



Research Article

FACTORS ASSOCIATED WITH BLOOD DONATION ATTITUDE AMONG NATIONAL GUARDS HEALTH AFFAIRS (NGHA) STAFF - A CROSS SECTIONAL STUDY 2011

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ARTICLE INFO

Article History:

Received 15th, December 2015
Received in revised form
20th, January 2016
Accepted 19th, February 2016
Published online 31st, March 2016

Keywords:

Blood donation, National Guards,
Medical and non medical staff,
Saudi Arabia.

ABSTRACT

This cross sectional study was carried out among the premises of the National Guards Health Affairs, Riyadh, Kingdom of Saudi Arabia, during July 2011. A total number of 236 persons were chosen from the both sex in convince sampling method of five different locations which are the Hospital, admin building, Iscan Clinics, blood bank and King Saud bin Abdul Aziz University for health science. Each individual complete a questionnaire in English Language containing demographical data, clinical characteristic, behavior and attitude regarding blood donation and reasons of blood donation or non donation. Out of 236 individual, 122 (51.5%) were males and 114 (48.5) were female. (82.5%) persons calculated as Non smoker. (48.8%) of the total sample were single. The majority (93.8%) of the total sample did not have any chronic diseases. Physicians counted to be (14%), nurses (29.7%), administrative (27.1%), students (12.6%) and others (29.3%) of the total sample number. For blood donation, physicians took the highest percentage of previous donation with (62.5%) and administrative persons took the lowest one with (30.6%) of the total sample number. As a strata, blood bank employers were in 1st place for donating (83.3%) of the total blood bank sample. University staff were in the last place (32.4%) of the total University sample. For previous need of blood transfusion, only 8.1% of the participants needed for blood. (90%) of the participants believed that blood donation is not a harmful procedure.

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INTRODUCTION

Saving lives is the main aim of all health organization all over the globe. Blood donation is a significant procedure that contributes with life saving health services. The demand of blood transfusion is increasing according to WHO 2011, 90 counties reported that more than 9 million patients received blood transfusions during the reported year (WHO, 2011). This happens due to the high number of traumatic injuries, mainly Motor Vehicle Accidents, surgeries and others (WHO, 2011). Blood donation is the only source to meet patients' need of blood. There are many factors effecting people attitude toward blood donation like socio – demographic profile, previous blood donation behavior and experience, knowledge and perception, attitude, social norms, and perceived behavioral control. These factors can affect the person and encourage him to donate blood or not to do it. There have been studies to see whether there are factors affect blood donation attitude. Knowledge found to be a significant factor that effect people attitude positively toward donation (Hong and Yuen Loke, 2011; Holdershaw *et al.*, 2003; Javadzadeh, 2006). Whereas other study found that "Greater knowledge about blood donation does not lead to donation" (Wiwanitkit, 2002).

Also, studies found that positive attitude of some people toward blood donation encourage them to give the their blood for others (Hong and Yuen Loke, 2011; Holdershaw *et al.*, 2003; Javadzadeh, 2006). While level of education is an absolute factor contribute with blood donation approach (Mousavi *et al.*, 2011; Wiwanitkit, 2000). Age found to be one of the main contributed factor that play role in blood donation where younger age people are more likely to donate than old ones (Hong and Yuen Loke, 2011; Holdershaw *et al.*, 2003). Whereas a study found there is no significant association between age and attitude (Wiwanitkit, 2000). Benefit for own health seems to be common perception among many individuals after blood donation procedure (Hong and Yuen Loke, 2011). People who donate assume "The benefits mentioned include healthy feeling and feeling of happiness, replacement of blood cells and reduction in heart attack" (Javadzadeh, 2006). In addition, studies believe that blood donation is so helpful in diminution of heart attack (Javadzadeh, 2006, Pennings, 2005). On the other hand, donors donate for a purpose of health evaluation by lab test (Mousavi *et al.*, 2011). Religion, moral and altruism were motivated factors for blood donation in different culture around the world (Hong and Yuen Loke, 2011; Javadzadeh, 2006; Mousavi *et al.*, 2011; Ajzen and Fishbein, 1977). In contrast, time limitation and fear either of pain, instruments use, dizziness, complications or seeing blood make many people

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refuse to donate (Hong and Yuen Loke, 2011; Javadzadeh, 2006; Al-Drees, 2008). Difficulty of facilitation and transportation act as one of the barriers for blood donation (Javadzadeh, 2006; Al-Drees, 2008). Most of non donors stated that no one approached them about blood donation (Alam Masalneh Bel, 2004). In Saudi Arabia accidents and injuries were the top causes of death among Saudis population with a percentage of 8.35 % (Ministry of Health, 2009). Which increase the blood demand among and need more blood donation? In the National Guard Health Affairs hospital the number of requests of blood transfusion is double or more than the number of blood donors in these blood banks particularly (Ministry of Health, 2009). The assumption of this study is to discover the attitude of NGHA staff toward blood donation. Literatures about factors affect the attitude toward donation among hospital staff are very limited; therefore, the aim of the study is to improve blood donation in Saudi Arabia by understand the underlining barriers and motivations factors. The purpose of this study is to improve blood donation behavior in Saudi Arabia (among National Guards Health Affaires "NGHA" staff) by understanding the underlying barriers and motivations toward blood donation.

MATERIALS AND METHODS

Study Area

Premises of National Guard Health Affairs in Riyadh, namely: Main hospital building, Administrative building, Iskan Clinic, blood bank and King Saud University for Health sciences.

Study Subjects

This study include all the NGHA Medical and Non-medical staff and no exclusion criteria

Study Design

This is an observational cross sectional study. The study is based on a structured questionnaire distributed randomly to target population.

Sample Size

The sample size calculated using Open-Epi epidemiologic calculator at Confidence interval 95%was found to be 228. Sample size was adjusted to 230.

Sampling Technique

236 subjects have been selected from the all staff in premises of National Guard Health Affairs in Riyadh during the period of week starting from 17 – 7 – 2011 until 22 – 7 – 2011. Using Stratified sampling the target population was divided into five strata by location. The main National Guard Hospital, Adminstration building, Iscan Clinic, Blood bank and King Saud bin Abdul Aziz University for health science.Fifty candidates were selected from each stratum by convince sampling.

Data Collection methods

Data collection was done through self-administered questionnaire. This questionnaire related to socio - demographic characteristic: (ex. age, gender ... ect), Clinical characteristics: (ex. weight, height... ect), medical history, and factors effecting blood donation attitude. The Outcome variables are the top motivating and barrier factors of donation. The questionnaire handed to the participant by the researcher. The questionnaires are self-administered, where candidates are supposed to fill and turn in the questionnaires to the researcher within the same time they received.

Data Management and Analysis Plan

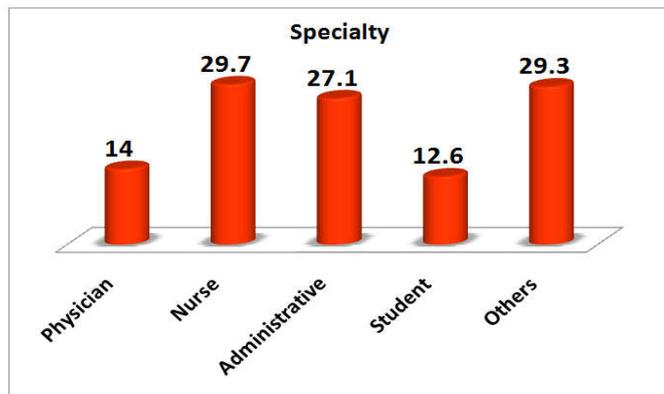
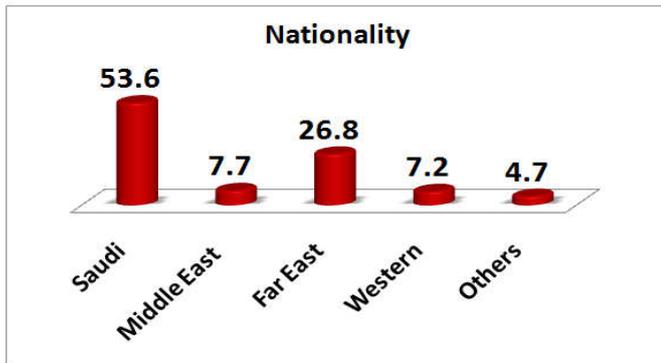
Raw data processed in accordance with the best practice for raw data management to identify any inaccuracies or incompleteness in advance to statistical analysis. In order to accomplish this task, all interval variables have been checked and summarized in terms of maximum and minimum values. A similar process applied to categorical variables to identify any potential anomalies. Descriptive analysis all variables were summarized and reported across the study using, frequency tables and descriptive statistic. Interval variables were summarized and reported in terms of mean and standard deviation. Further data analysis done using student t-test and Chi-square as appropriate. Data were entered and analyzed using SPSS software.

RESULTS

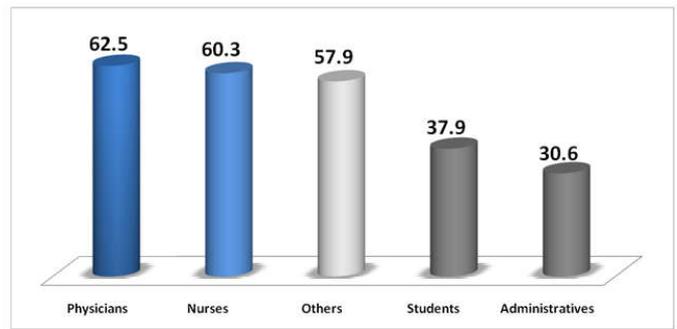
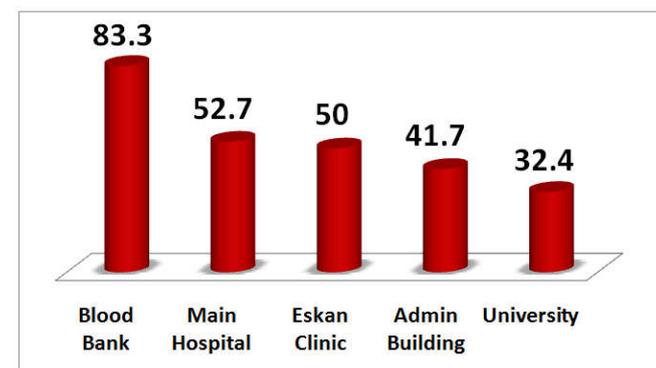
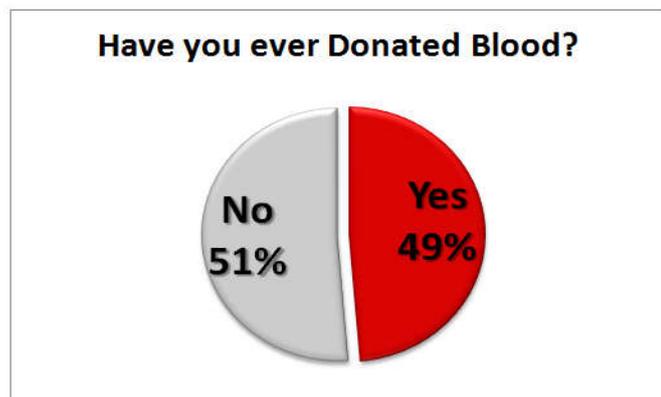
In this study, 236 staff members (122 male and 114 female) were included. The *demographic data* mean age 32.88 years, 51.5% males and 46.8% single. The *Clinical characteristicare* the the majority (93.8%) did not have any chronic diseases and the majority (82.5%) were non smoker.

Sample Size for Frequency in a Population		
Population size(for finite population correction factor or fpc)(N):		3000
Hypothesized % frequency of outcome factor in the population (p):		80%+/-5
Confidence limits as % of 100(absolute +/- %)(d):		5%
Design effect (for cluster surveys-DEFF):		1
Sample Size(n) for Various Confidence Levels		
Confidence Level(%)		Sample Size
95%		228
80%		102
90%		164
97%		274
99%		373
99.9%		564
99.99%		733

The distribution of different blood groups, 44.4% were blood group "O", 19.7% were blood group "A", 18.4% were blood group "B", 6% were blood group "AB", and 11.5% of Healthcare worker didn't know their blood group. Participants' well beings were part of this study. 83.8% of them reported not having any chronic diseases.



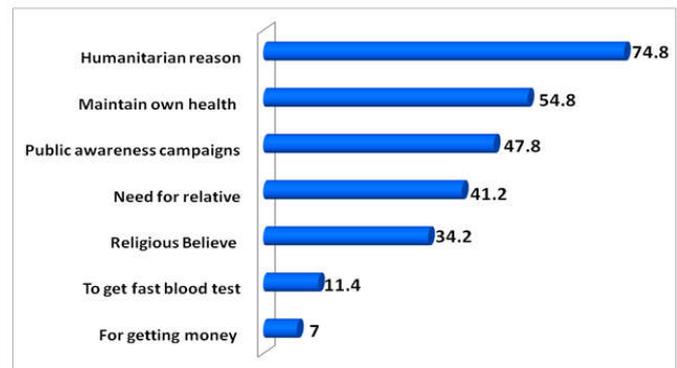
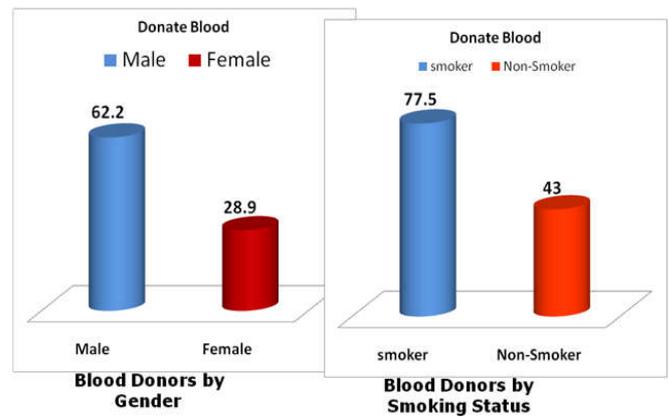
'Have you ever donated blood?' was the main question in this study. It was found that 49% of the subjects have donated blood at least once.



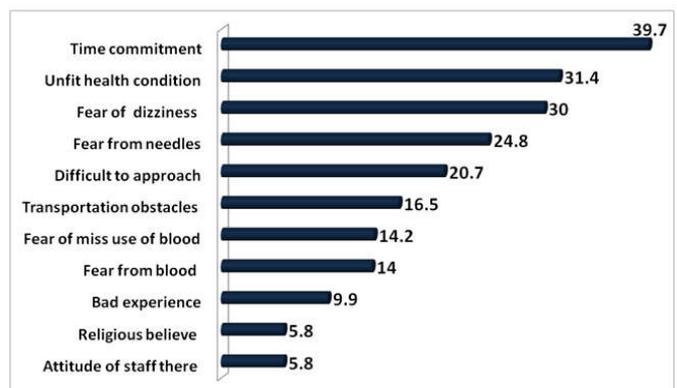
Blood Donor Percentage by Speciality

Attitude

(90%) of the participants believed that blood donation is not a harmful procedure. Only 8.1% of the participants have needed blood transfusion before.



Reasons for donating blood among who donated



Reasons for NOT donating blood among who have never donated

DISCUSSION

This study was done to determine the top factors affecting blood donation among NGHA staff by understanding the barriers and motivations of the staff toward blood donation. Almost half of the staff the donate 49%. 'Level of knowledge' played a significant role in blood donation. In this study Physicians and nurses donated blood almost twice as much as students, which is supported by several studies such as the one which was recently conducted in Hong Kong in Jan, 2011. According to a study done in Tazd, Iran in 2004, People who donate assumed there are personal health benefits which included 'healthy feeling and feeling of happiness, and replacement of blood cells', this supports our study's findings that 54.8% of the NGHA staff donated blood for maintaining their own health. According to previous studies such as the one done by Dr. Al-Drees in Saudi Arabia 2008, it was found that time limitation is the barrier for blood donation among medical staff which conforms with this study as the top reason for not donating. For the age, a study held on Sep. 2000 in Thailand found that there is no significant association between age and attitude which is approved by this study also.

A study done in Yasd city on Iranian population on May 2011 found that only 9.7% of the total sample size were donating for getting free blood test. This issue has been confirmed by this study also with 87.8% of the total sample who denied that they donate for having blood test before. Religion, moral and altruism were approved to be one of the motivating factor for donating blood in more than one study such as a study held recently in Hong Kong Jan 2011, other also recent take place in Yasd city on Iranian population on May 2011 and a study done in Tazd, Iran in 2004. In contrast, this study found that only 33.9% where donating for religious purpose, but at the same time this factor took only 2.6% as a reason for not donating blood of the same sample size. Difficulty in transportation, fearing from instrument used, fear of dizziness and fear of seeing blood were approved that they acting as of the preventing factors for blood donation in a study done in Tazd, Iran in 2004 and other done by Dr. Al-Drees in Saudi Arabia 2008. In contrast, this study shows that these factors does not act so much as a preventing factors here according to following percentage respectively (88.7%), (88.7%), (86.1%) and (93.9%). Lastly, according to a study done on Saudi Population 2004 Mar, most of non donors stated that no one approached them about blood donation. this is found to be presenting only 16.5% of the sample size in this study.

Conclusion

Blood donation is not a common practice among medical personnel, as nearly half of them do not donate blood. Practice and Attitude towards donating Vs. Not donating is affected by many reasons. In staff who donated, the biggest motive was Humanitarian reasons. For those who didn't donate, time commitment was their top reason.

Ethical Considerations

Verbal consent has been obtained from participants after explaining the content of the questionnaire and ensuring confidentiality of information given. There were no risk on the subject participant.

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