted donors and potential donors.

Ample evidence from this research point to the fact that adults are conscious that good health is a pre-requisite to donating blood. For instance, the mention of being 'stress-free' (P13) as a facilitator to donating blood indicates that some adults appreciate that the concept of being healthy for donation purposes includes the psychological dimension. It can therefore be inferred that campaign messages around health-based eligibility criteria have been well-understood in some circles within Harare. There is need for NBSZ to sustain the dissemination of such messages. Perhaps such messages could be pivotal in making prospective donors more health-conscious and more inclined towards adopting healthy lifestyles.



Some participants mentioned that they would find it easy to donate blood if they would have access to healthy food and drinks. It is noteworthy that Zimbabwe is a resource-constrained setting in which some individuals may not afford basic food (United Nations Development Programme, 2019) to enable them to be healthy enough to donate blood. Participants who cited the need for food and drinks rightly perceive food as being key in making blood 'abundant' in their body. In view of this finding, it is important for NBSZ to consider sourcing for food packs from the corporate world and other well-wishers for deserving donors. In China, state-run enterprises and governmental agencies offer subsidies in the form of small amounts of money for nutritional supplementation to some workers who donate blood (Ou-Young et al., 2020). However, admittedly, the offer of subsidies may not be feasible due to resource limitations in Zimbabwe.

Several participants highlighted that effective communication about various aspects of the donation process and outcomes would facilitate their willingness to donate. Detailed information about blood donation is key in dispelling possible myths and misconceptions, thus, allaying anxiety and enhancing prospective donors' readiness to donate blood (Mohammed and Essel, 2018). Similarly, within the domain of human milk donation, some participants indicated that being well informed about the entire donation procedure would help them to overcome a general sense of skepticism (Coutsoudis et al., 2011). Being engaged as a group was regarded as a motivator perhaps because doing so sends a strong signal that donating blood is a normative or collective endeavour. Our results are in line with previous findings that suggest that engagement motivates individuals to donate (Mohammed and Essel, 2018).

Various comments from participants underscore the need to use various media to publicise blood donation. On the basis of the identified perceived facilitators, the tailoring of promotional messages to suit the socio-cognitive parameters of different categories of adults is critical considering that basic cognitive mechanisms, such as the abilities to briefly maintain, focus, and process information decline with age (Li, 2002). Thus, a one-size-fits-all approach to communication may not be effective enough.

Some adults would be motivated to donate through receiving some tokens of appreciation. The feeling of being 'elevated' (P11) as a result of being contacted by telephone suggests that personalised communication can boost some adults' self-esteem and willingness to donate blood. This finding concurs with Ou-Yang et al.'s (2020) study in which they found that telephone calls can prompt more donors to return. The same study also highlights that SMS reminders with an altruistic appeal can urge donors to re-donate. Endeavouring to boost donors' morale through appreciation would be in accordance with the national standards for blood transfusion (sub-section 2.2.2), which stipulate that 'donors shall be recruited and retained in a manner that recognises the unique nature of their contribution and the right of the donor to be treated with dignity and in a fair and cordial manner' (MOHCW, 2010b:18).

Some participants reported that they would be motivated to donate blood if they are incentivised through being offered free blood tests, free blood, and symbolic gifts. Comments such as, 'when we donate our blood free of charge, we should be able to get it free of



charge...’ (P17) indicate that some adults perceive incentives as a legitimate expectation which ‘should’ be fulfilled. Our results confirm those of other researchers who have highlighted the importance of motivating donors through appropriate incentives (Charbonneau et al., 2019; Piersma and Klinkenberg, 2018). In any case, the national blood policy of Zimbabwe allows for the provision of “non-monetary incentives to regular donors that appropriately recognise the donor without providing an unintended incentive” (MOHCW, 2010a:15). We therefore argue that offering appropriate incentives in size and type (Lacetera and Macis, 2008) should still be considered because incentives can enhance individuals’ autonomy to act according to their true underlying preferences (Vlaev et al., 2019).

It is interesting to note that individuals who experience the benefit of donating blood will be motivated to donate blood in the future. It may be the case that those who experience a direct or indirect benefit will develop a sense of indebtedness that may foster a more favourable attitude towards donating blood. Evidence from the current research is consistent with findings from previous research conducted in other settings on the same topic (Bednall and Bove, 2011; Piersma and Klinkenberg, 2018; Suen et al., 2020). Findings from a recent study also indicate that when a known victim receives blood, it potentially increases psychological closeness, induces more concrete thinking about blood donation and activates sympathy toward those needing blood (Ferguson et al., 2020). Therefore, it may be beneficial to encourage blood beneficiaries and their relatives to share their experiences with people in their social networks to motivate them to donate as well. A study done in the Netherlands demonstrated that a donor-recruiting-donors campaign can increase blood donation registration rates (Piersma and Klinkenberg, 2018). In line with the proposition to encourage donors to recruit other donors, a key message for blood donors would be: ‘Well done for donating blood. Go ahead and tell someone!’

With respect to some participants who indicated that donating is easy for them because they consider the decision to donate as a function of personal choice, it is important to validate and encourage such a personal stance. This finding concurs with results of a recent study which revealed that some donors make their donation decision independently, without being influenced by other people (Billen et al., 2017). Individuals who donate on the basis of an independent decision may be easier to retain because they may not be easily swayed by social pressure not to donate (Suen et al., 2020). It could be inferred that making a personal choice to donate reflects intrinsic motivation. Findings from a recent study also stress the importance of intrinsic motivation in bolstering blood donor motivation (Vlaev et al., 2019).

Certain limitations of this study should be mentioned. It is conceivable that some participants may have concealed some of their actual perceptions due to social desirability (Timire and Neave, 2017). While interviewing participants face-to-face allows for probing when answers are incomplete (Nyambiya, 2020), its downside is that it may inhibit candid responses (Middlestadt et al., 1996). Notwithstanding these limitations, we are confident that our appeal for honest responses from the outset, coupled with the rapport that we created with participants went a long way in mitigating such limitations.

In conclusion, the person-to-person variations in perceived facilitators revealed in this study suggest that adult blood donor recruitment and retention strategies should be as client-



centric as possible. Messages to enhance recruitment and retention of adult blood donors should be based upon current evidence concerning what facilitates their donation decisions. The heterogeneous nature of blood donation facilitators identified in this study should challenge duty-bearers at the national blood service centre to be more versatile and consider going beyond the common, pure altruism-based messages such as 'donate blood and save lives.' Rather, to the extent possible, practical, and ethical ways of meeting donor preferences for things such as relevant tokens of appreciation and quick service should be objectively explored.

## References

- Anonymous. (2021). Blood Bank Runs Low. *The Sunday Mail*. 08 August, p.8.
- Basavarajegowda, A., Usha, K. C. & Mayadevi, S. (2020). Self-admitted Motivating Factors and Barriers to Blood Donation in a Single Center from Southern India. *Global Journal of Transfusion Medicine*, 5, 34-37. doi:10.4103/GJTM\_67\_19.
- Bednall, T. C. & Bove, L. L. (2011). Donating Blood: A Meta-Analytic View of Self-Reported Motivators and Deterrents. *Transfusion Medicine Review*, 25(4), 317-334.
- Bates, I. (2013). T-REC: Generating Local Evidence about Blood Transfusion. *Transfusion Today*, 94, 1-36.
- Billen, A., Madrigal, J. A., Scior, K., Shaw, B. E. & Strydom, A. (2017). Donation of Peripheral Blood Stem Cells to Unrelated Strangers: A Thematic Analysis. *PloS ONE*, 12(10), 1-16. doi.org/10.1371/journal.pone.0186438.
- Braun, V. & Clarke, V. (2006). Using Thematic Analysis in Psychology. *Qualitative Research in Psychology*, 3(2), 77-101.
- Bukar, A., Tosan, E. A., Obi, O.S., Akinola, A. S., Waziri, G., Thomas, M. J., Kevin, A., Fredrick, C. C., Osakue, O. E., Erifeta, G., Osadolor, H. B. & Olaniyan, M. F. (2020). The Inconspicuous Health Benefit of Blood Donation. *Global Journal of Transfusion Medicine*, 5, 63-67. doi: 10.4103/GJTM.GJTM\_14\_20.
- Charbonneau, J., Cloutier, M-S. & Carrier, E. (2015). Motivational Differences between Whole Blood and Apheresis Donors in Quebec, Canada: A Questionnaire-based Survey in a voluntary nonremunerated context. *Journal of Blood Transfusion*, 1-12. <http://dx.doi.org/10.1155/2015/568259>.
- Coutsoudis, I., Patrises, A. & Coutsoydis, A., 2011. Acceptability of Donated Breast Milk in a Resource Limited South African setting. *International Breastfeeding Journal*, 6(3), 1-10.
- Darley, J. M., & Batson, C. D. (1973). "From Jerusalem to Jericho": A Study of Situational and Dispositional Variables in Helping Behavior. *Journal of Personality and Social Psychology*, 27(1), 100-108.
- Dunn, A. (2011). Improving Blood Transfusion Services in Africa: The launch of T-REC. *Africa Health*, 22-23.



- Fasola, F. A. (2017). Negative Peri-donation Events Among Whole Blood Donors in A Blood Bank in Ibadan, Nigeria. *Journal of Public Health in Africa*, 8(720), pp.170-173.
- Ferguson, E., Hill, A., Lam, M., Reynolds, C., Davison, K., Lawrence, C. & Brailsford, S. (2020). A Typology of Blood Donor Motivations. *Transfusion*, 1-11. doi: 10.1111/trf.15913.
- Fishbein, M. & Cappella, J. N. (2006). The Role of Theory in Developing Effective Health Communications. *Journal of Communication*, 56, S1-S17.
- Kasprzyk, D., Tshimanga, M., Hamilton, D. T., Gorn, G. J. & Montano, D. E. (2018). Identification of Key Beliefs Explaining Male Circumcision Motivation among Adolescent Boys in Zimbabwe: Targets for Behaviour Change Communication. *AIDS and Behavior*, 22, 454-470. doi: 10.1007/s10461-016-1664-7.
- Lacetera, N. & Macis, M. (2008). Motivating Altruism: A Field Study. *IZA Discussion Paper 3770*, 1-36. Bonn: Institute for the Study of Labour (IZA). [viewed 15 August 2021]. Available from: <http://hdl.handle.net/10419/35484>.
- Li, S-C. (2002). Connecting the Many Levels and Facets of Cognitive Aging. *Current Directions in Psychological Science*, 11(1), 38-43.
- Marshall, M. N. (1996). Sampling for Qualitative Research. *Family Practice*, 13(6), 522-525.
- Martin-Santana, J.F., Beerli-Palacio, A., & Romero-Dominguez, L. (2019). Recruitment Strategies: Non-Donor Segmentation Based on Intrinsic and Extrinsic Stimuli. *Vox Sanguinis*, 115, 47-59. doi: 10.1111/vox.12858.
- Middlestadt, S. E., Bhattacharyya, K., Rosenbaum, J., Fishbein, M. & Shepherd, M. (1996). The Use of Theory Based Semistructured Elicitation Questionnaires: Formative Research for CDC's Prevention Marketing Initiative. *Public Health Reports*, 111, 18-27.
- Ministry of Health and Child Welfare (MOHCW). (2010). *National Blood Policy of the Republic of Zimbabwe*. Harare: Zimbabwe Government.
- Ministry of Health and Child Welfare (MOHCW). (2010). *Standards for Blood Donation Processing & Clinical Transfusion in Zimbabwe*. Harare: Zimbabwe Government.
- Mohammed, S. & Essel, H.B. (2018). Motivational Factors for Blood Donation, Potential Barriers, And Knowledge About Blood Donation in First Time and Repeat Blood Donors. *BMC Hematology*, 18(36), 1-9. <https://doi.org/10.1186/s12878-018-0130-3>.
- Montano, D. E. & Kasprzyk, D. (2008). Theory of Reasoned Action, Theory of Planned Behavior, And the Integrated Behavioral Model. In K., Glanz., B. K., Rimer., K., Viswanath (Eds.). *Health Behavior and Health Education: Theory, Research, and Practice*. (4<sup>th</sup> Ed.). San Francisco: Jossey-Bass Publishers.
- Morse, J. M. (2000). Determining sample size. *Qualitative Health Research*, 10(1), 3-5.
- National Blood Service Zimbabwe (NBSZ). (2013). *Annual Report: Accessible Safe Blood Used Right*. Harare: Zimbabwe Government.
- Nyambiya, T. E. (2020). 'Every Drop Counts': An Integrated Behavioural Model-Based Study of Socio-Cognitive Factors Affecting Adults' Motivation to Donate Blood in Harare, Zimbabwe. MPhil Thesis, University of Zimbabwe.



Nyambiya, T. E., Muromo, T. & Muchena, K. (2020). 'My Blood Is Now Old and Exhausted': A Qualitative Study of Adults' Behavioural Beliefs About Donating Blood in Harare, Zimbabwe. *Africa Sanguine*, 22(1), 14-22. <https://dx.doi.org/10.4314/asan.v22i1.3>.

Orford, J. (1992). *Community Psychology: Theory and Practice*. West Sussex: John Wiley and Sons.

Ou-Young, J., Bei, C-H., Liang, H-Q., He, B., Chen, J. Y. & Fu, Y. S. (2020). Effective Methods for Reactivating Inactive Blood Donors: A Stratified Randomized Controlled Study. *BMC Public Health*, 20, 1-11. doi:org/10.1186/s12889-020-08594-9.

Piersma, T.W. & Klinkenberg, E. F. (2018). The Relation between Blood Donor Recruitment and Donor Diversity and Loyalty in the Netherlands. *ISBT Science Series*, 13, 84-393. doi: 1111/voxs.12460.

Rael, C. T., Pierre, D., Frye, V., Kressler, D., Duffy, L., Malos, N. & Tieu, H. V. (2021). Evaluating Blood Donor Experiences and Barriers/Facilitators to Blood Donation in the United States Using Youtube Video Content. *Transfusion*, 1-8. doi: 10.1111/trf.16568.

Sandelowski, M. (2004). Using Qualitative Research. *Qualitative Health Research*, 14(10), 1366-1386. doi: 10.1177/1049732304269672.

Suen, L. K. P., Siu, J. Y., Lee, Y. M. & Chan, E. A. (2020). Knowledge Level and Motivation of Hong Kong Young Adults towards Blood Donation: A Cross-Sectional Survey. *BMJ Open*, 10: e031865, 1-8. doi:10.1136/bmjopen-2019-031865.

Timire, C., & Neave, P. E. (2017). Sexual Behaviour and Practices among Adolescent Blood Donors in Zimbabwe. *Africa Sanguine*, 19(1), pp.1-6.

Umeora, O.U.J., Onub, S.O., Umeora, M.C. (2005). Socio-cultural Barriers to Voluntary Blood Donation for Obstetric Use in a Rural Nigerian village. *African Journal of Reproductive Health* 2005; 9(3), pp.72-76.

United Nations (UN). (2016). *Zimbabwe United Nations Development Assistance Framework 2016 – 2020: Supporting Inclusive Growth and Sustainable Development*. New York, NY: United Nations (UN).

United Nations Development Programme (UNDP). (2019). *Human Development Report 2019: Inequalities in Human Development in the 21<sup>st</sup> Century*. New York, NY: United Nations.

Vasilileiou, K., Barnett, J., Thorpe, S. & Young, T. (2018). Characterising and justifying sample size sufficiency in interview-based studies: Systematic analysis of qualitative health research over a 15-year period. *BMC Medical Research Methodology*, 18, 148-165.

Vlaev, I., King, D., Darzi, A. & Dolan, P. (2019). Changing Health Behaviours Using Financial Incentives: A Review from Behavioural Economics. *BMC Public Health*, 19, 1-9.