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### Study on the Effectiveness of Healthcare Software Used By the Doctors during the Pandemic

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Abstract: In this project, we describe some of the key observations resulting from our work on using Bajaj Finserv Health DoctorRX platform to help and detect effectiveness of PMS (Practice Management system) processes and usage of platform among doctors. In many ways, medical processes are similar to distributed systems in their complexity and proneness to contain errors. We have been investigating the application of a DoctorRX platform for improvement and to make approach the medical processes in much easier way and so that it is subjected to rigorous analyses. The technologies we applied helped improve understanding about the processes and led to the detection of errors and subsequent improvements of the platform. This work is still preliminary, but is suggesting new research directions for improvement, and effectiveness of platform along with, and the applicability of this available system. Doctors have one of the most demanding jobs in the world - structuring up treatment plans, attending to patients, charting the job plan, clerical work, and keeping updated with the most recent advancements in the field of medical technology. Doctors are our marvel workers on this planet Earth and sure seem to have their hands full at all given times. However, with the coming up of modern technology encircling all aspects of life, it is no revelation that there are a numerous time-saving expedient software for doctors like Practo, pMD. Prescription pad, etc., In this project, Doctor RX platform has been taken into consideration to understand in depth the process that is carried out.

Keywords: Bajaj Finserv Health, Doctors and Pandemic

#### **INTRODUCTION**

Bajaj Finserv doctor Rx platform, a part of Bajaj finance Limited, is an Indian financial services company focused on lending, asset management, wealth management and insurance. The company employs over 20,154 employees at 1,409 locations, and is engaged in consumer finance businesses, life insurance, general insurance and health care. Apart from financial services, Bajaj Finserv was ranked among The Economic Times 500 as 119 in 2014. Bajaj Finance Limited (BFL), participates in the financial business and is a company listed on The Stock Exchange, Mumbai (BSE) and the National Stock Exchange. Our Bajaj Finserv doctor RX platform provides Tele-Consultation, Consultation Prescriptions, Tele-medicine Guidelines, Appointment, Quick View Queue Management Dashboard, Patient Records, Medical Background, Timeline view, Consultation, Tags & Buttons Powered by save medical notes, Communications and Billing, Bajaj Finserv Health Doctor is a safe & secure platform providing easy patient management, digital prescription, appointment booking and online consultation. Tracking patient reports and managing fees was never so fast, easy & reliable.



#### STATEMENT OF PROBLEM

To analyze the effectiveness of Bajaj Finserv Health care software and innovation as a tool of achieving competitive advantage in clinics by online mode. This research was conducted in India. Doctor RX is a simple yet effective tool for doctors, physicians, and medical administrators. The tool is designed for seamless

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management of clinics and various verticals of hospitals. All the medical records are stored on a cloud that helps doctors access the patient's history anytime. They can further prescribe medication or order investigations based on the retrieved information.

#### **OBJECTIVE OF THE STUDY**

Primary objective

• To study the effectiveness of healthcare software used by the doctors during the pandemic.

#### Secondary objective

- To analyze the factors influencing the doctors to use the healthcare software.
- To examine the role of healthcare software in assisting the Doctors in various tasks.
- To analyze the level of satisfaction of the Doctors with the software.

#### SCOPE OF THE STUDY

- This project will aid the organization in determining the quality of the service they offer.
- This research would inform the organization about the service's uniqueness as well as the support they offer.
- This research will give the company information about the nature of work.

#### **RESEARCH METHODOLOGY**

This section describes the methodology followed in the present study. It includes details of collection of data, processing data and analysis of data using various statistical tools. The study requires both primary and secondary data. Primary data was taken by using a questionnaire. Simple random sampling technique is followed for collecting primary data from the respondents.

#### SOURCES OF DATA

Both primary and secondary data is used for the study.

#### DATA COLLECTION

This study is based on both primary and secondary data. Primary data was collected from the respondents directly with the help of a structured questionnaire. Secondary data was collected from books, journals and websites.

#### **Primary data:**

Structured questionnaire was prepared for the purpose of collection of primary data from the respondents. The questionnaire was prepared in simple and understandable way as to express their view of opinion freely.

#### Secondary data:

Secondary data was collected through magazines, journal newspapers and various websites.

#### SAMPLING

Sample unit: In this research the sampling unit was the customers who have been using Bajaj Finserv Health Doctor.

**Sample Technique:** Convenient sampling technique was adopted for the study. **Sample size:** A sample of 200 respondents was included for the study purpose. **Statistical tools:** Percentage analysis, Chi-square analysis and One-way ANOVA.

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#### LIMITATION OF THE STUDY

- The study is only confined to the clients of the company.
- The time spent was limited due to the exhaustive study which could not be conducted.

Demographic profile	Particulars	Number of Respondents	Percentage
	Male	151	75.5
Gender	Female	49	24.5
	Total	200	100
Patient footfall per day	1 to 5	5	2.5

#### DATA ANALYSIS & INTERPRETATION

	6 to 10	24	12
	11 to 15	67	33.5
	16 & above	104	52
	Total	200	100
	Urban	2	1
	Suburban	3	1.5
Doctor serving under which type of areas	Rural	20	10
of areas	Metropolitan	175	87.5
	Total	200	100

They have highest number of male responds with 75.5%.52% of the respondents said that they have 16 and above footfalls per day to their clinics, 33.5% of them said 11 to 15 footfalls, 12% of them said that 6 to 10 footfalls and 5% of them said that they have 1 to 5 footfalls per day. urban, suburban and rural areas there were lower range of users and in metropolitan area more number of users are using the platform with 87.5%.

Satisfaction level	Number of Respondents	Percentage
Highly Satisfied	62	31
Satisfied	91	45.5
Neutral	47	23.5
Dissatisfied	0	0
Highly Dissatisfied	0	0

Around 31% of the users are highly satisfied, 45% users are satisfied, and 24% users are neutral. The satisfied user rate is higher in the analysis.

#### Satisfaction level for the mentioned modules (EMR Module)

Satisfaction level	Number of Respondents	Percentage
Highly Satisfied	82	41
Satisfied	57	28.5
Neutral	55	27.5
Dissatisfied	5	2.5
Highly Dissatisfied	1	0.5
Total	200	100

41% are highly satisfied, 29% are satisfied, 28% are neutral, 3% are dissatisfied and 1% are highly dissatisfied. Most of the users are highly satisfied with the EMR module option in the platform.

Satisfaction level for the mentioned modules (Invoice)

S.No	Satisfaction level	Number of Respondents	Percentage
1	Highly Satisfied	66	33
2	Satisfied	85	42.5

3	Neutral	46	23
4	Dissatisfied	3	1.5
5	Highly Dissatisfied	0	0
	Total	200	100

33% are highly satisfied, 43% are satisfied, 23% are neutral, 1.5% are dissatisfied. It is understood that the users are satisfied with the invoice option in the platform.

#### Satisfaction level for the mentioned modules (OPD plan)

S.No	Satisfaction level	Number of Respondents	Percentage
1	Highly Satisfied	31	15.5
2	Satisfied	88	44
3	Neutral	72	36
4	Dissatisfied	9	4.5
5	Highly Dissatisfied	0	0
	Total	200	100

15.5% are highly satisfied, 44% are satisfied, 36% are neutral and 4.5% are dissatisfied. It is analyzed that 44% are satisfied with the OPD plan.

#### Satisfaction level for the mentioned modules (Tele-consultation)

S.No	Satisfaction level	Number of Respondents	Percentage
1	Highly Satisfied	77	38.5
2	Satisfied	58	29
3	Neutral	60	30
4	Dissatisfied	5	2.5
5	Highly Dissatisfied	0	0
	Total	200	100

38.5% are highly satisfied, 29% are satisfied, 30% are neutral, 2.5% are dissatisfied. It is analyzed that 38.5% users are highly satisfied with the tele-consultation option.

#### Satisfaction level for the mentioned modules (Calendar module)

S.No	Satisfaction level	Number of Respondents	Percentage
1	Highly Satisfied	55	27.5
2	Satisfied	78	39
3	Neutral	63	31.5
4	Dissatisfied	4	2
5	Highly Dissatisfied	0	0
	Total	200	100

27.5% are highly satisfied, 39% are satisfied, 31.5% are neutral and 2% are dissatisfied. It is analyzed that 39% are satisfied with the calendar module from the platform.

S.No	Satisfaction level	Number of Respondents	Percentage
1	Highly Satisfied	56	28
2	Satisfied	98	49
3	Neutral	44	22
4	Dissatisfied	2	1
5	Highly Dissatisfied	0	0
	Total	200	100

Satisfaction level for the mentioned modules (Digital profile)

28% are highly satisfied, 49% are satisfied, 22% are neutral and 1% are dissatisfied. It is analyzed that 49% are satisfied with the digital profile in the platform.

	Satisfaction level for	the mentioned modules	(Mobile Platform)
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S.No	Satisfaction level	Number of Respondents	Percentage
1	Highly Satisfied	75	37.5
2	Satisfied	94	47
3	Neutral	30	15
4	Dissatisfied	1	0.5
5	Highly Dissatisfied	0	0
	Total	200	100

37.5% are highly satisfied, 47% are satisfied, 15% are neutral, 0.5% are dissatisfied. It is analyzed that 47% are satisfied with the mobile platform.

#### MEAN RANK

Level of satisfaction towards various modules with the clinics

Particulars	N	Mean	SD	Rank
Automatic Notification	200	1.93	.736	3
EMR Module	200	1.93	.911	3
Invoice	200	1.93	.786	3
OPD plan	200	2.29	.782	8
Tele-consultation	200	1.97	.888	6
Calendar module	200	2.08	.817	7
Digital profile	200	1.96	.736	5
Mobile Platform	200	1.78	.708	1

The above table reveals about the mean rank for level of satisfaction towards various modules with the clinics were the level of satisfaction was higher with mobile platform of the clinics among the employees (1.78), followed with automatic notification (1.93), EMR Module (1.93), invoice (1.93), digital profile of the clinics (1.96), Tele-consultation of the clinics (1.97),

Calendar module (2.08) and the satisfaction was lower with OPD plan of clinics (2.29) among the employees.

#### Comparison between gender and satisfaction of employees towards invoice raised by the clinic

 $H_01$ : There is no relationship between gender and satisfaction of employees towards invoice raised by the clinic.

Gender * Invoice Cross-tabulation								
		Invoice	nvoice					
		Highly satisfied	Satisfied	Neutral	Dissatisfied	Total		
Gender	Male	46	69	35	1	151		
	Female	20	16	11	2	49		
Total		66	85	46	3	200		

Chi-Square Tests						
	Value	df	Asymp. Sig. (2-sided)			
Pearson Chi-Square	5.574 <sup>a</sup>	3	.134			

The above table reveals that there is no relationship between gender and satisfaction of employees towards invoice raised by the clinic as the level of significance is at 0.134 which is greater than P value 0.05.

#### **ONEWAY ANOVA**

#### Comparison between age and level of satisfaction towards various modules

 $H_02$ : There is a significant difference between age of the respondents and their level of satisfaction towards various modules.

Factors	Age	N	Mean	SD	F	Sig
	Less than 10	53	2.06	.770		.337
	10-20	53	1.91	.714		
Automatic Notification	21-30	40	1.78	.698	1.132	
	More than 30	54	1.93	.749		
	Total	200	1.92	.736		
	Less than 10	53	1.87	1.020		
	10-20	53	1.96	.831		.902
EMR Module	21-30	40	2.00	.961	.192	
	More than 30	54	1.91	.853		
	Total	200	1.93	.911		
	Less than 10	53	2.23	.800		.015
	10-20	53	1.83	.778		
Invoice	21-30	40	1.82	.747	3.551	
	More than 30	54	1.81	.754		
	Total	200	1.93	.786		
	Less than 10	53	2.25	.806		.010
	10-20	53	2.06	.795		
OPD plan	21-30	40	2.32	.764	3.897	
	More than 30	54	2.56	.691		
	Total	200	2.30	.782		
	Less than 10	53	2.08	.895		.738
	10-20	53	1.91	.904		
Tele-consultation	21-30	40	1.90	.810	.421	
	More than 30	54	1.96	.931		
	Total	200	1.96	.888		

Factors						
	Age	N	Mean	SD	F	Sig
	Less than 10	53	2.06	.795		
	10-20	53	2.08	.895		
	21-30	40	2.15	.736	107	0.14
Calendar module	More than 30	54	2.06	.834	.127	.944
	Total	200	2.08	.817		.944
	Less than 10	53	1.89	.751		
	10-20	53	1.91	.658		
Digital profile	21-30	40	2.02	.733	.569	
	More than 30	54	2.04	.800		
	Total	200	1.96	.736		
	Less than 10	53	1.66	.649		
	10-20	53	1.77	.724		.400
Mobile Platform	21-30	40	1.90	.778	.987	
	More than 30	54	1.83	.694		
	Total	200	1.78	.708		

It reveals that there is no significant difference between age and satisfaction of employees towards invoice raised by the clinic (0.015), OPD plan (0.010).

Meanwhile, there is a significant difference between age and satisfaction of employees towards automatic notification (0.337), EMR module (0.902), Tele-consultation (0.738), calendar module (0.944), digital profile (0.636) and mobile platform (0.400).

#### Invoice

The employees who are having less than 10 years of experience (2.23) are satisfied towards invoice raised to the patients by the clinic. Meanwhile, the employees who are having experience between 10-20 years (1.83), between 21-30 years (1.82) and more than 30 years (1.81) are highly satisfied towards invoice raised to the patients by the clinic.

#### **OPD** plan

The employees who are having less than 10 years of experience (2.25) the employees who are having experience between 10-20 years (2.06), between 21-30 years (2.32) and more than 30 years (2.56) are satisfied towards OPD plan.

#### FINDINGS

- The employees who are having less than 10 years of experience (2.23) are satisfied towards invoice raised to the patients by the clinic. Meanwhile, the employees who are having experience between 10-20 years (1.83), between 21-30 years (1.82) and more than 30 years (1.81) are highly satisfied towards invoice raised to the patients by the clinic.
- The employees who are having less than 10 years of experience (2.25) the employees who are having experience between 10-20 years (2.06), between 21-30 years (2.32) and more than 30 years (2.56) are satisfied towards OPD plan.
- The employees who are working with clinic having patient footfall between 1-5 patients per day (2.60) and more than 15 patients per day (2.02) are satisfied towards automatic notification. Meanwhile, the clinic having patient footfall between 6-10 patients per day (1.92) and between 11-15 patients per day (1.73) are highly satisfied towards automatic notification.
- The employees who are working with clinic having patient footfall between 1-5 patients per day (2.80) and between 6-10 patients (2.42) are satisfied towards Tele-consultation. Meanwhile, the clinic having patient footfall between 11-15 patients per day (1.75) and more than 15 patients per day (1.93) are highly satisfied towards Tele-consultation.
- It is found that doctors are more interested in Tele-consultation, invoice, EMR modules and automatic notification rather than OPD plans.

- There are also network issues and delay in the notification which is reducing the affinity rate of the platform.
- The age wise difference is also playing a major role, where the new generation doctors are interested in using the platform and the old generation doctors are concerned about security and privacy and they are more comfortable in using paper and pen culture to document or send prescription to the patients directly.

#### SUGGESTIONS & RECOMMENDATIONS

- Since it is a general specific platform, most of the common terms used by other specialization like dentists, homeopathy or naturopathy are not visible; we should improve the specialization based features in the Platform.
- The platform should introduce specialization as a choice where the doctor can choose from the platform and customize it from their end.
- The platform should be compatible with all the electronic devices and supported in Android and IOS for easier access.
- Doctors should be able to maintain a break track where they can make a timeline to attend the patients online and offline.
- Doctors should be greeted with introduction/welcome kit and provided points or gifts for active engagement.
- Instead of providing offers there should be active schemes where the doctors have the option to add or use it in the platform to engage their patients.

#### CONCLUSION

Research on measuring the effectiveness of healthcare software used by the doctors during the pandemic with reference to Bajaj Finserv health DoctorRX. Patients are reluctant to visit the hospital as a result of the current situation, so they take advantage of the digital network. The doctor is the primary motivator for using the DoctorRX platform. The success of the brand is also one of the considerations urged by the doctor for their buying decision. Overall, it includes the highest privacy policy, enhanced plans, deals and highest frequency in network which will increase the scope of the platform to the doctors and patients.

#### REFERENCES

- 1. Anand V, Carroll AE, Downs SM. Automated primary care screening in pediatric waiting rooms. Pediatrics. 2012;129:e1275-81.
- 2. Arora P. Is the doctor on. In search for users of rural medical diagnostic software in central himalayas? Dev Pract. 2012;22:180–9.
- 3. Avery T, Barber N, Ghaleb M, Franklin BD, Armstrong S, Crowe S. Investigating the Prevalence and Causes of Prescribing Errors in General Practice: The Practice Study (Prevalence and Causes of Practicing Errors in General Practice) A Report for the GMC. 2012 May;:1–259.
- Prof. Shweta Jain. (2017). Design and Analysis of Low Power Hybrid Braun Multiplier using Ladner Fischer Adder. International Journal of New Practices in Management and Engineering, 6(03), 07 - 12. https://doi.org/10.17762/ijnpme.v6i03.59
- Prof. Bhushan Thakre, Dr. R.M Thakre. (2017). Analysis of Modified Current Controller and its Implementation in Automotive LED. International Journal of New Practices in Management and Engineering, 6(04), 01 - 06. https://doi.org/10.17762/ijnpme.v6i04.60
- Prof. Deepanita Mondal. (2018). Analysis and Evaluation of MAC Operators for Fast Fourier Transformation. International Journal of New Practices in Management and Engineering, 7(01), 01 - 07. https://doi.org/10.17762/ijnpme.v7i01.62
- Prof. Arun Pawar, Mr. Dharmesh Dhabliya. (2018). Intelligent Modulation Recognition System and its Implementation using MATLAB. International Journal of New Practices in Management and Engineering, 7(01), 08 - 14. https://doi.org/10.17762/ijnpme.v7i01.63
- 8. Bhambhani R, Bhattacharya J, Sen SK. Digitization and its futuristic approach in prosthodontics. J Indian Prosthodont Soc. 2013;13:165–74.
- 9. Ferrara FM. The standard 'healthcare information systems architecture' and the DHE middleware. Int J Med Inform. 1998;52:39–51.
- 10. Ganesh A, Al-Mujaini A. Electronic medical record system: Have we bitten off more than we can chew? Oman Med J. 2009;24:1–3.
- 11. Gil, D.; Ferrández, A.; Mora-Mora, H.; Peral, J. Internet of Things: A Review of Surveys Based on Context Aware Intelligent Services. Sensors 2016, 16, 1069. Kalem, G.; Turhan, Ç. Mobile Technology Applications in the Healthcare Industry for Disease Management and Wellness. Procedia Soc. Behav. Sci. 2015, 195, 2014–2018.

- 12. Hong, Y.-J.; Kim, I.-J.; Chul Ahn, S.; Kim, H.-G. Mobile health monitoring system based on activity recognition using accelerometer. Simul. Model. Pract. Theor. 2010, 18, 446–455.
- 13. Hovenga E, Garde S, Heard S. Nursing constraint models for electronic health records: A vision for domain knowledge governance. Int J Med Inform. 2005;74:886–98.
- 14. Lyons JP, Klasko S. Introduction of an electronic medical record system into physician practice offices: Why is it so #%! and -ing hard for everybody?-Part II. J Med Pract Manage. 2011;26:342–5.
- 15. Maimbolwa MC, Yamba B, Diwan V, Ransjö-Arvidson AB. Cultural childbirth practices and beliefs in Zambia. J Adv Nurs. 2003;43:263–74.
- 16. Mandl, K.D.; Mandel, J.C.; Kohane, I.S. Driving Innovation in Health Systems through an Apps-Based Information Economy. Cell Syst. 2015, 1, 8–13. Fafoutis, X.; Janko, B.; Mellios, E.; Hilton, G.; Sherratt, S.; Piechocki, R.; Craddock, I. SPW-1: A Low-Maintenance Wearable Activity Tracker for Residential Monitoring and Healthcare Applications. In Proceedings of the EAI International Conference on Wearables in Healthcare, Budapest, Hungary, 14–15 June 2016.
- 17. Masud, M.M.; Serhani, M.A.; Navaz, A.N. Resource-Aware Mobile-Based Health Monitoring. IEEE J. Biomed. Health Inform. 2017, 21, 349–360.
- Salehi, S.A.; Razzaque, M.A.; Tomeo-Reyes, I.; Hussain, N. IEEE 802.15.6 standard in wireless body area networks from a healthcare point of view. In Proceedings of the Asia-Pacific Conference on Communications (APCC), Yogyakarta, Indonesia, 25–27 August 2016.
- 19. Terroso, M.; Freitas, R.; Gabriel, J. Active assistance for senior healthcare: A wearable system for fall detection. In Proceedings of the Iberian Conference on Information Systems and Technologies (CISTI), Lisboa, Portugal, 19–22 October 2013. 31.
- 20. Varshney, U. Pervasive healthcare and wireless health monitoring. J. Mob. Netw. Appl. 2007, 12, 113–127.
- 21. Yang, Z.; Zhou, Q.; Lei, L.; Zheng, K.; Xiang, W. An IoT-cloud Based Wearable ECG Monitoring System for Smart Healthcare. J. Med. Syst. 2016, 40, 286.
- 22. Yoo, J.; Yoo, H.-J. Emerging low energy Wearable Body Sensor Networks using patch sensors for continuous healthcare applications. Annu. Int. Conf. IEEE Eng. Med. Biol. Soc. 2010.
- 23. Zhang, F.; Cao, J.; Khan, S.U.; Li, K.; Hwang, K. A task-level adaptive MapReduce framework for realtime streaming data in healthcare applications. Future Gener. Comput. Syst. 2015, 43–44, 149–160.