ORIGINAL ARTICLE

ARE SCHOOL CHILDREN READY TO DONATE BLOOD?

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Background: Voluntary non-remunerated blood donors are considered the best among all different types of blood donors for improving the supply of safe blood. Though safe blood transfusion services have improved in Pakistan, but efforts are still required to optimize blood banks and improve recruitment of voluntary donors, such as senior school/college going students as a source of safe blood. This study looks into the awareness of senior school children concerning blood related issues including blood donation. **Methods**: This cross-sectional descriptive study enrolled 106 senior school students of private schools. Data were collected through self-administered questionnaire. **Results**: Although 90% of the students considered blood as an important entity for saving lives still 56.8% had never thought of donating blood. Respondents had good knowledge regarding the possible spread of HIV/AIDS, and Hepatitis B and C through unsafe transfusions. Possible hindrances to donating blood included fear of needles, fear of acquiring disease, lack of knowledge regarding where to donate blood and lack of trust on blood banks. More than half of the students believed that blood should be bought from professional blood donors. **Conclusions**: Senior school going children are not ready to donate blood. Lack of knowledge and prevailing misconceptions regarding blood transfusions need to be addressed and mechanisms to motivate and mobilize youth for becoming voluntary blood donors need to be established.

Keywords: Blood transfusion, blood donation, blood donors
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INTRODUCTION

According to World Health Organization (WHO), almost 92 million blood donations are made each year. While the median whole blood donation rate in high-income countries is 36.4 donations/1000 population, in Pakistan it is less than 20 donations/1000 population; less than 25% blood donations are from voluntary non-remunerated blood donors.[1] As part of the Millennium Development Goals of 2015, WHO is aiming to restructure safe blood transfusion practices and achieve a rate of 100% voluntary blood donations.[2] Among all different types of blood donors including voluntary unpaid, family/replacement and paid, voluntary non-remunerated blood donors are considered the best to improve the supply of safe blood.[3]

Though safe blood transfusion services have improved in the country, but efforts are still required in certain areas to optimize blood banks and improve recruitment of voluntary donors.[4] Different studies conducted in Pakistan illustrate that adolescent population have relatively lower prevalence of Hepatitis B, Hepatitis C, and HIV.[5] It was also found that young people donate the least blood[6] and as level of education increases, the proportion of blood donors decreases.[7]

Since young college going students are considered the safest group of blood donors[8], they need to be utilized as a source of safe and non-remunerated donations. However, there is a dearth of data about their awareness regarding blood related issues including its donation. It would be important to understand knowledge gaps and misconceptions in this population so that appropriate mass awareness strategies can be targeted accordingly and school children are prepared to become future blood donors once they reach a blood donating age.

This study was conducted to determine the knowledge and attitude of senior school going children regarding blood donations and blood borne diseases.

MATERIAL AND METHODS

This cross-sectional descriptive study was conducted in one of the topmost private schools of Islamabad. The reason for selecting the private school was its volunteer participation, easy accessibility and financial assistance. The sample was collected from students of O-levels (class 9, 10 and 11). As we do not have the prevalence of knowledge regarding blood donation among students so considering that 50% of the students has the knowledge, the sample size was calculated using Epi-info at 95% confidence level and 10% margin of error. The estimated sample size came out to be 96 students. Considering 10% non-response/refusal, 106 students were finally enrolled for the study. Simple random sampling was done using attendance list of the classes.

A pretested close-ended self-administered questionnaire was used for data collection. The questionnaire included questions pertinent to knowledge regarding blood borne diseases, perceptions regarding blood donations and willingness to donate blood. Data were entered in SPSS-17 for analysis.

RESULTS

A total of 95 (89.6%) responded. There were 38 (40%) male students and 57 (60%) female students. The age range of the participants was 13–17 years with a mode of 15 years. Eighty-five (90%) of the students considered blood as an important entity for saving lives, however there was a mixed response regarding knowledge of various diseases and spread of diseases through unsafe blood transfusions. Respondents had relatively good knowledge about HIV/AIDS, Hepatitis B and C 53% spreading through unsafe transfusions. However, there was inadequate knowledge regarding the spread of Malaria, Tuberculosis, and Hepatitis A (Table-1).

Regarding effects/consequences of donating blood, 81 (85%) students believed that a donor got a sense of satisfaction after donating blood while 35 (37%) students also thought that blood donor experienced generalized weakness. Possible hindrances to donating blood included fear of needles, fear of acquiring disease, lack of knowledge regarding where to donate blood and lack of trust on blood banks (Table-2). Sixty-three (66%) respondents knew a family member who had received blood while 35 (37%) knew a blood donor in their family. Although most of the students had not reached blood-donating age, 54 (57%) students had not even thought of donating blood while 7 (7%) students had been motivated either by family member, friends, teachers or doctors.

When questioned regarding possible sources of blood, students came out with mixed responses regarding the most suitable and safest sources. Fifty-six (59%) students believed that blood should be bought from professional blood donors, while 65 (68%) also agreed that there was a need to build a network of voluntary non-remunerated blood donors throughout the country.

Table-1: Knowledge regarding blood borne diseases

Disease	HIV/AIDS	Hepatitis A	Hepatitis B, C	Malaria	Tuberculosis
Attribution to unsafe transfusion	86 (90%)	58 (61%)	53 (55%)	21 22%)	21 (22%)

Table-2: Barriers to Blood Donation

Barriers	Lack of trust on blood banks	Lack of knowledge regarding where to donate	Fear of needles	Fear of acquiring disease
Number (%)	48 (50%)	30 (31%)	29 (30%)	26 (27%)

DISCUSSION

The study findings suggest that educating young students regarding blood transfusion, its safety and its hazard is an important issue. On the other hand, improving conditions of blood banks and regulating them through proper authority will also help in creating trust among donors as the findings demonstrate that the students have mistrust regarding safety and hygiene conditions of the blood banks and also they are not properly aware of where to donate. With a high prevalence of blood borne infections in Pakistan even amongst healthy blood donors[8,10], it is utterly important that focused and targeted efforts are made to raise awareness regarding self-protection and minimizing spread of the infection amongst masses.

There is need to explore avenues for each stratum of society, where youth is one. Though only a small proportion of youth is school going in Pakistan[11], even they have not been provided with structured health education. Lack of knowledge and prevailing misconceptions regarding blood transfusions need to be addressed and corrected and formal or informal mechanisms to motivate and mobilize youth for becoming voluntary blood donors need to be established.

CONCLUSIONS

Majority of school going children had not thought to donate blood, but they agreed to establish a network of voluntary non-remunerated blood donors for ensuring safe blood transfusions. Creating awareness through various means including media and educational institutions and proper regulation of blood bank may help in improving blood donation statistics especially of the young generation in Pakistan. In this context, schools can play a strong role by developing liaison with blood banks, which can raise awareness through various means and design some mechanism to enrol children who reach the right age.

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