

Research Article

Voluntary Blood Donation Among Health Care Workers at Tertiary Care Center of Northern India.

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Abstract

Introduction: Healthcare workers (HCWs) are crucial for voluntary blood donation (VBD) due to their medical knowledge, often higher altruistic attitudes, and proximity to facilities but studies show a gap between positive knowledge/attitudes and actual practice, highlighting the need for better motivation through education, incentives (like paid leave/recognition), and accessible donation drives to leverage their potential for a safer, more stable blood supply. VBD is key for blood safety globally, reducing transfusion-transmitted infections, with WHO encouraging 100% voluntary systems, and HCWs as a prime recruitment pool. The challenges in HCWs voluntary donation is despite knowing that donation is good but don't donate regularly. Sometimes, busy work schedules act as a barrier and some lack detailed knowledge on donation frequency or minimum requirements. The World Health Organization (WHO) promotes 100% voluntary, non-remunerated donation as the safest model.

Aim of Study: To study habit of blood donation in health care workers at tertiary care center.

Materials & Methods: It was prospective study conducted at Department of Medical Gastroenterology, Post Graduate Institute of Medical Sciences (PGIMS), Rohtak, over a period of one year from 1st December, 2024 to 30th November, 2025 during which every health care worker, including doctors MBBS, Dental, Physiotherapy, Pharmacy students, nursing officers, operating technicians, bearers, data operators who reported in Medical Gastroenterology OPD as patient or as attendant were interviewed regarding their number of blood donations, if not done, then reasons for the same, any apprehensions associated with blood donation. Everyone was explained about benefits of blood donation for them as well as recipients and were motivated for blood donation in future. In total 1000 health care workers belonging to different streams were interviewed.

Observation & Results: Out of total 1000 health care workers who were interviewed, 250 (25%) had donated blood at least once in life. The number blood donation varied from 0-6 times. In a study pool of 1000 HCW, 300 (30%) were doctors belonging to different streams like Medical & Dental and included MBBS, Dental students, Junior & Senior residents, Interns and Consultants. The nursing officers including nursing students constituted 20% (200) of study pool. Physiotherapy students which included both Bachelor and Master course had significant representation i.e. 230 (23%). Pharmacy students, O.T. technicians, Bearers, Clerical staff constituted 100 (10%), 70 (7%), 50 (5%) and 50 (5%), respectively. Out of total 250 HCW who were blood donors, maximum were doctors i.e. 112 (44.8%).

Conclusion: There is strong need of increasing awareness among health care workers about voluntary blood donations, as there are many myths associated with blood donation, despite being part of health care system.

Keywords: Blood Donation, Doctors, Nursing officers, Operative technicians, Students, Pharmacy.

INTRODUCTION

Voluntary blood donation plays a crucial role in public health by ensuring a stable supply of blood and its components, essential for medical treatments including surgeries, trauma care, and chronic disease management. Voluntary donors increase the safety of the blood supply, helps in emergency preparedness, societal benefits, and provide health advantages for donors, including improved cardiovascular health due to reduced iron levels and psychological benefits

stemming from altruism and a sense of social responsibility. Public health initiatives are instrumental in fostering blood donation through education, awareness campaigns, and targeted donor recruitment strategies. These efforts encourage a culture of social responsibility, inspiring community participation and improving overall healthcare system sustainability. Despite these efforts, challenges such as fluctuating donation rates, aging populations, and shifting demographics underscore the need for ongoing initiatives to ensure a sufficient blood supply. As a public health priority,

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voluntary blood donation demands continuous promotion and innovation to meet the growing demand for blood products and maintain healthcare system resilience [1]. Blood donation is the voluntary process of providing a portion of one's blood for medical purposes, either for direct transfusion or the production of blood products [2]. Unlike paid blood donation systems, voluntary donation is rooted in altruism, emphasizing community support and a shared responsibility for safeguarding public health [3].

AIM OF STUDY

To study habit of blood donation in health care workers at tertiary care center.

MATERIAL AND METHODS

It was prospective study conducted at Department of Medical Gastroenterology, Post Graduate Institute of Medical Sciences (PGIMS), Rohtak, over a period of one year from 1st December, 2024 to 30th November, 2025 during which every health care worker, including doctors MBBS, Dental, Physiotherapy, Pharmacy students, Nursing officers, Operating technicians, Bearers, Data operators, Clerical staff who reported in Medical Gastroenterology OPD as patient or as attendant were interviewed regarding their number of blood donations, if not done, then reasons for the same, any apprehensions associated with blood donation. Everyone was explained about benefits of blood donation for them as well as recipients and were motivated for blood donation in future. In total 1000 health care workers belonging to different streams were interviewed.

Statistical Analysis

All the data was entered in Microsoft Excel and was analysed using SPSS 15.0 version.

Observations & Results

Out of total 1000 health care workers who were interviewed, 250 (25%) had donated blood at least once in life. The number blood donation varied from 0-6 times. In a study pool of 1000 HCW, 300 (30%) were doctors belonging to different streams like Medical & Dental and included MBBS, Dental students, Junior & Senior residents, Interns and Consultants. The nursing officers including nursing students constituted 20% (200) of study pool. Physiotherapy students which included both Bachelor and Master course had significant representation i.e. 230 (23%). Pharmacy students, O.T. technicians, Bearers, Clerical staff constituted 100 (10%), 70 (7%), 50 (5%) and 50 (5%), respectively. Out of total 250 HCW who were blood donors, maximum were doctors i.e. 112 (44.8%), followed by Physiotherapy students 28 (11.2%), Pharmacy students 28 (11.2%), Nursing officers 22 (8.8%), O.T. technicians 20 (8%), Bearers 13 (5.2%) and Clerical staff 10 (4%). The maximum representation of blood donation by doctors can be bit exaggerated because of their more number in total pool of study group, in comparison to other health care workers. There were many myths associated with blood donation in health care workers, varying from generalized weakness, vertigo, and even death. Many health care workers, especially females wished to donate blood but due to anemia (Hb of <10 gm%) was limiting factor and in some cases menstruation at time of blood donation camp proved to be hindrance. Many health care workers, especially students of various streams, during beginning of their course, were unaware about ways and place of blood donation.

Table 1. Showing Distribution of Blood Donors in Health Care Workers in Study Group.

Total Health Care Workers	Blood Donors	Blood Non-Donors
1000	250 (25%)	75 (75%)

Table 2. Showing Distribution of Health Care Workers in Study Group.

Total Health Care Workers	Doctors-Including Students	Nursing Officers	Physiotherapy Students	Pharmacy Students	O.T Technicians	Bearer	Clerk
1000	300 (30%)	200 (20%)	230 (23%)	100 (10%)	70 (7%)	50 (5%)	50 (5%)

Table 3. Showing Percentage of Blood Donors in Various Health Care Workers.

Total Blood Donors in HCW	Doctors-Including Students	Nursing Officers	Physiotherapy Students	Pharmacy Students	O.T Technicians	Bearer	Clerk
250	112 (44.8%)	22 (8.8%)	45 (18%)	28 (11.2%)	20 (8%)	13 (5.2%)	10 (4%)

DISCUSSION

In the last couple of decades, efforts have been intensifying to improve the voluntary donation culture due to a fast-growing demand for blood and its related products among seasonal fluctuation and emergency response needs [3]. The World Health Organization (WHO) asserts that voluntary blood donation is not only a means of maintaining health; it is an act of commitment concerning community health and social bonding [4]. Public health campaigns can highlight the importance of blood donation through various media channels [5,6]. Regular blood donation through well-organized programs contributes to the long-term sustainability of the healthcare system, reducing reliance on emergency blood appeals and improving the ability to plan medical procedures. In general, public health programs promoting blood donation foster greater trust in the healthcare system, protecting public health and saving lives [5,6]. Many donors have feelings of contentment and satisfaction, realizing that their blood can help save lives. Such good feelings are associated with reduced stress, heightened self-esteem, and better mental health overall [7,8]. There is strong need to promote voluntary blood donation among the staff of hospitals and they should be motivated to motivate everyone to donate regularly. Regular meetings should be held with the hospital management and a decision should be taken to give incentives to employees who donate to improve voluntary blood donor registry. Apart from routine blood donation cards, donation certificate, and a token of appreciation, employees who donate blood should be given an extra day's leave. Therefore, every employee can have a maximum of 4 days leave for donating four times blood per year [9]. Some studies have suggested that nonmonetary incentives such as social recognition and days off may encourage donors to make an extra donation per year [10]. The maximum representation of blood donation by doctors, in our study group, can be bit exaggerated because of their more number in total pool of study group, in comparison to other health care workers. Thus, larger studies with equal representation among HCW will reflect more exact contribution in blood donation among them. There were many myths associated with blood donation in health care workers, varying from generalized weakness, vertigo, and even death. Many health care workers, especially females wished to donate blood but due to anemia (Hb of <10 gm%) was limiting factor and in some cases menstruation at time of blood donation camp proved to be hindrance. Many health care workers, especially students of various streams, during beginning of their course, were unaware about ways and place of blood donation. The way we have included medical ethics in teaching and training of medical students, importance of blood donation and benefits of it in both donor and recipient should be taught to all students, irrespective of

their field. Many new innovations have been tried to increase voluntary blood donation and have given fruitful results [11].

CONCLUSION

There is strong need of increasing awareness among health care workers about voluntary blood donations, as there are many myths associated with blood donation, despite being part of health care system. There is integral role of management of different hospitals and medical colleges to resolve hindrances of duty timings during blood donation and certain incentives for donors like leaves in lieu of blood donation.

Limitation of Study

In the present study, there was uneven representation of various health care workers, thus larger studies with equal representation among HCW will reflect more exact contribution in blood donation among them.

Conflict of Interest

The authors declare that there was no conflict of interest and no funding was taken from any source to conduct this research.

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