

Review Article

Patients' attitudes toward receiving information and blood transfusion safety

Ahmad Moosavi¹, Zahra Zare Bersiyani², Ebrahim Yousefi³,
Mahdi Gharasi Manshadi⁴, Ali Moghimi³, Majid Mirzaei^{3*}

¹Department of Health and Community Medicine, Dezful University of Medical Sciences, Dezful, Iran

²School of Nursing and Midwifery, Isfahan University of Medical Sciences, Isfahan, Iran

³Faculty of Nursing and Midwifery, Tehran University of Medical Sciences, Tehran, Iran

⁴Department of Health Services Administration, School of Public Health, Shahid Sadoughi University of Medical Sciences, Yazd, Iran

Received: 19 May 2016

Revised: 17 April 2017

Accepted: 18 April 2017

*Correspondence:

Majid Mirzaei,

E-mail: majidmirzaei72@yahoo.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Despite the international recognition of the fact that patient can help improve her or his safety, there is little evidence that shows how patient want to take the active role. The aim of this study was to investigate Patients' Attitudes Toward Receiving Information and Blood Transfusion Safety. This study is performed by systematic reviewing of articles, magazines, foreign books and world health organization reports related to blood transfusion and its auditing. data banks were reviewed electronically. Electronic searches include: Magiran, SID, Embase, MIDLINE. Keywords used in searching includes: patient's involvement, transfusion safety, blood transfusion and their Persian equivalences. Research evidence showed that little studies about patients' willingness to accept findings of these innovative plans or factors influencing their participation level have been performed. Role of patient participation as main base of clinical dominance can improve hospital and health center safety level in clinical processes. Patients can participate in pre-, during and post-stages of safety control of blood transfusion. Lack of adequate information and contrasts and confliction of staff with patients causes delay in this process.

Keywords: Blood transfusion, Information, Safety

INTRODUCTION

There are five classes of factors which can influence patient involvement in terms of safety: factors related of the patient (such as population characters), factors related to the disease (disease intensity), factors related to healthcare staff (knowledge and beliefs), factors related to the kind of care (first or second) and factors related to the duties (does the need for safe behavior of the patients challenge doctors' abilities?).¹ Blood transfusion is a complicated process which can cause death if special techniques and skills are not used and is one of the

mortalities reason.^{2,3} Lack of correct identification and inadequate monitoring of patient receiving blood is some substantial and significant reasons of disease and mortality.⁴ Considering the broad usage of blood in hospitals and effectiveness of treatment actions, it seems that the awareness of people working in these centers is necessary.³ Revising hospital monitoring in terms of patient safety and blood transfusion efficiency is important for changing the situation.⁵ Patients should be informed about the risks and advantages of blood transfusion and the consensus should be obtained.⁶ Consistent and continuous awareness of the consensus

levels of each factor involved in blood transfusion is important in improving and consistent enhancing of the quality of supplying and ensuring blood product.⁷ Clinical consequences related to lack of correct identification of the patient, even death, can occur. Presenting the performance role to the patient can prevent unpleasant occurrences.⁸ Despite the international recognition of the fact that patient can help improve her or his safety, there is little evidence that shows how patient want to take the active role.⁹ England and Australia have introduced several innovative plans intending to increase the patient knowledge level about blood transfusion and to inform them how they can participate in their own care. The aim of this study is reengineering patient participation in blood transfusion auditing.

METHODS

This study is performed by systematic reviewing of articles, magazines, foreign books and world health organization reports related to blood transfusion and its auditing. The main areas in mentioned plans include doctor, nurse and patient. Searching in information centers was performed electronically and manually. Domestic and foreign data banks were reviewed electronically. Electronic searches in Persian centers include: Magiran, SID, IRONDOC, IRNAMedex, and non-Persian ones: Embase, Google Scholar, MIDLINE and HMIC. Keywords used in searching includes: Patients involvement, transfusion safety, blood transfusion and their Persian equivalences. Also, manual searching methods, reference list-based search were used to collect researches done in this aspect.¹⁴ Studies related to blood transfusion safety and patient involvement was included in this study.

RESULTS

Out of 1850 articles, finally 14 articles completely related to the study objects were included. 416 article excluded at duplicate, 980 excluded at title screening, 355 excluded at abstracts screening and 85 excluded at full text screening. (Figure 1). Publication date of studies was between 1998 and 2012. The results of extracted data from entered articles are presented in Table 1. The following data were extracted from eligible article: first writer/date, title, methods, samples, key findings.

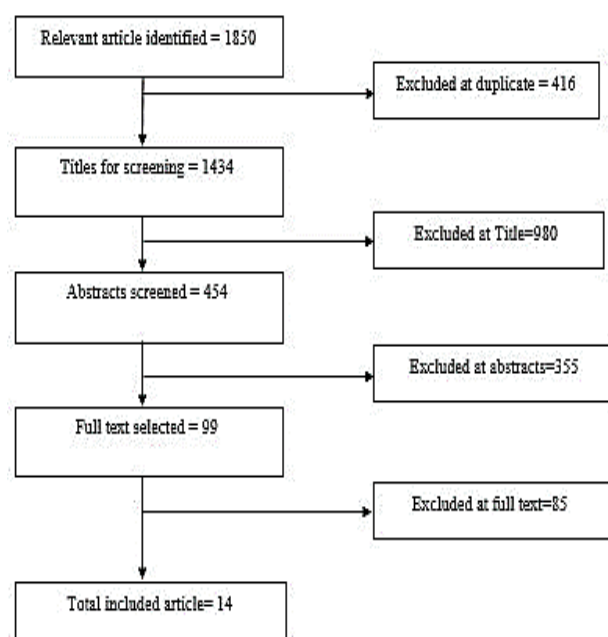


Figure 1: Flow diagram for study.

Table 2: Data collection form.

First writer	Title	Methods	Samples	Key findings
Davis ⁸	Patient involvement in blood transfusion safety: patients' and healthcare professionals' perspective	Segmental, quantitative, questionnaires	110 blood recipient and 123 blood transfusion experts in 13 districts of two hospitals	<ul style="list-style-type: none"> Both groups accepted that patient can help preventing errors Both groups find more assistance of the patient in preventing errors acceptable Patients were willing to participate more in control actions before and during blood transfusion Most health and treatment experts were more willing to support patient participation than patients in blood transfusion safety attitudes ($p < 0.05$) Participating in action related to safety causes no observable results but reduces error possibility.
Davis ⁹	Patient Involvement in Patient Safety-How Willing are Patients to	Segmental, behavior observation	80 patients of and educational hospital in	<ul style="list-style-type: none"> Patient willingness for participation is confirmed ($p < 0.05$) Patients show less tendency for participation in challenging behaviors with nurses.

	Participate?		London	<ul style="list-style-type: none"> Doctors and nurses' encouragement increase patient tendency for asking challenging questions.
Al-Drees ¹⁰	Attitude, belief and knowledge about blood donation and transfusion in Saudi population	Quantitative, questionnaire	335 male and 274 female	<ul style="list-style-type: none"> 88.5% of the people who participated in the study believed that blood donation was not harmful. 55.1% believed that blood transfusion was safe 17.4% believed that all surgeries need blood. 20% of them stated that they would refuse blood transfusion. 11.6% claimed to have acquired infectious disease after blood transfusion
Rachel ¹¹	Blood transfusion safety: the potential role of the patient	Review research	Research related to patient safety	<ul style="list-style-type: none"> Five factors that influence patient safety: factors related to the patient, factors related to the illness, factors related to health care staff, factors related to the kind of care and factors related to the tasks
Entwistle ¹²	Involvement in treatment decision-making: Its meaning to people with diabetes and implications for conceptualisation	Conceptual review	Research related to patient participation	<ul style="list-style-type: none"> Current models of patient participation measurement in treatment focus more on communicating and consulting with the patient in selecting the treatment, Not only patient participation can mean what they say but also show how they feel about their own role and feelings.
Chan ¹³	Consenting to blood: what do patients remember?	Quantitative, questionnaire	344 patients in at London Heath Sciences Centre (LHSC)	<ul style="list-style-type: none"> 80% of respondents recalled discussing and signing an informed consent 88% recalled the consent process, many did not recall the discussion of specific transfusion risks or alternatives to donor blood (88%) The majority felt the discussion was at least somewhat understandable (77%), only 35% felt better informed and more comfortable with accepting blood.
Kakhki ¹⁴	Satisfaction evaluation of blood donors of Iranian Blood Transfusion Organization in 2003	Descriptive, analytic, questionnaire	2508 persons apply to donate blood	<ul style="list-style-type: none"> There is direct relation between encountering way and also the relation of the doctor and personnel with client and during consultation and cares after donation and patient consent.
Clark ¹⁵	Quality improvement report: Effect of a formal education programme on safety of transfusions	Quantitative review	A large educative hospital in England	<ul style="list-style-type: none"> Educational programs as an effective strategy for reducing dangers related to blood transfusion safety There was a need for more auditing.
Farrell ¹⁶	Confidence in the safety of blood for transfusion: the effect of message framing	Quantitative review	254 adult students	<ul style="list-style-type: none"> participants receiving the gain-frame information were significantly more confident of the safety of blood for transfusion than those receiving loss-frame information or both. This was unaffected by donation history or appraisals of stress associated with transfusion. The extent to which blood was considered safe was negatively associated, independently

				of framing effects, with perceptions that transfusion was threatening.
Luby ¹⁷	Patients' perceptions of blood transfusion risks in Karachi, Pakistan	Quantitative, observation	141 transfusion recipients from 13 major Karachi hospitals	<ul style="list-style-type: none"> • 38% were apprehensive about receiving transfusion • 34% were afraid of transfusion • 4% of the total study population were concerned about disease transmission • 30% of patients believed that blood transfusion should be surely available • 63% preferred family donors.
McCarthy ¹⁸	Irish orthopedic patients' attitudes to blood transfusion	Quantitative, questionnaire	203 patients attending an elective orthopaedic hospital	<ul style="list-style-type: none"> • 61% regarded blood transfusion as a risk for hepatitis transmission • 85% knew of the risk of blood transmission of HIV • 11% reported that they would have no concerns about receiving a blood transfusion
Finucane ¹⁹	Public perception of the risk of blood transfusion	Questionnaire, phone survey	1204 people conducted in the United States	<ul style="list-style-type: none"> • There is 46.6% medium to high danger understanding for blood transfusion • 69.9% agreed or completely agreed that that blood transfusion in United States of America is safe and 36% disagree • 41.79% Patients who felt they have less control on their health believed in more risk for blood transfusion than those who had more control • Female patient or those with low level of education believed in more risks for blood transfusion.
Fitzgerald ²⁰	To investigate patients' perspectives of blood transfusions	Qualitative interview study	19 patient	<ul style="list-style-type: none"> • Patients were dissatisfied with inadequate information • Many of the patients mentioned that they don't understand information given to them • Two patients were eager to know whether they have blood transfusion at correct time • One patient paid attention to drop passing.
Morel ²¹	Surveillance of Blood: Transfusion Safety Contribution of the Hemovigilance Strategy in France	Descriptive	Subjective review	<ul style="list-style-type: none"> • Doctors need existing strategies in terms of blood transfusion to improve health safety • Necessity of using detection methods and also developing logic aspects for blood prescription.

Findings showed that most of the patients believe that patient training can help prevent errors. Information should be understandable and accord the patient's literacy. Moreover, patients' active participation in blood transfusion process improves it.

Effective communication with patients can reduce their stress and facilitate the process. Another important issue is to satisfy patients and consult with them. Using communication methods and obtaining written consent from patients enhance their information level and make them participate. Ensuring patients of the harmlessness of blood transfusion particularly those who consider it as a high-risk process is another solution which can be utilized in this regard.

DISCUSSION

Research evidence showed that little studies about patients' willingness to accept findings of these innovative plans or factors influencing their participation level have been performed. Role of patient participation as main base of clinical dominance can improve hospital and health center safety level in clinical processes. Annual report of serious dangers of blood transfusion in 2010 showed that 200 blood transfusion incidents was due to incorrect methods in blood transfusion process. Primary data from a study in Australia show that several patients wanted to accept active role in preventive measures such as checking blood bags to ensure correct blood type by the patient and monitoring timing of blood

transfusion to ensure the correct delivery time.²⁰ Most qualitative data from United States show that blood control by health care experts in presence of the patient relaxes her or him, though patient don not want to participate in this control.²³ It seems that the combination of clinical auditing and patient participation in blood transfusion leads to responsibility of and clarification for clinical staff and patients. Blood transfusion auditing which is part of clinical auditing should focus more on patient participation in clinical intervention. It seems that England and Australia's plan could be matched in blood transfusion auditing with Iranian models and became practical. The concept of more patient participation in blood transfusion stages is too complicated to understand with the given data and it needs more research and more detailed survey. Patients can participate in pre-, during and post-stages of safety control of blood transfusion. Also, willingness of clinical staff to support patient engagement needs more research. Lack of adequate information and contrasts and confliction of staff with patients causes delay in this process. There are many activities which should be done before patient participation effectiveness in blood transfusion. It seems that patients and their families' experience is one of the important stages in blood transfusion safety and more broadly it ensures blood transfusion services.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: Not required

REFERENCES

1. Davis RE, Jacklin R, Sevdalis N, Vincent CA. Patient involvement in patient safety: what factors influence patient participation and engagement? *Health Expect.* 2007;10(3):259-67.
2. Ittah-Desmeulles H, Nguyen L, Moreau C, Garrot H, Bourdillon F. Quality-assessment of the transfusion record in a Paris hospital in 2003. *Transfus Clin Biol.* 2004;11(4):192-8.
3. Piri AR, Shahdadi H, Badakhsh M, Karimfar MH. Knowledge of health care workers in hospitals of Zabol about the appropriate procedure for administration of blood and blood components. *Sci J Blood Transfus Organ.* 2008;5(3):203-7.
4. Clark P, Rennie I, Rawlinson S. Effect of a formal education programme on safety of transfusions. *BMJ.* 2001;323(7321):1118-20.
5. Dzik WH, Corwin H, Goodnough LT, Higgins M, Kaplan H, Murphy M, et al. Patient safety and blood transfusion: new solutions. *Transfus Med Rev.* 2003;17(3):169-80.
6. Davis R, Vincent C, Sud A, Noel S, Moss R, Asgheddi M, et al. Consent to transfusion: patients' and healthcare professionals' attitudes towards the provision of blood transfusion information. *Transfus Med.* 2012;22(3):167-72.
7. Kakhki M, Emami H, Oodi A, Rajabpoor Niknam F, Javanbakht AM. Satisfaction evaluation of blood donors of Iranian blood transfusion organization in 2003. *Sci J Blood Transfus Organ.* 2007;3(5):405-11.
8. Davis R, Murphy MF, Sud A, Noel S, Moss R, Asgheddi M, et al. Patient involvement in blood transfusion safety: patients' and healthcare professionals' perspective. *Transfus Med.* 2012;22(4):251-6.
9. Davis R, Sevdalis N, Vincent C. Patient Involvement in Patient Safety-How Willing are Patients to Participate? *BMJ Quality and Safety.* 2011;20:108-14.
10. Al-Drees AM. Attitude, belief and knowledge about blood donation and transfusion in Saudi population. *Pak J Med Sci.* 2008;24:74-9.
11. Davis, Rachel E, Vincent CA, and Michael F. Murphy. Blood transfusion safety: the potential role of the patient. *Trans Me Rev.* 2011;25(1):12-23.
12. Entwistle, Vikki. Involvement in treatment decision-making: Its meaning to people with diabetes and implications for conceptualisation. *Soc Sci Med.* 2008;66(2):362-75.
13. Chan T, Eckert K, Venesoen P. Consenting to blood: What do patients remember? *Trans Med.* 2005;15:461-6.
14. Kakhki M. Satisfaction evaluation of blood donors of Iranian Blood Transfusion Organization in 2003. *Blood.* 2007;3 Sup 5:405-11.
15. Peter C, Rennie I, Rawlinson S. Quality improvement report: effect of a formal education programme on safety of transfusions. *BMJ.* 2001;323:1118.
16. Farrell K, Ferguson E, James V. Confidence in the safety of blood for transfusion: The effect of message framing. *Trans.* 2001;41:1335-40.
17. Luby SP, Niaz Q, Siddiqui S. Patients' perceptions of blood transfusion risks in Karachi, Pakistan. *Int J Infect Dis.* 2001;5:24-6.
18. McCarthy T, Butler KM, Carey M. Irish orthopedic patients' attitudes to blood transfusion. *Ir Med J.* 2001;94:110-1.
19. Finucane ML, Slovic P, Mertz CK. Public perception of the risk of blood transfusion. *Trans.* 2000;40:1017-22.
20. Fitzgerald M, Hodgkinson B, Thorp D. Blood transfusion from the recipient's perspective. *J Clin Nurs.* 1999;8:593-600.
21. Morel, Pascal, Hervé P. Surveillance of blood transfusion safety: contribution of the hemovigilance strategy in France. *Trans Med Rev.* 1998;12(2):109-27.
22. Murphy MF, Docherty S, Greenfield P. Survey of the information given to patients about blood transfusion and the need for consent before transfusion. *Trans Med.* 1997;7(4):287-8.
23. Weiss-Adams K, Tolich D. Blood transfusion: the patient's experience. *Am J Nurs.* 2011;111:24-30.

Cite this article as: Moosavi A, Zare Bersiyani Z, Yousefi E, Gharasi Manshadi M, Moghimi A, Mirzaei M. Patients' attitudes toward receiving information and blood transfusion safety. *Int J Adv Med* 2017;4:609-13.