

ORIGINAL ARTICLE

Knowledge management and attitudes of blood donors in a peruvian hospital

Gestión del conocimiento y actitudes de los donantes de sangre
en un hospital del Perú

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ABSTRACT

Background: blood donation is a voluntary act that helps save human lives. Therefore, having sensitized, informed, and educated donors is crucial for maintaining adequate reserves in blood banks.

Objective: to determine the relationship between knowledge management and the attitudes of blood donors in a peruvian hospital.

Methods: a descriptive study with a quantitative approach was conducted at the Hipólito Unanue National Hospital in Lima, Peru, between July and December 2023. This observational, correlational, cross-sectional study employed a non-experimental research design. Theoretical and empirical methods were used for the theoretical framework and data

collection. The data obtained were analyzed using descriptive statistics and Spearman's Rho non-parametric test.

Results: a moderate positive correlation (Spearman's $\rho = 0.471$) was found between the variables studied. 92% of participants had good knowledge regarding the importance and significance of blood donation, which generated a favorable emotional attitude toward donation.

Conclusions: a significant relationship was determined between knowledge management and attitudes among blood donors at a public hospital in Peru, with positive effects on participants regarding blood donation.

MeSH: blood; blood donors; blood banking; knowledge management; quality of life; education, medical.

RESUMEN

Fundamento: la donación de sangre es un acto voluntario que ayuda a salvar vidas humanas. Por ello, contar con donantes sensibilizados, informados y educados es determinante para mantener reservas adecuadas en los bancos de sangre.

Objetivo: determinar la relación entre la gestión del conocimiento y actitudes de los donantes de sangre de un hospital del Perú.

Métodos: se realizó una investigación descriptiva con enfoque cuantitativo en el Hospital Nacional "Hipólito Unanue", en la ciudad de Lima, Perú, entre julio-diciembre de 2023. Es un estudio observacional, correlacional, transversal, con un diseño de investigación no experimental. Se utilizaron métodos teóricos y empíricos para la fundamentación y búsqueda de información. Se analizaron los datos obtenidos utilizando la estadística descriptiva y la prueba no paramétrica de Rho de Spearman.

Resultados: se constató una relación positiva moderada (Rho de Spearman = 0.471) entre las variables estudiadas. El 92 % de los participantes tenían buenos conocimientos referentes a la importancia y significación de la donación de sangre, lo cual generó una actitud emocional favorable hacia la donación.

Conclusiones: se determinó la relación significativa entre la gestión del conocimiento y las actitudes en los donantes sangre de un hospital público del Perú, con efectos positivos en los participantes en temas relacionados con la donación de sangre.

DeSC: sangre; donantes de sangre; almacenamiento de sangre; gestión del conocimiento; calidad de vida; educación médica.

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INTRODUCTION

Knowledge management has established itself as a strategic tool in the healthcare field; it allows for the collection, organization, and analysis of information to optimize institutional processes. Regarding transfusion medicine, adequate knowledge management favors the implementation of efficient practices that impact the recruitment and retention of blood donors. Likewise, it is essential to know the attitudes of donors, as their willingness and motivation influence the supply of safe and timely blood.⁽¹⁾

In this context, blood transfusion not only improves health, it is vital for people who need this component in serious medical conditions that cannot be treated with medications.⁽²⁾ Furthermore, there are emergency situations such as traffic accidents, oncological diseases, complications in pregnant women, and organ transplants that demand it; consequently, it is necessary to have adequate supplies in blood bank services.^(3,4)

Access to blood remains a problem in public healthcare, therefore, blood banks constantly face the challenge of maintaining a continuous blood supply.⁽⁵⁾ It should be mentioned that the World Health Organization (WHO) recommends that activities related to blood donation processes have effective organization and integrated networks based on national policies.⁽⁶⁾

Although some Latin American countries gather 50 % of voluntary blood donors,⁽⁶⁾ in Peru there is still a gap between the demand for blood components and the stock of units in blood

banks, despite the efforts made by the Dirección General de Donaciones, Trasplantes y Banco de Sangre (DIGDOT) of the Ministry of Health, which implements strategies to increase blood donation.⁽⁷⁾

In other cultures, for example, in Saudi Arabia, blood donation is conceived as contrary to their religious beliefs, which generates a lack of motivation and negative attitudes that stigmatize it.⁽⁸⁾ Similarly, the lack of clear and accessible information about this procedure and the requirements to donate blood prohibitively influence this population. Ignorance fosters the proliferation of myths, beliefs, and taboos surrounding this humanitarian act; however, reversing this situation is important, and to do so, strategies must be created to foster a culture that increases blood donations.

The objective of this study was to determine the relationship between knowledge management and the attitudes of blood donors in a Peruvian hospital.

METHODS

A descriptive study with a quantitative approach was carried out at the Hipólito Unanue National Hospital, in the city of Lima, Peru, between July and December 2023. From a population of 9,924 blood donors treated at the hospital, a sample of 264 was taken, using simple random probabilistic sampling for finite populations; with the following inclusion criteria: blood donors aged 18 to 60 years who were treated at the Hipólito Unanue National Hospital, who agreed to participate in the study and answer the questionnaire; questionnaires that were incomplete were excluded from the study. The confidence level for sample selection was 95 % with a margin of error of 5 %.

Theoretical methods:

Analytical-synthetic, induction-deduction, and hypothetical-deductive: used to analyze and process the theoretical information of the study and reach conclusions.

Empirical methods:

Two types of questionnaires were used:

I. For knowledge management –with 20 items-, which included three dimensions:

- Knowledge creation (12 items): ability to create and explore new knowledge
- Knowledge transfer (three items): action or effect of transmitting information to other people
- Knowledge application (five items): internal acquisition of knowledge and learning capacity

II. For the evaluation of blood donor attitudes, -15 items- composed of three dimensions:

- Emotional (six items): demonstration of feelings that are produced and generate positive or negative experiences
- Cognitive (five items): search for information about donating blood
- Behavioral (four items): willingness to perform the act of donating blood

Both instruments were validated by expert judgment and for the reliability of the Knowledge Management questionnaire, a Cronbach's alpha coefficient of 0.902 was obtained; while for the Attitudes in blood donors questionnaire, a Cronbach's alpha coefficient of 0.829 was obtained.

Statistical-mathematical level: Spearman's Rho statistic was used to test the hypotheses, with a significance level of 0.05. Data analysis was performed using descriptive statistics and presented in frequency tables and pictures.

Regarding ethical principles for data collection, the guidelines established in the Declaration of Helsinki were respected, and an informed consent form was used stating the objective of

the study and the approval of the research ethics committee of Hipólito Unanue National Hospital.

RESULTS AND DISCUSSION

As shown in Table 1, the predominant sex was male with 70.5 %, and regarding age, the most represented group was 26 to 35 years (33.0 %) and 36 to 45 years (32.5 %).

Table 1. Sociodemographic characteristics of blood donors. Hipólito Unanue National Hospital. Peru. July-December. 2023

Sociodemographic factors	Frequency	%
Sex		
Male	186	70.5
Female	78	29.5
Age		
Less than 25 years	44	16.7
From 26 to 35 years	87	33.0
From 36 to 45 years	86	32.5
From 46 to 55 years	37	14.0
56 years or more	10	3.8
Total	264	100.0

Source: questionnaire

Table 2 shows a direct and moderate strength correlation with Spearman's Rho value ($Rho = 0,471$), indicating the existence of knowledge associated with positive attitudes towards blood donation; likewise, the results revealed a significant relationship (0,000), less than 0.05 (significance level), therefore the null hypothesis was rejected and the alternative

hypothesis was accepted; it was corroborated that there is a highly significant relationship between the two variables, as shown in Figure 1.

Table 2. Relationship between knowledge management and attitudes of blood donors.
Hipólito Unanue National Hospital. Peru. July-December. 2023

Dimension / Variable	Rho Spearman	Significance Value
Knowledge Management	0,471	0,000
Attitudes towards blood donation		

Source: questionnaire

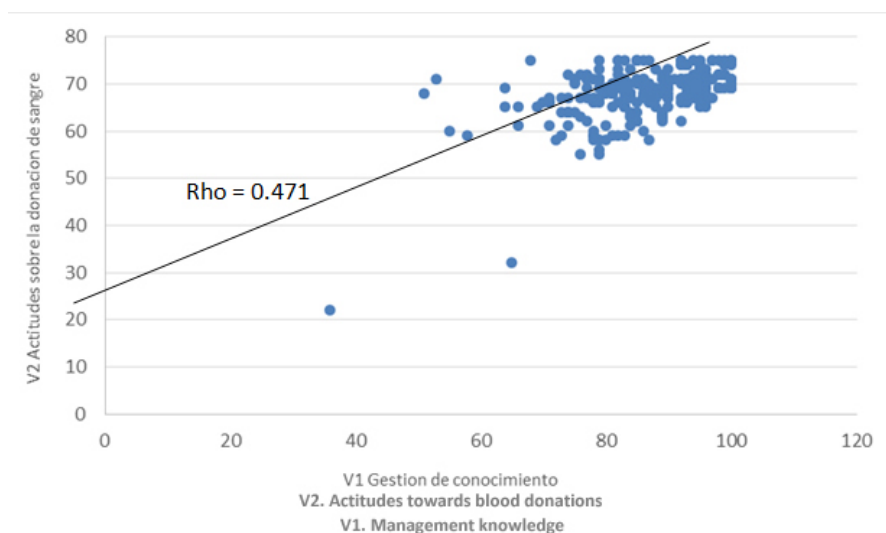


Fig. 1. Correlation between knowledge management scores and attitudes of blood donors.
Hipólito Unanue National Hospital. Peru. July-December. 2023

Source: questionnaire

This study coincides with other research, for example, Jiang *et al.*,⁽⁹⁾ in China, in a sample of 580 voluntary blood donors, determined that they exhibited good knowledge and positive attitudes, with a Spearman correlation of 0.580 and a significance value $p < 0.001$; likewise, Alvarado Garriazo,⁽¹⁰⁾ in 188 students from a higher education institute in the city of

Ayacucho in Peru, demonstrated that there is a low positive correlation with a Spearman's Rho value of 0,033.

Beyene Alemayehu⁽¹¹⁾ conducted a study in the city of Adama in Ethiopia, which showed that participants had an above-average level of knowledge about blood donations; they also demonstrated a low magnitude correlation between knowledge and attitudes with a Spearman correlation of 0,116 and a significance value of $p < 0.019$. These findings are a guide to reinforce interventions that strengthen educational activities and offer information about the processes to become a blood donor, and thus improve participation in this human task.^(2,12)

Contrary to this, the findings of Santisteban *et al.*,⁽¹³⁾ in 244 people who attended a first-level hospital located in the Amazonas region, Peru, found that knowledge about blood donations was negatively related to age –the Spearman's Rho value was -0,21-, indicating a low magnitude negative correlation; however, this knowledge was positively related to educational level, with a Spearman's Rho value of 0,38.

In Table 3, regarding the dimensions of knowledge management, it is observed that 0.4 % present a poor category in "knowledge creation"; 7.2 % regular category and 92.4 % good; in relation to the "transfer" dimension, 1.1 % presented a poor category, 9.1 % regular and 89.8 % good; while regarding "application", 1.1 % presented a poor category, 26.6 % regular and 72.3 % good.

Table 3. Description of knowledge management and its dimensions. Hipólito Unanue National Hospital. Peru. July-December. 2023

Knowledge Management		Frequency	Percentage
Creation	Poor	1	0.4
	Steady	19	7.2
	Good	244	92.4
Total		264	100.0
Transferencia	Bad	3	1.1
	Steady	24	9.1
	Good	237	89.8
Total		264	100.0
Application	Bad	3	1.1
	Steady	70	26.6
	Good	191	72.3
Total		264	100.0

Source: questionnaire

Regarding these results, Paredes García *et al.*,⁽⁵⁾ determined that 86.0 % had adequate knowledge about voluntary blood donation; however, 61.0 % of them did not know some requirements to donate blood such as age, weight, and donation interval. Similarly, Ogundeji *et al.*,⁽¹⁴⁾ in 840 students from Afe Babalola University in Nigeria showed that more than half (54.5 %) of the students had good knowledge about blood donation and 62 % showed a positive attitude towards donation.

In Table 4, it can be seen that 98 % presented a positive emotional attitude; in relation to the cognitive dimension, 1.1 % showed a negative attitude, 67.4 % regular and 31.4 % positive; and regarding the behavioral dimension, 1.1 % exhibited a negative behavioral attitude, 5 % regular and 94 % positive.

Table 4. Description of attitudes towards blood donation and dimensions. Hipólito Unanue National Hospital. Peru. July-December. 2023

Attitudes towards donation		Frequency	Percentage
Emotional	Negative	2	1.0
	Steady	3	1.0
	Positive	259	98.0
Total		264	100.0
Cognitive	Negative	3	1.1
	Steady	178	67.4
	Positive	83	31.4
Total		264	100
Behavioral	Negative	2	1.0
	Steady	15	5.0
	Positive	247	94.0
Total		264	100.0

Source: questionnaire

The results are similar to those obtained by Paredes *et al.*⁽⁵⁾ who found that 61.0 % expressed an attitude of acceptance; on the contrary, it was shown that 35.0 % exhibited an attitude of indifference, which constitutes a critical issue; this has similarity with the study by Atuncar Loyola⁽¹⁵⁾ in which blood donors presented attitudes of a regular level towards the act of donation.

Study limitations

For the search of background information, there is scarce scientific literature in the cloud that relates, influences, or correlates the variables "knowledge management and attitudes of donors"; literature has been found independently for each variable.

Scientific contribution

The present study allowed us to know the relationship between knowledge and attitudes of blood donors in a health facility in Peru, as well as to know the most relevant sociodemographic characteristics of blood donors in said institution.

CONCLUSIONS

It was determined that the relationship between knowledge management and attitudes in blood donors at a hospital in Peru was moderately positive; furthermore, the relationship between the knowledge management variable and the emotional attitude dimension also behaved as moderately positive among those sampled.

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Declaration of interests

The authors declare no conflict of interest.

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