ORIGINAL ARTICLE

Impact of Quality, Perceived Value, and Expectations on Satisfaction of Blood Donors of Rasht Blood Transfusion Organization

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Abstract

Introduction: Attracting donors and increase their satisfaction for regular donation of blood transfusion are the most important goals of the organization (the blood transfusion organization of Iran). In this study, quality, perceived value, and expectations on the satisfaction level of blood donors in Rasht blood donors were studied. **Methods:** In this study, the purpose and terms are descriptive survey research. The research instrument was a standard questionnaire. The population of this study included 384, the number of samples and sampling of blood donor transfusion in the center of Rasht were available. Data analysis using software SPSS18 and PLS indicators and descriptive and inferential statistics were used. **Results:** The results showed that service quality has an impact on the value perceived by donors. Service quality has an impact on increasing donor satisfaction. Perceived value affects blood donors to increase their satisfaction. **Conclusion:** With attention to customers, the service quality and perceived value affect the level of donor satisfaction, we expected that employees have more responsibility and are ready to service the customers and so the time of doing the customer application should be shorter and appearance of regular employees should be justified. Amenities such as chairs and reception furniture should be appropriate. The referring to customer complaints should be addressed. Staff should have the necessary capabilities that customers feel good about the organization.

Key words: Blood donors, customer expectations, perceived value, quality of service, satisfaction Rasht blood donors

INTRODUCTION

Blood donation is life donation. Every second an individual in the world needs blood for survival.[1] Nowadays, consumption of blood and blood products has increased for various reasons. Thus, the number of blood donors should also increase in parallel to increasing blood and blood products consumption.[2] Supplying adequate and healthy blood for individuals in need of blood and blood products is the main task of blood transfusion organization. Thus, being constantly aware of satisfaction level of end or intermediate users plays significant role in ongoing improvement and promotion of the quality of blood products' supply process.[3] Investigation of service quality impact on post-consumption behaviors including customer satisfaction and customer behavior is crucially important for informing employers and employees.[4,5] Various studies have been conducted regarding relationship between service quality and satisfaction, and experimental evidence suggests causal relationship between service quality and customer satisfaction.[6,7] There is positive significant relationship between perceived value and customer expectations.[8,9] Providing logical and scientific feedback of needs and expectations of an organization's customers not only can be used as a supervision and control tool in the organizations but also in a more comprehensive look it can

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be one of the prerequisites in the organizational planning trend.[10] Individual's satisfaction plays significant role in their return for blood donation.[11] Hence continuous awareness of donors' satisfaction with blood sampling environment conditions, the way of communication and exposure of the physician to the donor, communication and exposure of blood donation personnel with the donor, the way of informing on donation conditions in blood donation centers, to provide healthy and adequate blood.[3] Higher levels of service quality will lead to higher levels of customer satisfaction and high perceived value and positive behavioral tendencies.[12] Some research works have been done on components affecting continuous blood donation and satisfaction of blood donors including Enayattollahi and Sohrabi,[13] Hasanzadeh *et al*.,[14] and Kakhaki *et al*.[3] In addition, some works have been done on impact of service quality, perceived value, and customer satisfaction in other organizations including Ebrahimi and Mansuri,[14] entitled as relationship between service quality, perceived value, and behavioral tendency of customers regarding restaurant service, and Ligas and Chadhuri[15] on tourism. Reviews by the author suggest despite research subject significance, there is no comprehensive research on impact of service quality, perceived value, and expectations on satisfaction of blood donors. Thus, the author attempts to help planners in blood transfusion organization in their future planning by conducting this research and extracting and publishing its results and reporting findings to the policy-makers and planners in the organization.

METHODS

The research is of applied, descriptive survey studies. Statistical population included 384 blood donors in Rasht Blood Transfusion Organization, who referred to the organization during March 2014–January 2015 for blood donation. Census was done using sampling and infinite population formula, and it was calculated as follows:

$$n= z^2_{\alpha/2}\, S^2X/£^2 = (1.96)^2 * (0.500)^2/(0.05)^2 \tilde{} 384$$

n: sample size
$Z_{\alpha/2:}$ 1.96 z value
α: 0.05, significance level
d^2: Estimation error
S^2: Sample variance.

Data collection tool was a standard questionnaire[16,17] composed of two parts. The first part includes 4 items about personal and demographic information and the second part contains 28 specialized items including service quality (8 items), customer expectations (7 items), perceived value (7 items), and customer satisfaction (6 items), which are scored in Likert five-point scale (totally agree to totally disagree).

Validity of questionnaire was confirmed by consulting with instructors and experts and modification of parts of the questionnaire, and its reliability was obtained by calculating Cronbach's alpha coefficient as follows [Table 1].

Since all obtained alpha coefficients are above 70%, thus the questionnaire possesses acceptable reliability. Data distribution normality was tested using Kolmogorov–Smirnov test, significance level of which was obtained smaller than 0.05 for all variables; hence, assumption of variable normality was rejected and assumption of abnormalities of variables was confirmed. Therefore, structural equations using PLS method were utilized for data analysis.

RESULTS

The results include two parts: A. Personal and demographic characteristics and description of research variables. Of 384 participants, 95.8% were male and 4.2% were female. 78.4% were married and 21.6% of respondents were single. 30.5% of the target population had high school diploma and below, 21.1% had associate degree, 35.9% had BA degree, and 12.5% had MA and higher degrees.

About 19.3% of target population was 25 and younger, 40.6% were between 26 and 35, 25.5% between 36 and 45, 10.4% between 46 and 55, and 4.2% were >55-year-old.

Among research variables, service quality had mean of 4.23, standard deviation (SD) as 9.529, and variance as 0.280. This variable had minimum and maximum score as 3.12 and 5.00.

Mean, SD, and variance in customer expectation variable were 4.50, 0.465, and 0.216, respectively. Furthermore, minimum and maximum scores were 2.86 and 5.00, respectively.

Table 1: Cronbach's alpha coefficient for each component

Component	Cronbach's alpha coefficient	Variable	Result
Service quality	0.864	8	Reliable
Customer satisfaction	0.858	7	Reliable
Perceived value	0.935	7	Reliable
Customer satisfaction	0.958	6	Reliable
Total	0.964	28	Reliable

Perceived value has mean as 4.290, SD as 0.687, and variance as 0.471. Furthermore, minimum and maximum score for perceived value was 2.57 and 5.00, respectively.

Mean, SD, and variance in customer satisfaction variable were 4.34, 0.668, and 0.447, respectively. Furthermore, minimum and maximum scores were 2.67 and 5.00, respectively.

B. Results obtained from confirmatory factor analysis and path analysis: In confirmatory factor analysis and t statistics and significance level: Four components including service quality (8 variables), customer expectations (7 variables), perceived value (7 variables), and customer satisfaction (6 variables) were calculated [Table 2].

As observed in Table 2, factor load for all variables of service quality component was higher than 0.05, and it is significant at level 0.01. In expectation component, except for variable 11, factor load of all variables was higher than 0.5, and it is significant. Factor load for all variables of perceived value and customer satisfaction was higher than 0.5 and significant at level 0.01. Using structural equations or path analysis, path coefficient of components including service quality, perceived value, expectation, and satisfaction of donors is calculated and shown in Table 3.

Considering results in Table 3, it can be stated that the impact of expectation on customer satisfaction is not significant and other research components are significant. It should be noted that in evaluation of fit indexes, goodness of fit index was 0.63. Since the closer it is to 1, the model's goodness of fit is higher, thus it can be stated that model goodness of fit is acceptable.

DISCUSSION AND CONCLUSION

Research findings indicate that service quality has direct and significant impact on perceived value and satisfaction of blood

Table 2: Factor load, t statistics, significance and Cronbach's alpha

Component	Variable (item)	Factor load	T statistics	Significance	Cronbach's alpha
Service quality	Q1	0.50	8.55	Confirmed	0.86
	Q2	0.75	32.54	Confirmed	
	Q3	0.60	14.66	Confirmed	
	Q4	0.66	38.29	Confirmed	
	Q5	0.63	15.27	Confirmed	
	Q6	0.71	23.55	Confirmed	
	Q7	0.83	58.16	Confirmed	
	Q8	0.84	66.35	Confirmed	
Expectations	Q9	0.54	6.17	Confirmed	0.86
	Q10	0.57	6.65	Confirmed	
	Q11	0.24	2.21	Rejected	
	Q12	0.82	61.18	Confirmed	
	Q13	0.87	51.67	Confirmed	
	Q14	0.84	51.03	Confirmed	
	Q15	0.86	43.15	Confirmed	
Perceived value	Q16	0.71	26.43	Confirmed	0.93
	Q17	0.82	37.24	Confirmed	
	Q18	0.79	31.37	Confirmed	
	Q19	0.89	93.75	Confirmed	
	Q20	0.90	104.32	Confirmed	
	Q21	0.87	83.23	Confirmed	
	Q22	0.88	89.33	Confirmed	
Customer satisfaction	Q23	0.88	73.53	Confirmed	0.95
	Q24	0.88	68.70	Confirmed	
	Q25	0.91	96.27	Confirmed	
	Q26	0.89	93.36	Confirmed	
	Q27	0.87	56.61	Confirmed	
	Q28	0.88	66.47	Confirmed	

Table 3: Path significance test

Hypothesis number	From component	To component	Path coefficient	T statistics	Test result
1	Service quality	Perceived value	0.43	8.41	Confirmed
2	Expectations	Perceived value	0.35	6.59	Confirmed
3	Service quality	Satisfaction of blood donors	0.22	5.01	Confirmed
4	Expectations	Satisfaction of blood donors	0.04	0.99	Rejected
5	Perceived value	Satisfaction of blood donors	0.65	17.19	Confirmed

donors. Increasing service quality as a managerial goal as well as ensuring the quality experienced by the customer leads to increasing satisfaction and perceived value, which is crucial for managers when determining their survival strategies.[18] It is consistent with findings by Kakhaki *et al*.,[3] Hussaih *et al*.,[19] and Denga *et al*.[20] Expectations of blood donors influence perceived value and there is significant relationship between expectations and perceived value of donors, but there is no significant relationship between expectations of donors and their satisfaction, which is consistent with findings by Hussein *et al*.[19] On the other hand, research findings showed that perceived value by donors influences their satisfaction and there is positive significant relationship between two components. These findings are consistent with findings by Reid and Wood[21] and Chen and Lin.[22] Research findings indicated that perceived value to donors' satisfaction with path coefficient of 0.65 and service quality to perceived value with path coefficient of 0.43 have highest prediction power and impact, because perceived value is a powerful force in directing operations, attitudes, and judgments in all daily life aspects.[22-26] Since service quality affects perceived value and satisfaction of customers, thus accountability and responsibility of employees of blood transfusion organization, using efficient system and increasing employee capability is recommended. Furthermore, given impact of donors' expectations on perceived value, it can be stated that the model enjoys relatively suitable goodness of fit.[17,27] Considering impact of perceived value on customer satisfaction, it is suggested that communicative and human skills of employees with donors and increasing employees' technical skills are more taken into account.

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