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CUSTOMER RELATIONSHIP MANAGEMENT AND ITS IMPACT ON PATIENT SATISFACTION: A QUANTITATIVE STUDY IN LEBANON

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The way healthcare practitioners and institutions are communicating with patients has changed dramatically due to the emergence of digitalization. In order to enhance their market share, healthcare institutions and staff utilize the use of customer relationship management. This study investigates the impact of CRM on patients' satisfaction and loyalty at healthcare institutions in Lebanon. To attain the research objectives, a survey targeting 500 patients was distributed and descriptive statistical analysis was completed. The results showed that customer relationship management improves communication and trust with healthcare practitioners. Moreover, CRM enhances the service quality and impacts patients' satisfaction.

Keywords: Customer relationship management, patient satisfaction, patient loyalty, healthcare, service quality.

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1. INTRODUCTION

Technological advancement in different fields with changing customers' needs and intense competition have forced healthcare organizations to adapt and use digitalization in an attempt to improve their service quality, attract customers, and enhance patients' perception to meet their demand (Baashar et al., 2016; Baashar et al, 2020). As strategies are becoming more customer-oriented, customer relationship management emerged as an innovative tool to maximize customer value through ensuring proper relationship with various target segments (Burr et al., 2009).

Customer relationship management (CRM) is a business and marketing strategic method combining people, processes, and technology to enhance and support productive connections with different clients including customers, suppliers, distributors, and partners (Harryani, 2017). Not only it serves as a database to record customers' information, the CRM system improves the communication with customers through managing customers' data, organizing documents and activities, and setting reports to be used as a competitive advantage for differentiation (Maulana et al., 2021). More than building a profitable relationship with customers, CRM assists in enhancing customer satisfaction and customer loyalty (Sulaiman, 2018).

Customer relationship management is so-called patient relationship management in the healthcare sector where patients are the key clients. One way to collect patient data, create communication and appropriate relationship with them, customizing data and tracking their health record is through the use of CRM (Baashar et al., 2016).

Although a lot of studies support the role of customer relationship management in improving customer satisfaction and loyalty; however, limited data was available supporting the healthcare Lebanese market. The purpose of this study is to investigate the intention to use customer relationship management in healthcare sector and its effect on patient satisfaction in Lebanon. This research will provide an insight for management on the importance of CRM system in attracting patients and maintaining their satisfaction and it will assist all healthcare practitioners in realizing the CRM essential advantages in tracking their patients especially as data relevant to the Lebanese market is deficient.

2. LITERATURE REVIEW

One of the main factors to consider when assessing healthcare is patient satisfaction. CRM empowers the medical care area to further develop customers' wellbeing, increment customers' loyalty, maintain customers and add new administrative services also. The CRM incorporates strategic planning to improve communication and counselling, CRM for doctors, strategic management, database establishment, and segmentation tool (Mohite et al., 2013). CRM was proven to enhance the organization performance. Once customers are satisfied with the service provided by healthcare institutions, a long-term relationship with patients can be established (Ali et al., 2013). As CRM and customer satisfaction are related, the increase in satisfaction will ultimately lead to an improvement in the organization sales performance due to the high number of loyal customers generated (Hassan et al., 2015).

According to Harryani et al. (2017), after the distribution of a questionnaire on 360 customers in a bank sector to determine the impact of CRM on customer satisfaction, the results showed that CRM system will assist in providing a higher product and service quality and customer value. On the other hand, the study stated that higher customer value and product and service quality will enhance the customer satisfaction that will in turn increase customer loyalty. Another study at Ghanaian hospitals by Nkrumah et al (2020) on 788 patients revealed that CRM has a positive relationship with customer satisfaction loyalty and patient satisfaction affects the relationship between CRM and customer loyalty. In addition, customer satisfaction lead to customer loyalty.

Maulana et al (2021) revealed in the study done on 100 participants that CRM system at PT Tiki Jalur Nugraha Ekakurir (JNE) improved customer satisfaction by 50.08%. Moreover, a study by Sulaiman (2018) on 250 participants at the Islamic bank in Aceh's Province showed that customer relationship

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management positively affects customer satisfaction and loyalty and customer satisfaction, itself, can lead to customer loyalty.

A study targeting 490 participants in Indian hospitals stated that of the influential drivers of customer satisfaction and loyalty is trust. For organizations to cultivate customer satisfaction, they need to gain their trust which will eventually be translated into customer loyalty and better retention (Sethi, 2021).

TABLE 1. CRM Impact on Satisfaction

Author (year)	Population	Type of technology	Result
Moudud-UI-Huq et al (2021)	328 respondents (Tourists)	CRM	CRM has Positive impact on SATIS
Abekah-Nkrumah et al (2020)	788 patients	CRM	CRM has Positive impact on SATIS
Sofi et al (2020)	176 hotel customers	CRM	CRM has Positive impact on SATIS
Kumar & Misra (2020)	308 employees	CRM	CRM moderator of organizational learning and SATIS
Joo et al (2018)	222 university students	Massive Open Online Courses	Satisfaction has positive impact on BI
Sharma et al (2014)	408 citizens	E-government	SATIS affects technology use
Palm et al (2006)	324 (Physicians, nurses, and secretaries)	Clinical information system	IT use affects SATIS
Hassan et al (2015)	100 Banking employees	CRM	CRM use enhances SATIS
Mithas et al (2006)	300 U.S firms	CRM	CRM use enhances SATIS
El Sheikh et al (2020)	150 hotel customers	CRM	CRM use enhances SATIS
Musnadi (2020)	250 bank employees	CRM	CRM influences SATIS

SATIS: Satisfaction

Source: Extracted from different literature

3. RESEARCH HYPOTHESIS

Researches targeting CRM use in healthcare institutions in Lebanon is still under investigation. To provide the market and academics with an insight about patients' satisfaction in adopting CRM in Lebanese healthcare, the paper will answer the below hypothesis:

H1: CRM use impacts patients' satisfaction

H0: CRM use does not impact patients' satisfaction

4. RESEARCH METHODS

To meet the paper objectives, primary and secondary data was collected. Secondary data was collected through accessing various databases and online resources and articles. Primary data was accumulated through distributing a questionnaire on 500 patients available in different Lebanese hospitals. The data was collected between October 2021 and February 2022 through visiting hospitals and physicians' clinics; therefore, the sampling was a non-probability sampling method. Four scale items are used for CRM use and 2 scale items are used for satisfaction. Questions asked followed a literate scale where "1" is strongly disagree, "2" is disagree, "3" is neutral, "4" is agree, and "5" is strongly agree. The data collected was then quantitatively analysed using descriptive and regression analysis.

5. FINDINGS

Descriptive Statistics

 Age, Gender, and Education

TABLE 2. DEMOGRAPHIC INFORMATION

Gender	Male	38% (188)
	Female	62% (312)
Age	18-27 years	7% (37)
	28-37 years	14% (68)
	38-47 years	28% (139)
	48-57 years	31% (154)
	Above 58 years	20% (102)
Education	School level education	30% (148)
	University level education	59% (298)
	Not educated	11% (54)

Source: Author

 Customer relationship management enhances communication with healthcare practitioners (X1)

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TABLE 3. CRM ENHANCES COMMUNICATION WITH HEALTHCARE PRACTITIONERS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	75	15.0	15.0	15.0
	Agree	315	63.0	63.0	78.0
	Strongly agree	110	22.0	22.0	100.0
	Total	500	100.0	100.0	

Source: Generated by SPSS

The above table indicates that 22% (110) strongly agree and 63% (315) agree that customer relationship management enhances communication with healthcare practitioners while 15% (75) were neutral and none disagreed on the significant effect of CRM on enhancing communication with healthcare practitioners.



Customer relationship management enhances my trust towards healthcare institutions (X2)

TABLE 4. CRM ENHANCES PATIENTS' TRUST

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	20	4.0	4.0	4.0
	Neutral	150	30.0	30.0	34.0
	Agree	270	54.0	54.0	88.0
	Strongly agree	60	12.0	12.0	100.0
	Total	500	100.0	100.0	

Source: Generated by SPSS

As conveyed by table 4, 12% (60) strongly agree and 54% (270) agree that the use of customer relationship management improves patients' trust with the healthcare institution while 30% (150) were neutral and only 4% (20) disagree that CRM enhances patients' trust with healthcare institutions.



Customer relationship management is an efficient tool to track my health record (X3)

TABLE 5. CRM AS AN EFFICIENT TOOL TO TRACK PATIENTS' HEALTH RECORD

		Frequency	Percent	Valid Percent	Cumulative Percent
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Valid	Neutral	55	11.0	11.0	11.0
	Agree	245	49.0	49.0	60.0
	Strongly agree	200	40.0	40.0	100.0
	Total	500	100.0	100.0	

Source: Generated by SPSS

As seen in the above table, 40% (200) strongly agree and 49% (245) agree that customer relationship management is an efficient tool to track the patients' health record. While only 11% (55) showed to be neutral in their opinion and none of the patients disagree about the importance of CRM in tracking their health record.

 *Customer relationship management improves the quality of healthcare service (X4)*

TABLE 6. CRM EFFECT ON SERVICE QUALITY

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	90	18.0	18.0	18.0
	Agree	365	73.0	73.0	91.0
	Strongly agree	45	9.0	9.0	100.0
	Total	500	100.0	100.0	

Source: Generated by SPSS

Table 6 showed that 9% (45) strongly agree and 73% (365) agree that customer relationship management improves the quality of healthcare service while 18% (90) were neutral and none disagree on the importance of CRM in improving the quality of healthcare services.

 *The use of CRM is satisfying to me (Y1)*

TABLE 7. THE USE OF CRM IS SATISFYING

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	30	6.0	6.0	6.0
	Agree	405	81.0	81.0	87.0
	Strongly agree	65	13.0	13.0	100.0
	Total	500	100.0	100.0	

Source: Generated by SPSS

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According to table 7, 13% (65) strongly agree and 81% (405) agree that customer relationship management improves patients' rate of satisfaction while 6% (30) had a neutral opinion.

 *The service quality affects patient satisfaction (Y2)*

TABLE 8. SERVICE QUALITY EFFECT ON PATIENTS' SATISFACTION

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	385	77.0	77.0	77.0
	Strongly agree	115	23.0	23.0	100.0
Total		500	100.0	100.0	

Source: Generated by SPSS

As shown in the above table, 38% (115) strongly agree and 62% (385) agree that the quality of service affects their rate of satisfaction. None of the participants disagree on the relationship between the quality of service and satisfaction rate.

TABLE 9. DIFFERENT CONSTRUCTS DESCRIPTIVE STATISTICS

		X1	X2	X3	X4
N	Valid	500	500	500	500
	Missing	0	0	0	0
Mean		4.07	3.74	4.29	3.91
Median		4.00	4.00	4.00	4.00
Std. Deviation		.605	.717	.653	.512
Variance		.366	.513	.427	.262
Range		2	3	2	2
Minimum		3	2	3	3
Maximum		5	5	5	5

Source: Generated by SPSS

As shown in table 9, different constructs have a different mean. This is explained as following: For X1, the mean is 4.07 which falls in the agree category. For X2, the mean is 3.74 which falls in the neutral category. For X3, the mean is 4.29 which falls in the agree category and for X4, the mean is 3.91 which falls in the neutral category.

TABLE 10. VARIABLES DESCRIPTIVE STATISTICS

	Mean	Std. Deviation	N
Patient Satisfaction	4.1500	.38444	500
CRM Use	4.0025	.56236	500

Source: Generated by SPSS

In table 10, for patient satisfaction variable, the mean is 4.1500 which falls in the agree category. For CRM use variable, the mean is 4.0025 which falls in the agree category.

Regression Analysis

TABLE 11. Correlations

		Patient Satisfaction	CRM Use
Pearson Correlation	Patient Satisfaction	1.000	.815
	CRM Use	.815	1.000
Sig. (1-tailed)	Patient Satisfaction	.	.000
	CRM Use	.000	.
N	Patient Satisfaction	500	500
	CRM Use	500	500

Source: Generated by SPSS

TABLE 12. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.815 ^a	.664	.664	.22292

a. Predictors: (Constant), CRM Use

Source: Generated by SPSS

TABLE 13. ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	49.002	1	49.002	986.070	.000 ^b
	Residual	24.748	498	.050		
	Total	73.750	499			

a. Dependent Variable: Patient Satisfaction

b. Predictors: (Constant), CRM Use

Source: Generated by SPSS

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TABLE 14. Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.920	.072		26.765	.000		
	CRM Use	.557	.018	.815	31.402	.000	1.000	1.000

a. Dependent Variable: Patient Satisfaction

Source: Generated by SPSS

The regression analysis has been conducted to test the relationship between the variables, and to validate the research hypothesis based on a margin error of 5%. It can be noticed that information Patient Satisfaction (0.000) is significant since it scored a level lower 0.05.

This means that the alternative hypothesis is accepted and the null hypothesis are rejected.

$$Y = A + BX1$$

$$\text{Patient satisfaction} = 0.000 + 0.815 \text{ CRM Use}$$

This means that:

- For every 1% increase in CRM Use, Patient satisfaction will increase by 81%.

Reliability Statistics

Reliability statistics is conducted on the measurement items used for CRM use and satisfaction.

For the 4 CRM use measurement items, Cronbach's alpha is 0.920 which is greater than 0.5, thus they are reliable (table 15).

For the 2 satisfaction measurement items, Cronbach's alpha is 0.772 which is greater than 0.5, they are reliable (table 16).

TABLE 15. Reliability Statistics For CRM Use

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.920	.926	4

Source: Generated by SPSS

TABLE 16. Reliability Statistics For Satisfaction

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.772	.772	2

Source: Generated by SPSS

6. CONCLUSIONS

In this study, customer relationship management showed to be acceptable by Lebanese patients as it enhances their satisfaction. Most of the respondents were educated which can reflect their understanding of what CRM is when explained to them. Lebanese patients see that CRM can enhance their communication with various healthcare institutions and practitioners; in addition to its ability to build a trustworthy relationship with them. Lebanese patients believe that CRM is an efficient tool to track their health record and with the positive perception of CRM, Lebanese patients stated that CRM enhances the service quality which will improve their satisfaction towards the healthcare institution and its staff and eventually lead to customer loyalty. This result was supported by Nkrumah et al (2020) Harryani et al (2017), and Sulaiman (2018). Therefore, Lebanese patients has the intention to use CRM in healthcare. Moreover, respondents revealed that service quality enhances satisfaction and CRM is available to improve healthcare services, they also stated that CRM is satisfying. As supported by literature, this research proved that CRM use by Lebanese patients influences satisfaction. Thus, although most Lebanese healthcare institutions and healthcare practitioners don't apply all CRM strategies, they should seriously consider the application of CRM to improve their communication with their patients, enhance the service provided, and improve their satisfaction. CRM application can be used as mean of differentiation to attract patients and maintain their loyalty.

On the other hand, limitations of the study exist. One limitation is the sample size as 500 patients can't accurately reflect the opinion of a whole country. In addition, further research should be conducted gathering the opinion of healthcare staff to analyse the opportunities and challenges of use of CRM in Lebanon.

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