

Article

Assessment of Knowledge, Attitude, and Practice toward Blood Transfusion among Healthcare Providers in Qatar

Danial Hassan¹, Abdulqadir J. Nashwan^{2*} and Mohamed A. Yassin²

^{1.} Department of Healthcare Profession (DHP), Ministry of Public Health (MoPH), Doha, Qatar

^{2.} Hamad Medical Corporation (HMC), Doha, Qatar

* Correspondence: anashwan@hamad.qa

Abstract: Introduction: Blood transfusion involves the transfer of blood from donors to patients. A blood transfusion is carried out every 2 seconds in the US. It is made up of about 29000 units of red blood cells and is transfused every day in the US. When blood transfusion is done correctly, it can result in the saving of lives and the improvement of healthcare. However, it may also lead to immediate, late, delayed, and chronic complications. No previous studies have been conducted in Qatar to address this issue.

Methods: This is a cross-sectional study intended to determine the knowledge, attitude, and practice toward blood transfusion among healthcare providers at Hamad Medical Corporation (HMC), which is the principal healthcare provider in Qatar. Participants between 18 and 25 years of age were selected for the research study. A 10-item online questionnaire that people can fill out on their own will be used to get the data needed for the analysis and meet the study's goals.

Results: the analysis has indicated that facing negative reactions after blood transfusion and being worried about getting affected by any infection have a small positive association, with the specific values coming in at $r = 0.317$, $p = 0.000$. Fever after blood transfusion and feeling like refusing blood transfusion have a significant and moderate positive correlation, with the specific values coming in at $r = 0.630$ and $p = 0.000$.

Conclusion: The findings of this study have helped us figure out how healthcare providers feel, what they know, and what they do during a blood transfusion.

Keywords: Blood Transfusion; Knowledge; Attitude; Practice; Healthcare Providers

Introduction

Blood transfusion is one of the most common measures achieved in hospitals. According to (Erhabor and Adias 2013) it is tremendously well organized. It is one of the five most commonly used medical procedures and has become a routine therapeutic procedure regardless of the availability of cheaper and safer alternatives. However, it was observed that inadequate knowledge in hospital settings has been frequently reported during these procedures. This might be a reflection of a less knowledge on transfusion medicine (Scharf and Kongress 2008). In addition to that, the life-saving procedure technique is an indispensable part of the administration of

hematologic in addition to non-hematologic situations. The information from doctors regarding blood transfusion provides considerable inspiration on the lucid operation of blood products. The assessment in this study recognized their strengths and weaknesses in order to improve quality and transfusion practices. Furthermore, (WHO. 2010) states that clinician's knowledge about blood transfusion procedure and their products, preparation, storage, demands, doses, and administration may have great impact on patient care and transfusion outcomes. Therefore, transfusion practice and inappropriate transfusion may jeopardize patient's safety. It is a commonly used therapeutic procedure and not a risk-free intervention. Much health disorders may be associated with it, for example, transfusion-transmitted infections, transfusion of an incorrect blood products, hyperkalemia and hemolytic reactions (Barbeau 2019).

The aim of blood transfusions in health care providers is to understand all possible risks of blood transfusion, in addition to the possible therapeutic benefits. HCPs should be able to address any doubts expressed by patients, which will increase patient safety and awareness. According to (Kandola 2020), the expected result of any transfusion should be cautiously monitored against the potential risks of unwanted complications. Physicians should be well-educated to evaluate the risks, benefits, and side effects of their medical therapies. They should be aware of the possible adverse effects associated with the transfusion of allogeneic blood products (Kandola 2020). This study focused on assessing the perceptions and awareness among all healthcare practitioners in Hamad Medical Corporation regarding the risks, associated diseases, and necessity of blood transfusions to identify the factors that influence these perceptions. It is the consequence of a multifaceted chain of activities, numerous complicated types of therapeutic and paramedical control. According to the reports of WHO or the World Health Organization, it can be said that out of all the reported countries, 10 countries were not able to screen

blood by proper methods (Erhabor, Osaro, and Teddy C Adias 2013). Thus, lack of appropriate blood screening during transfusion has led to the lack of appropriate or accurate blood transfusion. Results from a research study have reported that 50% of the patients died after one year of blood transfusion (Barbeau 2019). Survival rates from blood transfusion varied with the age of patient and cannot be differentiated by gender. The main purpose of this study was to understand the attitude, knowledge, and practice of healthcare providers during process of blood transfusion. Additionally, the study will evaluate the impact of such attitudes and the understanding of the healthcare providers in the blood transfusion sector. In addition, the study aims at assessing any correlations between the demographics, knowledge, attitude, and practice of healthcare providers in HMC.

Methods

Eligibility criteria

Participants (HCPs) who underwent blood transfusion in HMC, Adults (18 to 25 years), and willing to participate. Never underwent blood transfusion and/or less than 18 years were excluded.

Design & Settings

A cross-sectional design, including a self-administered online and paper-based survey (10 questions for 600 participants) was used to achieve the study objectives using a convenient sample. A version of the survey was used to meet the study's objectives.

All individuals knew about the steps that were to be followed in the conductance of the research. All the participants were asked not to disclose their names, since personal information is to be kept confidential to respect the privacy of the patients. Permission to use the tool was obtained by the PI.

Data collection

Online survey method was used to collect data, the survey questions were sent by the research coordinator to all participants by HMC email via the corporate nursing mail group, and the monkey survey technique was used to keep the participants anonymous.

The research information sheet was provided along with an online/paper-based survey. The data collection period was from 1st Dec 2020 to 1st March 2021.

Sample size

The planned recruitment number was 229. However, the target was around 300 physicians using 99CL. The calculated sample size was initially 150, which was later increased to 229 to avoid incomplete response. The list of hospital participants from HRM included participants (HCPs) who underwent blood transfusion in HMC, and they comprised of adult volunteers. The exclusion criteria were used and participants who did not undergo blood transfusion were excluded.

All the participants were between 18 to 25 years of age.

Study procedure

The study duration and timeline of data collection were from December 1, 2020, to 1st March 1, 2021.

Ethical considerations

The study was conducted only after MRC review and exemption (MRC-01-20-88) and in full conformance with the principles of the "Declaration of Helsinki," Good Clinical Practice (GCP), and within the laws and regulations of MoPH in Qatar.

Statistical analysis

The analysis was executed using SPSS analysis tool to assess the attitude, knowledge, and practice toward blood transfusion among healthcare providers in Hamad Medical Corporation, which is based in Qatar. Understanding people's perception of blood transfusion is imperative as it helps make credible decisions within the healthcare industry. The results are displayed in the Tables format. For this qualitative data, the executed descriptive statistics will be used for the age variable. (See Table 1)

The inferential analysis involved correlation analysis as shown in Table 2 to determine the relationship between variables. The analysis of variance involved to observe the means of variables between group and within group as shown in Table 3. In addition, multiple linear regression analyses was conducted to obtain the model summary table as shown in Table 4, and ANOVA results shown in Table 5, and lastly, logistic regression analyses were used to determine the factors that can be used to predicted the outcome variable. The ANOVA results, as seen in Table 5, shows how different age groups responded to the questions in the study. Based on the obtained results, all variables had a collective effect on the study. Regression analysis as explained by (Darlington and Hayes 2016) helps in determining how the predictor variables affect the outcome variable within the analysis as shown in Table 6. The aim of, the analysis is to determine if blood transfusion refusal thoughts are related to age, facing negative reaction after blood transfusion, and months one has participated in taking blood transfusion service.

Results

The Pearson correlation results, facing negative reaction after blood transfusion and facing fever after blood transfusion, have a strong positive association ($r = 0.732$, $p = 0.000$). Facing negative reactions after blood transfusion and feeling like refusing blood transfusion have a significant and moderate positive association (r

= 0.463, $p = 0.000$). The analysis has indicated that facing negative reactions after blood transfusion and being worried about getting infected with any infection has a weak positive association ($r = 0.317$, $p = 0.000$). Fever after blood transfusion and feeling like refusing blood transfusion had a significant and moderate positive correlation ($r = 0.630$, $p = 0.000$). Moreover, the study, facing fever after blood transfusion and being worried about getting affected by any infection has a significant and moderate positive correlation ($r = 0.433$, $p = 0.000$). Feeling like refusing blood transfusion and being worried about getting affected with any infection are moderately correlated ($r = 0.688$, $p = 0.000$).

Also, the results shown in the Table 1, that the valid sample size that participated fully within the study was 229 participants. Of the total participants, no participant aged between 18 years and 25 years of age participated in the study. Those aged between 26 and 30 years were 38, with 99 participants ranging aged between 31 to 40 years. For those who participated in the study, 38 participants were aged between 41 to 50 years, and 13 were aged above 50 years of age. The remaining 41 respondents did not specify their age category.

The obtained logistic model was significant since the p-value was <0.05 . The explained variation within the outcome variable was 75.4%, and it correctly classified 98% of the cases.

Based on the regression results in the Appendix, $r = 0.865$ indicates that there is a strong correlation between the variables. R-squared = 0.748 shows that 74.8% of the model variation is due to the predictor variables. The age and months of participation in blood transfusion services are good predictors within the model since the p-values of these coefficients are less than 5% alpha level. Having faced negative reactions after blood transfusion was not significant within the model.

Discussion

Blood transfusion is one of the most familiar method attained in hospitals and it is tremendously well-organized (Akhter S, Anwar 2016). As stated by (Kandola 2020), the expected result of any transfusion should be cautiously monitored against the potential risks of unwanted complications. There are several health disorders may be associated with blood transfusion, for example, transfusion-transmitted infections, transfusion of an incorrect blood products, hyperkalemia and hemolytic reactions (Barbeau 2019).

From the ANOVA results, it can be asserted that there was a difference within the age groups in the number of participants who reported undergoing or experienced blood transfusion. The difference was witnessed when it came to satisfaction levels with the quality of care provided in HMC. Finally, the same difference was observed the number of months the participants received blood transfusion services (Akhter S, Anwar 2016). Feelings such as refusing blood transfusion and being worried about being affected by any infection were moderately correlated ($r=0.688$, $p=0.000$). These findings were found in another research study, where patients were afraid of blood transfusions (Erhabor, Osaro, and Teddy CAdias 2013) They reported feelings of getting scared to perform blood transfusion as they thought that they will get infected. Thus, it can be said that this finding is justified.

From the findings, which are clearly shown in the Appendix, the valid sample size that participated fully within the study was 229 participants. Of the total participants, none aged between 18 and 25 years participated in the study. This shows that all the participants were adults and were very helpful in this study. Thirty-eight participants were aged between 26 and 30 years were 38, and 99 participants were aged between 31 and 40 years. Those who were able to identify the exact results were adults, and they largely participated in this study. For those who participated in the study, it was easy to obtain the required results for the study. The age group

that was highly involved was the elderly people. The Individuals who face facing fever after blood transfusion are relatively high and, at the same time, are afraid of being infected with other diseases and donating blood. The age and months of participation in blood transfusion services are good predictors within the model since the p-values of these coefficients are less than 5% alpha level. Having faced negative reactions after blood transfusion is insignificant within the model, as shown in the Table 6 in below appendixes.

The results have stated that blood transfusion negative reaction after blood transfusion and fever after blood transfusion are strongly associated with each other. The negative reactions of blood transfusion are thus fever and the same findings have been observed in another research study (Scharf and Kongress 2008). Thus, this finding can be stated to be justified. Facing negative reactions after blood transfusion can thus be stated to be common (Darlington,2016). The results have also shown that the fear of getting affected by new infections was less prevalent than fever. Thus, it can be said that this fear had less prevalence in blood transfusion and has not mostly been considered as a common negative reaction (Bolton-Maggs P 2013) .Most of the patients did report that fear of fever was the major reason behind rejecting blood transfusion. This finding has been observed in another research study and thus can be stated to be justified (Bryant BJ 2005). However, the findings have stated that feelings of refusing blood transfusion and getting worried of being affected by infections are not strongly correlated. This means that refusals of blood transfusion are not connected mostly with post-transfusion infection chances. This finding has been observed in another research study (Kandola, Aaron. 2020). The selection of participants comprised of people from all ages. In other words, it can be said that people of all age groups require blood transfusion in many situations (Barbeau, J Mills. 2019). For this reason, people of all groups of ages were selected for the research.

Data dissemination (data availability for all)

Research data will be shared to allied researchers for reviewing. This data will be made available for third party access; however, they will be not allowed for general public. After the reviewers approve the research manuscript data, the original study will be performed, with higher number of research participants (Bolton-Maggs P 2013). In this way, data will be made available for the allied researchers first, either via email or hardcopies of the research. Shared data will be locked by a password and the password will be provided to the allied researchers only and not to the general public.

Limitations

Comprehensive information about the study has been provided by experienced research team to eliminate any unexpected confidentiality/privacy-related risks. The main limitation of this study was the smaller number of research participants. Data generalization was another issue with a smaller number of participants. The study has also not addressed any statistical bias or confounding factors. These limitations are also been observed in other primary research studies (Buckinghamshir, 2013). Confounding factors are known for altering the results or producing results misleading or deviating results. The confounding factors were not addressed in the study and therefore the findings can be stated to have been altered by the presence of these factors. These limitations reduce both the viability and reliability of the study. Therefore, these limitations are needed to be neutralized in future researches. A major limitation of this research study lies in the fact that the rationale behind the selection of data collection and analysis was not provided. The research study has also used a specific number of participants as the sample, whereas the sample size calculation was not specifically shown in the research

study. Another limitation lies in the fact that the ethical considerations were not specifically mentioned in the research study. Less number of samples has reduced the external validity of the research study. The study findings cannot be completely applied for the local population. These specific limitations were observed in another research study also (Organization., 2010). Literature review section was significantly small and therefore previously researched evidences were not discussed properly in the study. The study has not discussed anything about statistical or recall bias, which was associated with this research. In every study where participants are to answer something with respect to a questionnaire, recall bias is bound to exist. Thus, a discussion of bias in research would have increased the study quality. These are the overall limitations of the research study.

Conclusions

Despite the existence of more affordable and secure alternatives, blood transfusions remain one of the top five most frequently performed medical operations. However, it was noted that throughout these treatments, a lack of understanding was commonly reported in hospital settings. This may suggest a lack of understanding about transfusion medicine. Furthermore, the life-saving procedure approach is a crucial component of the management of both hematologic and non-hematologic circumstances. The medical community's information on blood transfusions serves as a significant source of inspiration for the rational use of blood products. To enhance the standard of care and transfusion procedures, the assessment in this study identified their advantages and disadvantages. Based on the obtained results, attitude, knowledge, and practice collectively affect blood transfusion. Some individuals develop a fever after a blood transfusion. The analysis indicated that facing adverse reactions after blood transfusion and being worried about getting affected by any infection

has a small positive association. According to the findings, a fever following a blood transfusion and a negative reaction to the transfusion are both highly correlated. Fever is one of the adverse effects of blood transfusion, and similar results were seen in another research investigation. Therefore, it may be said that this conclusion is supported. Thus, it may be said that having unfavorable responses following a blood transfusion is common (Kandola, Aaron, 2020). The findings also indicated that worry of contracting new diseases was less common than fever. Therefore, it may be concluded that this anxiety was less prevalent and was not generally thought to be a common adverse reaction to blood transfusion. The study has addressed the aim as well as the objectives. But more research needs to be done in the future to learn more about the topic and find new facts.

Declarations

Ethics approval and consent to participate

The project was exempted by the Medical Research Center (MRC) IRB of Hamad Medical Corporation (MRC-01-20-88). The study was conducted in accordance with the ethical standards note in the 1964 Declaration of Helsinki and its later amendments or comparable ethical standards. Informed consent was obtained from the research participants, before beginning the process of data collection in the research study.

Consent for publication

Not applicable

Availability of data and material

All data generated or analyzed during this study are included in this published article.

Competing interests

The authors declare that they have no competing interests.

Funding

This study was not funded.

Authors' contributions

Conceptualization: DH

Formal analysis: DH

Data curation, Literature Search, Methodology: DH, AJN, MAY. Writing - original draft, writing - review & editing: DH, AJN, MAY. All authors read and approved the final manuscript

Acknowledgments

None

References

1. Erhabor, Osaro, and Teddy C Adias. 2013. Essentials of blood transfusion science.
2. [Buckinghamshir: Authorhouse, 2013.
3. Scharf, R E, and Deutsche Gesellschaft fürTransfusionsmedizin und Immunhämatologie. Kongress. 2008. Progress and challenges in transfusion medicine, hemostasis, and hemotherapy : state of the art 2008. Basel ; New York: Karger, 2008.
4. WHO., World Health. 2010. Screening donated blood for transfusion-transmissible infections : recommendations. Geneva: World Health Organization, 2010.
5. Barbeau, J Mills. 2019. Risk management in transfusion medicine. St. Louis, Missouri: Elsevier, [2019].
6. Kandola, Aaron. 2020. "MedicalNewsToday." medicalnewstoday.com. January 16. Accessed January 24, 2022. <https://www.medicalnewstoday.com/articles/327513>.

7. Darlington, Richard B, and Andrew F Hayes. 2016. Regression analysis and linear models : concepts, applications, and implementation. New York : The Guilford Press, 2016.
8. Akhter S, Anwar I, Akter R et al. Barriers to Timely and Safe Blood Transfusion for PPH Patients: Evidence from a Qualitative Study in Dhaka, Bangladesh. PLOS ONE 2016;11: e0167399. doi: 10.1371/journal.pone.0167399
9. Alsharidah AS, Alsuhaibani HA, Almansour BS, Alsharidah MS Perceptions About Blood Transfusion Therapy Among the General Public and Healthcare Professionals in the Qassim Region of Saudi Arabia <https://doi.org/10.2147/JBM.S296036>
10. Bolton-Maggs P, Cohen H. Serious Hazards of Transfusion (SHOT) haemovigilance and progress is improving transfusion safety. Br J Haematol. 2013;163(3):303–314. doi:10.1111/bjh.12547
11. Bryant BJ, Alperin JB, Indrikovs A. Blood bank on-call physician’s experiences at a large university medical center. Transfusion. 2005;45:35–40. doi: 10.1111/j.1537-2995.2005.04097.x.
12. Dubey A, Sonker A, Chaudhary R. Knowledge, attitude, and beliefs of young, college student blood donors about Human immunodeficiency virus. Asian Journal of Transfusion Science 2014;8:39. doi:10.4103/0973-6247.126689
13. Friedman M, Arja W, Batra R, et al. Informed consent for blood transfusion. Am J Clin Pathol. 2012;138(4):559–565. doi:10.1309/AJCP2TN5ODJLYGQR
14. Graw J, Eymann K, Kork F et al. Risk perception of blood transfusions – a comparison of patients and allied healthcare professionals. BMC Health Services Research 2018;18. doi:10.1186/s12913-018-2928-

15. J.L. Callum, J.H. Waters, B.H. Shaz, et al. The AABB recommendations for the Choosing Wisely campaign of the American Board of Internal Medicine.
16. Kabinda J, Miyanga S, Donnen P et al. Knowledge, Attitudes and Practices of Medical and Paramedical Staff in Blood Transfusion in the Democratic Republic of Congo. *Open Journal of Preventive Medicine* 2014;04:672-680. doi:10.4236/ojpm.2014.48076.
17. Letaief, M., Hassine, M., Bejia, I., Ben Romdhane, F., Ben Salem, K. and Soltani, M.S. (2005) Para Medical Staff Knowledge and Practice Related to the Blood Transfusion Safety. *Transfusion Clinique et Biologique*, 12, 25-29. <http://dx.doi.org/10.1016/j.tracli.2005.01.002>
18. Mei Ling L, Sheng Hui T, Andrew K. G. T et al. Determinants of Blood Donation Status in Malaysia: Profiling the Non-Donors, Occasional Donors and Regular Donors. *Kajian Malaysia* 2018;36:43-62. doi:10.21315/km2018.36.1.3
19. Mohammed S, Essel H. Motivational factors for blood donation, potential barriers, and knowledge about blood donation in first-time and repeat blood donors. *BMC Hematology* 2018;18. doi:10.1186/s12878-018-0130-3
20. *Transfusion*, 54 (2014), pp. 2344-2352 <http://dx.doi.org/10.1111/trf.12802> | Medline The Joint Commission and the American Medical Association-Convended Physician Consortium for Performance Improvement (PCPI). Proceedings from the National Summit on Overuse.
21. Vetter T, Adhami L, Porterfield J, Marques M. Perceptions about blood transfusion. *AnesthAnalg.* 2014;118(6):1301–1308. doi:10.1213/ANE.0000000000000131
22. Wautier, J.L. Evidence-Based Transfusion Medicine and Medical Training. *Transfusion Clinique et Biologique*, 6, 349-354. [http://dx.doi.org/10.1016/S1246-7820\(00\)88979-X](http://dx.doi.org/10.1016/S1246-7820(00)88979-X)

Appendix

Table 1. Descriptive Statistics

Age					
		Freq	(%)	Valid (%)	Cumulative (%)
Valid	26-30	38	16.6	20.2	20.2
	31-40	99	43.2	52.7	72.9
	41-50	38	16.6	20.2	93.1
	above	13	5.7	6.9	100.0
	Total	188	82.1	100.0	
Missing	5	41	17.9		
Total		229	100.0		

The above data table has shown the percentage of people from different age groups, who participated in the research study. The total number of people present in the research study was also observed in the table. Total 229 people were present in the research study out of which 43.2 percent people were of 31-40 years of age.

Table 2. Correlation Analysis

Correlations					
		Have you ever faced any negative reaction after blood transfusion?	Have you ever faced fever after blood transfusion?	Have you ever felt like refusing blood transfusion?	Are you worried of getting infected with any infection?
Have you ever faced any adverse reactions after blood transfusion?	Pearson Correlation Sig. (2-tailed) N	1	.732**	.463**	.317**
			.000	.000	.000
		161	158	161	158
		.732**	1	.630**	.433**
		.000		.000	.000
		158	158	158	158
Have you ever faced fever after blood transfusion?		.463**	.630**	1	.688**
		.000	.000		.000
Have you ever felt like refusing					

blood transfusion?		161	158	162	158
Are you worried of getting infected with any infection?		.317**	.433**	.688**	1
		.000	.000	.000	
	N	158	158	158	158
**. Correlation is significant at the 0.01 level (2-tailed).					

The above table shows the association of four variables with the rejection of blood transfusion among the participants. Of these, fever is one of the major factors, which prevented the participants from undergoing blood transfusion. The negative reactions after blood transfusion were found to have weak association with the rejections of blood transfusion among the research participants. On the other hand, worry of getting infected by blood transfusion had weak association with the rejection of blood transfusion among the selected group of patients.

Table 3. Analysis of Variance

		Sum of Squares	df	Mean Square	F	Sig.
Underwent or experienced blood transfusion?	Between Groups	36.099	3	12.033	1129.859	.000
	Within Groups	1.960	184	.011		
	Total	38.059	187			
Are you satisfied with the quality of care provided in HMC?	Between Groups	2.988	3	.996	95.097	.000
	Within Groups	1.875	179	.010		
	Total	4.863	182			
For how many months have you been taking the blood transfusion service?	Between Groups	79.541	2	39.771	348.380	.000
	Within Groups	16.211	142	.114		
	Total	95.752	144			

The table has shown the variance of blood transfusion experience, satisfaction and length of service among the selected number of participants. The overall value of significance for all the three variables was 0.00. This means that the variation between groups was not significant. However, variation inside single groups was significant. This means variation of satisfaction; experience of transfusion and time length of transfusion were significant individually. However, when compared with either of the groups, this variation had no significance.

Table 4. Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.865 ^a	.748	.742	.234
a. Predictors: (Constant), What is your age? Have you ever faced any negative reaction after blood transfusion?, For how many months you have been taking the blood transfusion service?				

Table 1. ANOVA

ANOVA^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	22.911	3	7.637	139.165	.000 ^b
	Residual	7.738	141	.055		
	Total	30.648	144			
a. Dependent Variable: Have you ever felt like refusing blood transfusion?						
b. Predictors: (Constant), What is your age? Have you ever faced any negative reaction after blood transfusion? For how many months you have been taking the blood transfusion service?						

Table 6. Regression Model

Coefficients^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.713	.153		17.756	.000
	For how many months you have been taking the blood transfusion service?	-.254	.046	-.450	-5.544	.000
	Have you ever faced any negative reaction after blood transfusion?	-.025	.086	-.015	-.294	.769
	What is your age?	-.408	.065	-.465	-6.244	.000
a. Dependent Variable: Have you ever felt like refusing blood transfusion?						
Omnibus Tests of Model Coefficients						
		Chi-square		df	Sig.	

Step 1		Step	15.907	5	.007		
		Block	15.907	5	.007		
		Model	15.907	5	.007		
Model Summary							
Step		-2 Log likelihood		Cox & Snell R Square		Nagelkerke R Square	
1		5.545 ^a		.096		.754	
a. Estimation terminated at iteration number 20 because maximum iterations has been reached. Final solution cannot be found.							
Variables in the Equation							
		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	Have you ever faced any negative reaction after blood transfusion?	.000	17723.434	.000	1	1.000	1.000
	Do health professionals explain to you regarding the blood transfusion?	21.203	4411.752	.000	1	.996	1615474869.060
	Have you ever faced fever after blood transfusion?	.000	15803.013	.000	1	1.000	1.000
	Have you ever felt like refusing blood transfusion?	.000	11404.843	.000	1	1.000	1.000
	Are you worried of getting infected with any infection?	.000	8904.828	.000	1	1.000	1.000
	Constant	-21.203	11602.711	.000	1	.999	.000