

Patients' Level of Satisfaction on Services Provided by Nurses in Rwanda Hospitals

Cassien GATOYA and Mary D. N. Kitula*

The Open University of Tanzania.

Corresponding author: *Mary D. N. Kitula, The Open University of Tanzania.

Abstract

Patient satisfaction serves as a tool to measure if the patient expected needs from health professionals are met or not. This paper assessed the level of patients' satisfaction on the services they receive from nurses while at hospitals. A cross-sectional design was applied from October 2015 to August 2016. The data was collected through 360 interviewees on structured questionnaire in five (5) selected hospitals. The Pearson Correlation Coefficient was computed to correlate two or more continuous variables and be informed on their significant relationship. Findings from the study showed that majority of patients (48.4%) were (strongly) dissatisfied with health care received from nurses and four (4) among five (5) variables considered were strongly associated to patient dissatisfaction. These are physical environmental and its appropriateness, regular rounds and availability of nurses each time needed by patients, waiting time for health services, patient loyalty and patient willingness to recommend the same hospital to friends, relatives and other patients. Hospital managers should review their policies related to patients and plan how to promote patients satisfaction.

Keywords: Patients, Satisfaction, Rwanda hospitals

Introduction

Patients' satisfaction has become a worldwide topic in health sector used to measure the quality of health care delivered by providers to their clients. This is done through the evaluation of patients' needs with their health services and their outcomes. Meeting patients' needs leads to the satisfaction in terms of the services they get (Wen, 2004).

Satisfied patients are more likely to be willing to return to hospitals in the future when they are sick. They also intend to recommend their friends and relatives to consult the same hospitals. Health facilities with a system of

identifying patients' needs and mobilizing resources to meet these needs lead to higher patient satisfaction scores (Nelson et al., 1989).

Patient satisfaction in Rwanda is currently an important aspect because of the increase in number of health facilities. Customer care is always a topic discussed in various meetings of the Ministry of Health in Rwanda requesting both public and private health facilities to deliver good quality health care. Policies regarding patients' rights were established by the Ministry of Health and sent to all health institutions in order to make them

available to patients. Indeed, suggestions boxes have been introduced in many health service institutions.

All of these efforts were followed by setting the offices customer care and public relations in each hospital. These offices have an intention to make sure that all policies of the Ministry of Health regarding customer care and satisfaction are implemented. However, considering all these good practices in Rwandan hospitals, there is still low satisfaction among patients and the services they receive from health professionals are still poor. Thus, taking this aspect into consideration can contribute to improve patient satisfaction in health facilities in Rwanda.

Purpose and methods

The purpose of this paper is to assess the level of patients' satisfaction on the services they receive from nurses while at hospitals. Specifically, to determine the factors that lead to patients' satisfaction and their level of satisfaction on the services they receive from nurses. The results of this study will contribute to guide health planners and hospital managers in Rwanda to develop strategies to increase patients care satisfaction.

A cross-sectional design was conducted from October 2015 to August 2016. The data was collected from 360 nurses in five (5) selected hospitals in Rwanda. The interview was carried out with patients. Each selected patient was asked to respond the same structured questions by the interviewer himself. Respondents were asked to respond to different statements using the 5-point Likert scale ranged from 1 to 5 where 1 is strongly disagree and 5 is strongly agree. The advantages of this mode of administration include the collection of more detailed and complex data and the possibility to clarify. This technique also gave more chances to illiterate patients to participate in the survey.

The questions asked had five (5) variables, namely physical environment and its appropriateness, regular rounds and availability of nurses each time needed by patients in various departments, availability of health services delivered to patients, the waiting time for health services, patient loyalty and patient willingness to recommend the same hospital to friends, relatives and other patients. Socio-demographic characteristics of patients were also correlated to overall patient satisfaction score. Each question has its own variables presented one by one. Under each variable there were statements to be answered by respondents.

Data from respondents was compiled in SPSS, version 16. Four (4) variables of patients' satisfaction with their statements and eight (8) patients' socio-demographic characteristics were correlated to the overall patient satisfaction score using Pearson's Correction Coefficient. The purpose was to examine whether there was any relationship between studied variables and overall patient satisfaction score. The statements comprised in each variable were computed to generate a total factor score. In turn, this factor was correlated to the overall patients' satisfaction score.

Five degrees of correlation were used to take decision namely; perfect as first degree of correlation which is used when the value of r is near ± 1 ; high degree used when the coefficient value lies between ± 0.50 and ± 1 , and is considered as a strong correlation; moderate degree used when the value lies between ± 0.30 and ± 49 , and is considered as medium correlation; low degree used when the value lies below $+ 0.29$, and is considered as a small correlation and finally no correlation when the value is zero (Cohen 1988, 1992).

The level of statistical significance (p value) showed by *sig (2-Tailed)* indicated that there was a statistically significant correlation between two considered variables, this significance was shown by one star (*) at

significant correlation of 0.05 level (2-tailed) or two stars (**) at a significant correlation of 0.01 level (2-tailed) as seen below.

Results
Demographic Characteristics of Respondents

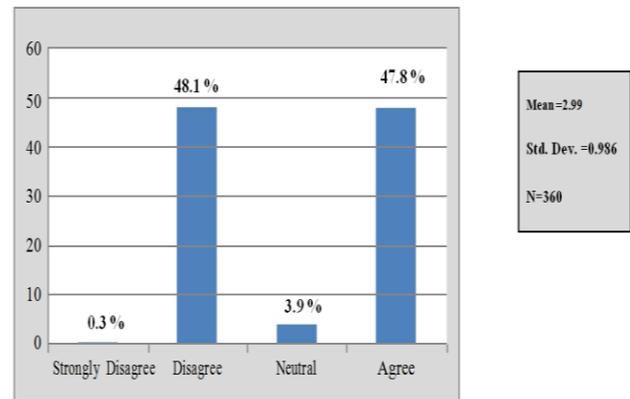
A total number of 360 patients were involved in the study. Each patient in the sample was interviewed using structured questionnaire. From different departments, the information on patients’ demographic characteristics such as their profession, age-group, sex, marital status, education level, payment mode as well as their monthly net incomes was collected.

Data from the study revealed that among six (6) departments visited by patients, the Internal Medicine was the largest one with 23.1% of patients. The majority of respondents were farmers with 62.5% that is 225 out of 360 respondents. In addition, 134 out of 360 respondents representing 37.2% are between 35 and 44 years old; 196 out of 360 respondents equivalent to 54.4% were females while the remaining 45.6% were males. Furthermore, 250 out of the total number of respondents representing 69.4 % were married.

Data from the study also revealed information respondents’ levels of education, their health insurance schemes as well as their income. In fact, it was also found out that out of 360 respondents, only 31.4% had done secondary school education whereas 52.2% had just attended primary. In addition, the majority of respondents 248 out of 360 representing 68.9 % used Community Based Health Insurance (CBHI) as payment mode of health services. This payment mode was followed by the Rwandan Social Security Funds (RSSB) which covered 18.3 % of respondents. Finally, 126 respondents equivalent to 35 % had a monthly net income of 10 001-15 000 Rwandan francs.

Level of Patients’ Satisfaction

The result from the overall level of patients’ satisfaction score showed that 48.1 % of respondents generally disagreed with nursing care received from nurses and 0.3 % strongly disagreed. Moreover, 3.9 % of respondents did not give their opinions; while 47.8 % were generally satisfied with health care received from their nurses. Thus, majority of respondents were dissatisfied with the services they receive from nurses.



Source: Field Data, 2016.

Figure 1: The Distribution of the Level of Patients’ Satisfaction Score.

The Relationship between Socio-Demographic Characteristics of Patients and the Level of Patient Satisfaction Score.

Aforementioned eight (8) variables of patients’ characteristics were correlated to the level of patient satisfaction score to see whether there was a relationship between them or not. Only two (2) variables among them were correlated to patients’ dissatisfaction. These are the age group of patients moderately associated to the level of patients satisfaction score ($r=-0.340$, $p<0.01$) and education level weakly associated to the level of patient satisfaction score ($r=-0.291$, $p<0.01$).

Table 1: The Correlation between Socio-Demographic Characteristics of Patients and Overall Level of Patients Satisfaction Score in Selected Hospitals.

		Department	Profession	Age	Gender	Marital status	Education level	Monthly income	Mode of Payment	Patient Satisfaction
Department	Pearson Correlation	1	-.007	-.010	-.248**	.058	-.032	-.082	.004	-.010
	Sig. (2-tailed)		.895	.847	.000	.274	.548	.120	.937	.848
	N	360	360	360	360	360	360	360	360	360
Profession of Patient	Pearson Correlation	-.007	1	.008	-.159**	.000	.228**	.279**	.329**	.000
	Sig. (2-tailed)	.895		.886	.002	.994	.000	.000	.000	.999
	N	360	360	360	360	360	360	360	360	360
Age	Pearson Correlation	-.010	.008	1	.028	.346**	-.148**	.083	-.001	.340**
	Sig. (2-tailed)	.847	.886		.600	.000	.005	.114	.977	.000
	N	360	360	360	360	360	360	360	360	360
Gender	Pearson Correlation	-.248**	-.159**	.028	1	.054	-.061	-.088	-.172**	.060
	Sig. (2-tailed)	.000	.002	.600		.306	.245	.095	.001	.254
	N	360	360	360	360	360	360	360	360	360
Marital status	Pearson Correlation	.058	.000	.346**	.054	1	-.035	.109*	-.059	.003
	Sig. (2-tailed)	.274	.994	.000	.306		.507	.038	.268	.954
	N	360	360	360	360	360	360	360	360	360
Education level	Pearson Correlation	-.032	.228**	-.148**	-.061	-.035	1	.362**	.084	-.291**
	Sig. (2-tailed)	.548	.000	.005	.245	.507		.000	.111	.000
	N	360	360	360	360	360	360	360	360	360
Monthly Net income	Pearson Correlation	-.082	.279**	.083	-.088	.109*	.362**	1	.197**	-.032
	Sig. (2-tailed)	.120	.000	.114	.095	.038	.000		.000	.549
	N	360	360	360	360	360	360	360	360	360
Mode of Payment	Pearson Correlation	.004	.329**	-.001	-.172**	-.059	.084	.197**	1	.069
	Sig. (2-tailed)	.937	.000	.977	.001	.268	.111	.000		.190
	N	360	360	360	360	360	360	360	360	360
Level of Patient Satisfaction	Pearson Correlation	-.010	.000	.340**	.060	.003	-.291**	-.032	.069	1
	Sig. (2-tailed)	.848	.999	.000	.254	.954	.000	.549	.190	
	N	360	360	360	360	360	360	360	360	360

** . Correlation is significant at the 0.01 level (2-tailed). * . Correlation is significant at the 0.05 level (2-tailed).

Source: Field Data, 2016

Factors associated with Patients’ Care Satisfaction

Five (5) variables defined as independent variables were correlated to the overall level

of patients’ satisfaction score considered as dependent variable. Findings from the Table 2 indicated that all the five (5) variables were strongly correlated to patients’ dissatisfaction.

These are physical environmental and its appropriateness ($r=0.719$, $p<0.01$), the regular rounds and availability of nurses each time needed by patients ($r= 0.577$, $p<0.01$), the availability of health services delivered to patients performed at $r= 0.680$, $p <0.01$, the waiting time for health services performed at $r= 0.738$, $p <0.01$ and patient loyalty and patient willingness to recommend the same hospital to friends, relatives and other patients at $r= 0.608$ and $p <0.01$.

The findings of socio-demographic characteristics of the patients showed that two (2) out of eight (8) variables were statistically correlated to the overall patients satisfaction score. These variables were age group and education level. On the other hand, departments visited by patients, profession, gender, marital status, monthly net incomes and payment mode of health services of patients were not correlated to the overall patients satisfaction score.

The age group variable was moderately correlated to the overall patient satisfaction score ($r =0.340$ $p<0.01$). The findings of this study indicated that majority of young patients were moderately dissatisfied compared to old patients. Results of this study showed that the satisfaction level increases with age while the maximum dissatisfaction level was found in younger age of respondents. This finding is similar to that of Braunsberger and Gates (2002). They found that older patients were more satisfied with healthcare service provided to them than younger patients. Considering these

individual differences, nurses, health professionals and hospitals managers have to consider them while offering health care to different age groups of patients.

The education level was weakly associated to the overall patient satisfaction score ($r=-0.291$, $p<0.01$). Findings show that majority of patients with secondary school and university levels were dissatisfied compared to illiterate patients and to patients with primary school education. This might be caused by the capability of high educated respondents to analyse health services received from nurses. This finding is similar to that of Muhammad et al. (2012) in the study of effect of demographic characteristics on patients' satisfaction with health care facility. They found out that those illiterates patients were more satisfied compared to patients with universities degrees. Nurses, hospitals managers and other health professionals should consider these educational differences while offering health care to high educated persons.

The variable of gender also in this study was not correlated to patient satisfaction score. This means that the sex of respondents did not have any significant effect on the satisfaction score. However, the cross tabulation (% within gender: Gender* Overall level patient satisfaction cross tabulation) of this study showed that females respondents were more satisfied than males. Weisman et al. (2000) reported that women are more satisfied than men with health care received.

Table 2: Factors associated with the Level of Patients Satisfaction Score.

Variable	N	r	Sig.
Physical environmental and its appropriateness	360	.719**	.002
Regular rounds and availability of nurses each time needed by patients	360	.577**	.000
Availability of health services delivered to patients	360	.680**	.000
Waiting time for health services	360	.738**	.000
Patients' loyalty and patient willingness to recommend the same hospital to friends, relatives and other patients	308	.608**	.000

****.** Correlation is significant at the 0.01 level (2-tailed).

Source: Field Data, 2016

Based on these findings, it is a must for hospital managers to consider the relationship between patients' gender characteristics and their satisfaction as it would be helpful for ensuring more health care.

The marital status variable was not correlated to the patient satisfaction score. However, the result of this study is different from that of Hall and Dornan (1990). These scholars found out that the variable of marital status was significantly related to patients satisfaction score. According to them, single patients had significantly less satisfaction score as compared to married and divorced patients.

Differences in patients' professions did not have any relationships with their level of satisfaction. This result is parallel to the findings of Mohammed et al. (2012) who proved that patients' occupations did not influence their overall level of satisfaction. On the contrary, Haiping et al.,(2016) in the study on *factors influencing inpatients' satisfaction with hospitalization service in public hospitals in Shanghai, China*; found out that there is a difference between inpatients' occupation and satisfaction was statistically significant ($p < 0.001$).

Findings from the present study also showed that monthly net incomes of patients did not influence their level of satisfaction on health care they receive from nurses. Differently to this finding, Hall and Dornan (1990) showed that monthly incomes' level of the patients is an important factor to patients' satisfaction. They emphasized that patients with less monthly net income were significantly more satisfied with their health care than patients who had high monthly income level.

The payment mode of healthcare did not have any relationship with the overall level of patient satisfaction. However, in the cross tabulation of this study, it was shown that patients with Community Based Health Insurances (CBHI) were more satisfied as compared to their fellow patients who used other health insurances or patients who paid out of their own pocket money. This situation

may be due to the fact that patients with CBHI pay less money as cost sharing of their healthcare. Vanhoof et al., (2005) in a study of customer (dis) satisfaction proved that high expenditure of health services received by patients is the most important reason for inpatient dissatisfaction. Differences in payment mode of health services should not prevent patients from getting healthcare at hospitals. Therefore, hospital managers should think how to treat equally all patients regardless the amount of money they pay and insurance mode they use.

The variable of physical environment and its appropriateness was strongly correlated to patient dissatisfaction at $r = 0.719$ and $p < 0.001$. Patients were dissatisfied with the regular cleanliness of toilets, bathrooms, kitchen and respect of patients' bed to another. Joye., (2007) found out that less noise in the hospitals, cleanliness of the hospital, respect of architecture features, such as single-bed patient rooms and short corridors, improve patient sleep, reduce annoyance of consumers, decrease psychological and physiological stress from different diseases. Their absence leads to patient dissatisfaction. Therefore, hospital managers should concentrate their efforts on cleanliness of toilets, kitchen, and bathrooms and avoid congestion between and among patients' beds in order to plan for better service delivery.

The regular rounds and availability on nurses each time needed by patients in various departments were strongly correlated to patient dissatisfaction at $r = 0.577$ and $p < 0.01$. Patients were totally dissatisfied with regular rounds and availability of nurses each time needed by them in various departments. Desjardins (2008) revealed that regular nurses' availability and their rounding contributed to prevent both accidental and anticipated falls, and reduce patient' issues related to pain management, toileting, changing position, patient' comfort which finally result to improved patient care

satisfaction score. From these findings, it is clear that hospital managers should have a responsibility to put in place nursing stations close to patients in order to create immediate patient- nurse interactions.

The variable of availability of health services delivered to patient was strongly correlated to the patients' satisfaction at $r= 0.680$ and $p<0.01$. Patients were totally satisfied with health services delivered by nurses such as tablets, injections, infusions as prescribed by Medical Doctor. This finding is similar to that of Patavegar et al. (2012). They conducted a *cross- sectional study on patient's satisfaction towards services received at tertiary care hospital on outpatient department (OPD) basis* and found a statistically significant association between the total patients relationship and the availability of drugs in health facilities (Patavegar et al., 2012). Therefore, hospital authorities should continue to take action to improve the availability of drugs and other consumables in order to have more satisfied patients.

The variable of waiting time for health services for patients was strongly correlated to the patients' dissatisfaction at $r= 0.738$ and $p<0.01$. Patients were dissatisfied with a long waiting time for health services. These findings were similar to those of Dahab et al. (2008) who proved that a long waiting time for health services contributed to the patients' dissatisfaction in clinic services. Therefore, hospital managers should work on waiting time reduction and make sure that patients can receive the right care at the right time.

Finally, the patient loyalty and patient willingness to recommend the same hospital to other sick people was strongly correlated to patient dissatisfaction at $r= 0.608$ and $p<0.01$. Majority of patients of this study asserted that they could not return or recommend their fellow to come to the same hospitals. Reichheld (1996) mentioned that five per cent (5%) increases in customer loyalty can result in an increase of the organization's profitability from 25 % to 85 %. The same

authors also expressed that loyal customers can recommend new customers to the organizations. Based on these findings; nurses and their hospital managers can be advised to attract, promote, and build relationships with patients through a good communication between them.

Conclusion

It has been concluded from the above analysis that majority of patients (48.4 %) were dissatisfied with health care received from nurses and many factors identified in this study were associated to the patient dissatisfaction. Four (4) out of five (5) variables were found to be strongly associated to patients' dissatisfaction. These are physical environment and its appropriateness, regular rounds and availability of nurses each time needed by patients in various departments, the waiting time for health services, patient loyalty and patient willingness to recommend the same hospital to friends, relatives and other sick people. Also the availability of health services delivered to patients was strongly associated to patient satisfaction. Finally, two (2) out of eight (8) demographic characteristics of patients were found to be associated with patients' dissatisfaction, namely age group and educational level. In conclusion, patients in five (5) selected hospitals were generally dissatisfied with their health care. Hospital managers are advised to review their policies about services rendered to patients and promote patients' satisfaction in their hospitals.

Recommendations

Based on the findings of the study, it is being recommended that:

- (i) Hospital managers should ensure that patients are received and treated in better physical conditions like public toilets, bathrooms, kitchens and patients' wards.
- (ii) The availability of health services delivered to patients and waiting time for health services have to be monitored by

hospitals managers in order to timely respond to their clients' needs.

- (iii) Patients' rights have to be respected as defined by the Ministry of Health in Rwanda.
- (iv) The communication between patients and nurses should be facilitated by hospital leaders in order to accelerate the quality of healthcare delivered to patients.

References

Afzal, M., Rizvi, F., Azad, A.H., Rajput, A.M., Khan, A., Tariq, N. (2014). Effect of demographic characteristics on patient's satisfaction with health care facility. *J Postgrad Med Inst*; 28(2):138-152.

Braunsberger, K., Gates, R.H. (2002). Patient/enrollee satisfaction with healthcare and health plan. *Journal Consumer Marketing*; 19:565-89.

Dahab, M., Charalambous S., Hamilton R., Fielding K., Kielmann K., Churchyard G. (2008). *That is why I stopped the ART: patients & providers' perspectives on barriers to enablers of HIV treatment adherence in a South African workplace Programme*. *BMC Public Health*. 8(63):2-8

Hall, J.A., Dornan, M.C. (1990). *Patient socio-demographic characteristics as predictors of satisfaction with medical care: a meta-analysis*. *Soc Sci Med*; 30: 813.

Haiping, C., Meina, L., Jingrui, W., Chen, X., Tao D., Xin N., Yuan, L., Lulu, Z. (2016). *Factors influencing inpatients' satisfaction*

with hospitalization service in public hospitals in Shanghai, People's Republic of China; 10: 456-476.

Joye Y. (2007). *Architectural lessons from environmental psychology: The case of biophilic architecture*. *Review of General Psychology*, 11 (4), 280-312.

Nelson, E.C., Hays, R.D., Larson. C. (1989). *The patient judgment system: reliability and validity*. *QRB Qual Rev Bull*.15:185-91.

Reichheld, F. F. (1996). *The Loyalty Effect: The Hidden Force behind Growth, Profits, and Lasting Value*. Boston, MA: Harvard Business School Press.

Wen, K.Y., Gustafson, D.H. (2004). *Needs Assessment for cancer patients and their families. Health Qual Life Outcomes*. 1 (40).

Weisman, C.S., Rich, D.E., Rogers, J., Crawford, K.G, Grayson, C.E., Henderson, J.T. (2000). *Gender and patient satisfaction with primary care: tuning in to women in quality measurement*. 9:657-67.

Patavegar, B. et al., (2012). A cross-sectional study of patient's satisfaction towards services received at tertiary care hospital on OPD. *National Journal of Community Medicine*. Vol. 3 Page 232-237.

Vanhoof, K., Pauwels, P., Dombi, J., Brijs, T., Wets, G. (2005). *Intelligent Data Mining. Heidelberg: Penalty-Reward Analysis with Un-norms: A Study of Customer (Dis) Satisfaction*. pp. 237-252.