Original Article

EVALUATION OF INTERVENTION ON VOLUNTARY BLOOD DONATION AMONG 1ST PROF MEDICAL AND DENTAL STUDENTS OF INDEX MEDICAL COLLEGE, INDORE (MP), INDIA

Abhishek Bachhotiya1, V K Arora2, Piyusha Mahashabde1

ABSTRACT

Objective: Objectives of this study was to assess KAP regarding voluntary blood donation among 1st Prof MBBS & BDS students of Index Medical College, Indore and also to evaluate the intervention in making the students aware about voluntary blood donation

Methods: Among 209 students (125 MBBS, 84 BDS) a questionnaire was administered followed by participants’ visit to the hospital blood donation centre where a short interactive awareness session was organized. The willingness to donate blood was noted at the end of the session.

Results: All the participants had lack of knowledge regarding blood donation with no difference between male and female. The proportion of male blood donors was 36 (36.7%) while 9 (8.2%) female students had donated blood so far. At first, a total of 88 students were willing to donate blood, including those 45 who had earlier done it. Out of the 164 students who did not donate blood earlier, 24 (14.6%) had no support from family, 16 (9.75%) were afraid of needle prick, 34 (20.7%) had fear of becoming weak after blood donation and 8 (4.8%) were afraid of contracting any disease through needle prick. After the awareness session, a total of 196 students (93.77%) showed willingness to donate blood and the change was statistically significant.

Conclusion: The knowledge and practice of voluntary blood donation among the study participants was found much better than the results of previous studies [7] and the awareness session-cum-visit to the blood donation centre fetched very high level of willingness. This implies the importance of regular intervention which can be most easily and successfully carried out by the teaching faculties in the medical college.

Keywords: MBBS, Blood Donation, Awareness

INTRODUCTION

Human blood is an essential element of the human life and there are no substitutes for it [1]. The ability to donate and transfuse blood is one of the greatest virtues given to the humans by Mother Nature. Approximately 30 million units of blood components are transfused every year throughout the world [2]. The reasons for blood transfusion are varied but the need for it is ever growing [3] owing to the advancements in the field of medicine and surgery. Today, the use of whole blood is a well-accepted and a commonly employed measure without which many modern surgical procedures cannot be carried out [4].

The blood supplies are always in shortage either due to lack of blood donors or due to collection of blood from unsafe donors clubbed with inadequate testing for transmissible infections due to which the blood cannot be transfused and has to be discarded resulting in additional financial costs. These issues are of particular concern in countries facing blood shortages

Blood is not only needed in a wide range of surgical procedures but also proves to be a Life Saver in a large number of cases. But the transfusion of unsafe blood puts lives at risk because HIV, Hepatitis B, Hepatitis C, Syphilis, Malaria and other infections can be transmitted to the recipients.
About 80% of maternal deaths are due to obstetric complications of pregnancy, and the single cause accounting for a quarter of all deaths is the obstetric hemorrhage, which can lead to death very rapidly in the absence of prompt life-saving care, one of which is blood transfusion[5].

The National Blood Policy of any country relies heavily on voluntary blood donors as they are usually assumed to be associated with low levels of transfusion-transmitted infections[6].

Voluntary, non-remunerated blood donation has been universally shown to be the cornerstone of safe blood[6]. College students, especially in such institutions where awareness regarding blood donation is an integral part of the curriculum, prove to be the quickest and most dependable source of quality blood provided they are motivated for voluntary blood donation.

OBJECTIVES

Objectives of this study was to assess KAP regarding blood donation.

MATERIAL AND METHOD

Of the total 250 students in 1st prof MBBS (150) and BDS (100) of Index Medical College and Index Dental College, a total of 209 students (125 MBBS, 84 BDS) were present on the day of administration of a pre-tested predesigned close-ended questionnaire based on the study objectives. The questionnaire was administered followed by participants’ visit to the hospital blood donation centre where a short interactive session was organized. The willingness to donate blood was again noted at the end of the session. The responses were consolidated and subjected to statistical analysis to assess the impact of intervention.

RESULTS

There were a total of 98 male (75 MBBS and 23 BDS) and 111 female (50 MBBS and 61 BDS) students (Table 1). The age of the participants ranged from 17 to 23 years with a mean age of 18.47 years. All the participants had lack of knowledge regarding blood donation. There was no significant difference between male and female students in ‘knowledge regarding blood donation’ part of questionnaire.

Of all the students, 58% (122) had father with at least a graduate qualification. Such students were found to have a better knowledge regarding blood donation. The proportion of male blood donors was 36 (36.7%) while 9 (8.2%) female students had donated blood so far (Table 2). The percentage of donors was around 8 times in MBBS (32.8%) than BDS (4.80%) as shown in Table 3. 41 (32.8%) MBBS and 4 (4.8%) BDS students had donated blood earlier out of which 35 MBBS students donated blood after joining the medical college, being motivated by the professors. At first, a total of 88 students were willing to donate blood, including those 45 who had earlier done it.

| Table 1: Distribution of Male and Female Participants in First Prof MBBS and BDS |
|------------------------|------------------------|------------------------|
|                       | Male (n=98) (%)        | Female (n=111) (%)    |
| MBBS                  | 75 (76.5)              | 50 (45.0)              |
| BDS                   | 23 (23.5)              | 61 (55.0)              |

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<thead>
<tr>
<th>Table 2: Distribution of Voluntary Blood Donors According to Sex</th>
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<td>Donated Blood (%)</td>
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<td>Male (n=98)</td>
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<td>Female (n=111)</td>
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Chi Square test: 25.245; df : 1; p=0.000 (p<0.05)

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<th>Table 3: Distribution of Voluntary Blood Donors According to Faculty</th>
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<tr>
<td>Donated Blood (%)</td>
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<tr>
<td>MBBS (n=125)</td>
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<td>BDS (n=84)</td>
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Chi Square test: 23.376; df : 1; p=0.000 (p<0.05)

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<th>Table 4 Reason for Non-Donation/Unwillingness to Donate Blood (n=146)</th>
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<tr>
<td>Reason for Non-Donation/Unwillingness</td>
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<tr>
<td>No Support from Family</td>
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<tr>
<td>Afraid of Needle Prick</td>
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<td>Fear of Weakness</td>
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<tr>
<td>Fear of Contracting any Disease</td>
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<tr>
<td>Why to Donate to Unknown</td>
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<td>No Opportunity</td>
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| Table 5: Comparison between Pre and Post-session Willingness to Donate Blood |
|------------------------|------------------------|------------------------|
|                       | Pre-session (%) | Post-session (%) | P value* |
| MBBS (n=125)          | 64(51.2%)       | 123(94.4%)         | p<0.05   |
| BDS (n=84)            | 14(16.67%)      | 73(86.9%)          | p<0.05   |
| Total (n=209)         | 88(37.32%)      | 196(93.77%)        | p<0.05   |

*Using Chi-square test

Out of the 164 students who did not donate blood earlier, 24 (14.6%) had no support from family, 16 (9.75%) were afraid of needle prick, 34 (20.7%) had fear of becoming weak after blood donation, 8 (4.8%) were afraid of contracting any disease through needle prick, 12 (7.3%) didn’t want to donate blood to any unknown person and 70 (42.68%) had either never thought of voluntary blood donation or got no opportunity to do so (Table 4).

The benefits of blood donation, both to the recipient and the donor, were known to 63.20% males and 77.40% females at the commencement of the session. 32.70% boys and 26.20% girls believed that it doesn’t...
make any difference if they alone donate blood while
there are thousands of people who are in need of
blood every day.

After the awareness session, a total of 196 students
(93.77%) showed willingness to donate blood. The
change in willingness after intervention was statisti-
cally significant in both the MBBS and the BDS stu-
dents (Table 5). The remaining 13 (6.23%) who were
still not willing to donate blood had stated ‘non-
approval by family’ as the reason. It was interesting to
note that 89% of the total students agreed to donate
blood if given special consideration in internal as-
se ssment as motivation.

DISCUSSION

Medical students have always been a potential and
easily accessible source of safe, non-remunerated, vol-
untary and fresh blood. This is because of all time
availability of students in the medical hostels and
quick mutual co-ordination in case of requirement of
blood of almost all groups. The main reason for non-
donation of blood by students was found to be the
lack of opportunity to donate blood. It implies that
even after their willingness to donate blood, this
abundant resource is not being utilized well. Though
parental education has an impact over the willingness
but it is on the part of the medical college authorities
to utilize the available resource.

Comparing the present study with a previous one
carried out in general population, where only 46% of
the subjects had showed willingness to donate blood
[5] this study shows the willingness much higher
(93.77%) in the students, as also seen in another study
in medical undergraduates [6]. A study carried out
among medical students of south India[8] and one
conducted among youngsters in Sikkim[9] showed
87.23% and 87.3% had never donated blood. This
opens the door for a drive towards voluntary non-
remunerated blood donation.

All the students had a positive attitude towards blood
donation and all considered it to be a generous and
noble act. The higher proportion of unwillingness was
found in female students who either had lack of ap-
proval from family or fear and experienced inconven-
ience associated with blood donation as corroborated
with results of a previous study [8].

The questionnaire was followed by an interactive
awareness session which was based on the facts being
asked in the questionnaire and also other relevant
information on blood donation. This was combined
with a visit to the Index Blood Donation Centre so as
to explain the students the requirement, supplies and
functioning of the centre. The basic aim of this visit
was to remove the myths and apprehension among
the students about blood donation. The increase in the
willingness to donate blood can be attributed to the
impact of interactive intervention as it did not take
much time to fetch a positive attitude among the stu-
dents who are truly regarded as the largest reservoir
of quality blood in a medical college. The 13 (6.23%)
students who did not agree to donate blood even at
the end of the session had both the parents below
graduate qualification. This evokes the need for
spreading awareness even in the less-educated section
of the society regarding the benefits of blood donation.

The youth in the medical colleges should be encour-
egaged and guided to participate in non-remunerated
voluntary blood donation activities. This can be very
well done by the teaching faculties as they have a di-
rect and vast access as well as influence over the
medical students. Even in our study, 35 MBBS stu-
dents had donated blood for the first time after joining
the medical college on being motivated by their pro-
fessors. The change in willingness among MBBS stu-
dents from 51.2% to 98.4% and those in BDS students
from 16.67% to 86.9% is not only statistically signifi-
cant but also implies the need for intervention on a
periodic basis. This study aimed at 1st prof students so
as to inculcate the habit of blood donation since the
very beginning of their medical life. Also it validates
the need for awareness sessions and short messages
during the lectures so as to increase the knowledge
and build up a strongly positive attitude towards vol-
untary blood donation. 36.80% boys and 22.60% girls
not knowing the fact that the donor also gets benefit-
ted by blood donation in the form of increased
erthropoiesis, improvement in cardiac activity and an
immense self-satisfaction is a matter of concern. Al-
most one-fourth of students believing that it doesn’t
make any difference in the huge requirement of blood
if only they themselves donated blood should be taken
into account while planning orientation activities so as
to persuade every individual to contribute a drop in
the sea. They should be made to believe that even if
the whole world may not get benefitted by their step
but this noble act would definitely help somebody
stay healthy in the world. The willingness to donate
blood on being promised special consideration in in-
ternal assessment as stated by 89% of students is a
matter that should be looked into.

CONCLUSION

The knowledge and practice of voluntary blood dona-
tion among the study participants was found much
to be better than the results of previous studies [7] and
the awareness session-cum-visit to the blood donation
centre fetched very high level of willingness. This im-
plies the importance of regular intervention which can
be most easily and successfully carried out by the
teaching faculties in the medical college.

So we, hereby, conclude with the recommendation
that the students in a medical college should be ex-
posed to assessment and awareness sessions as soon
as they enter the institution so as to promote non-
remunerated voluntary blood donation. This matter
should also be addressed in the parents’ meeting so as
to alleviate their anxiety and overprotection in order
to ensure family support for this noble act. Such sessions for the students, parents and also for the faculties should be held periodically for sustained motivation. Though the aim is to emphasize non-remunerated voluntary blood donation, yet motivation in the form of good marks does not seem to be unethical or illogical.

ACKNOWLEDGEMENTS

The authors extend a heartfelt gratitude to all the participants for their responses; to the professors who spared their valuable time for the conduct of the study and the hospital blood donation centre staff for their immense cooperation.

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