



Impact of the Leadership in Managing the Quality of Care: A Comparative Analysis of Healthcare in Qassim Saudi Arabia

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ABSTRACT:

The aim of this paper was to find the relationship between leadership and its impact on quality of healthcare. Survey approach using questionnaire was used for data collection. Population of the study was from Qassim health sector employees. A total of 200 completed questionnaires were collected back and used in the analysis in this study. Correlation analysis and regression analysis were used to test hypotheses. It was found that all the predictors and criterion have moderate and positive relationship. Likewise, there is significant impact of leadership found on quality of healthcare in Saudi Arabia; finding are consistent with that previous studies. Based on findings, the study suggests that participative style of the leader not only encourage the people to give their input in decision making and formulation of plans but also play greater role in implementation too. Therefore, friendly, accommodative, democratic, encouraging, and liberal work environment may be created by management of the hospitals because such kind of an environment increase the level of performance and advantageous in materializing the predefined objectives of quality management, that also supplements better healthcare outcomes. Future researcher can conduct studies with larger sample to generalize the findings since this study used a small sample size only from one region.

Keywords: Leadership, Managing, Quality of Care, Health Administration, Comparative Analysis.



Introduction

The purpose of health care system is to promote, restore and maintain health in a country whereas, according to World Health Organization "health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." The main responsibility of healthcare system is to ensure healthy life, which is a key for the societal and economic uplift and development. Different philosophies have been recommended by experts to effectively manage the healthcare systems by delivering quality of care up to the satisfaction of the patients. However, adverse events and errors occurred as error is too human, which could not be ignored as they put human life at risk and danger. Despite development of quality and patient safety mechanism and standards and execution of the same, still the quality of health care is a big question in developing countries like Saudi Arabia.

Saudi Arabia is striving hard through visible and dynamic reforms under the leadership of Prince Muhammad bin Salman under the title of vision 2030 not only bringing structural and functional changes but also to improve the quality of clinics, service, and care too. The Saudi ministry of health is holding the administrative and managerial powers and responsible to govern the affairs of the health system in the kingdom being sole regulator. Saudi Central Board for Accreditation of Healthcare Institutions (CBAHI) is the country official agency which is authorized for grant of accreditation certificates to public and private healthcare facilities that are operating in Saudi Arabia. The primary role of CBAHI is setting of the healthcare quality and patient safety standards. All healthcare facilities are evaluated for evidence of compliance against these standards. Efforts have been made to streamline the health care facilities and to conform to the standards of quality, however, it has been observed by several studies that there are several organizational, managerial, human, and technical issues due to which implementation of quality systems in hospitals is yet to be achieved. Implementation of the quality standards is largely dependent on the knowledge, vision, approach, ability, capability, and commitment of the leadership of the hospitals, however, unfortunately, Saudi system of health lacks effective leadership (Gul Afshan, Mughal, & Kundi *et al.*, 2021). Healthcare facilities are run by the expatriates either in the form of physicians or nursing staff, though administrative offices are occupied by the local people, however, they lack the vision to transform the conventional health care system into a dynamic, vibrant, and modern state-of-the-art health facility. Researchers have identified leadership style/approach, organizational culture, quality awareness as key critical success factors for effective management of quality in healthcare (Albejaidi, Kundi, & Mughal, 2020). This study was aimed to look into the impact of the leadership in management of quality care of health in Saudi Arabia. Further, the study was conducted to identify the issues and the contextual fabric of the healthcare organizations in Saudi Arabia with reference to the quality care efforts and to build up knowledge and command in research with regard to quality of care and addressing the issues in implementation of the quality of care in my home country.

This comparative study is significant in the background of Kingdom of Saudi Arabia as there is dearth of empirical research in this important area of healthcare. The leadership in the hospitals is though not ignorant; however, their perception towards creation, development and implementation of quality culture and quality mechanism demands more of their interest, attention, and support to achieve the goals of quality healthcare. This study focused on the impact of the leadership in management of quality care of health: A comparative analysis of the Buraydah General Hospital and King Fahd Specialist Hospital in Qassim Saudi Arabia. Moreover, the empirical evidence will set guidelines to the policy makers and decision-making authorities to incorporate the findings of the study to further improve the quality of care and reduce the adverse events and medical errors, by improving the quality of care through the gaps identified. As the adverse events and medical errors in healthcare jeopardize patient trust and confidence on one hand which is deeply rooted in the structure and function of systems results into failures, likewise, on other hand, the improvement in patient safety is also imperative for changes in the existing systems by overcoming the issues and challenges for example, eradicating the predominant culture of blaming the individual health-workers for these errors. Emphasizing on the individual blames, employees' ignores, and often play-down weaknesses of the system thereby dampens the reporting of errors. Therefore, limits the ability of the leadership to analyze them and, most significantly, thwart them from happening once more. With this background, thus the problem statement of this study was "What is the impact of the leadership in management of quality care of health: A comparative analysis of the Buraydah General Hospital and King Fahd Specialist Hospital in Qassim region of Saudi Arabia".

Literature Review

Healthcare institutions like hospitals are established to deliver high quality healthcare services to promote, restore and maintain health of the sick, ill and injured. Satisfaction of the patient should be the pivot as American marketing association-defined customer/ patient as a king; therefore, all efforts could be made towards development of patient-centric policies, programs and services to satisfy the patients from the health services they avail from the hospitals. It is high time to modernize the hospitals by transforming them from conventional practices to the technology driven state-of-the-art quality of care. This demands not only paradigm shift in the structure, policies, programs, and decision rather the whole mind set from rigid to the more flexible and democratic environment. The prerequisite for this new approach based on the principles of total quality management is development of the hospital leadership towards working in more transparent, collaborative work environment and the participation and involvement of the staff of the hospitals, physicians, paramedics as well as the patients and their relatives in designing and developing and evaluation of the of the services (Kundi, 2022). Healthcare leaders both generalists and specialists in health administration play instrumental role in the success or otherwise failure in materializing the goals of patient satisfaction through quality of care and ensuring the patient safety. Their role becomes more critical when the aim of the organization is to bring more efficiency and effectiveness in healthcare service delivery as they use the organizational resources therefore, they need to devise the strategies to align the resources with the objectives, which is imperative to create a true quality culture in healthcare institutions of the developed world as well as developing countries like Kingdom of Saudi Arabia in particular.

Though the high rate of adverse events related to the medical errors is reported by the Institute of Medicine's (Kohn *et al.*, 2000) is not acceptable to citizens in developed and the developing world however, 'Err is to Human' is a well reported phrase known to the healthcare providers. Likewise, several studies have focused on the medical errors considering it as the most serious challenging for the healthcare researchers and providers, they further report that increasing rate of adverse events with regard to medical errors demands more attentions and resources from the healthcare systems in order to ensure quality of care (Kundi, 2021; Malik, Cao, Mughal, Kundi, Mughal, & Ramayah, 2020). This is why the researchers throughout the world agree that culture of quality in health organizations is a critical factor which needs the support of top leadership and an environment that could help in prevention of the occurrences of the medical errors during patient-care services (Al-Ahmadi, 2005). Research points that organizational culture has significant impact on quality of care (Singer *et al.*, 2003; Scott-Cawiezelle *et al.*, 2006). The mentioned studies investigated the impact of leadership and their culture in implementation of the quality standards in healthcare organizations by discussing the important role played by the leaders through their influence on the ability of their organizations to unfold the medical errors and the relevant opportunities to further the improvement in medical care services rendered by the healthcare institutions. Though, it has been found by studies that leaders in these organizations consider quality of care as priority of the organizations, however, on the other hand, still employees in these healthcare organizations have been found with expressing concerns continuously about the actual priorities and practices they are experiencing in their daily operations (Kundi, Mughal, Albejaidi, & Pasha, 2021). The Saudi health system was established since the birth of Kingdom through a Royal decree to ensure the delivery of all-inclusive health care throughout the Saudi Arabia in a just, systematized, and cheap way. In 2017, there were 1,848 primary health care centers and the total number of hospitals was 200. The Ministry of Health (MoH) budget increased from 2.8% of the total National budget in 1970 to 6.4% in 2004. In 2006, there were 20.4 doctors and 35.4 nurses per 10,000 population (Health Statistical Yearbook, 2017).

Saudi Arabian health system is in the process of transformation from the conventional to the quality and digital based healthcare system. The government of Saudi Arabia has developed a National transformation Plan of health sector 2020 under the vision of 2030. Since then, health sector of Saudi Arabia is endeavoring to improve the quality of care through developing the quality culture and execution of total quality management systems. The aim of this study is to investigate the extent to which the quality of care is influenced by the management and leadership of the Saudi healthcare organizations. A recent study, reports that 60% of the respondents in Riyadh region showed their satisfaction with as excellent/good, 33% ranked it as acceptable and 7% perceived it as poor or failing for overall

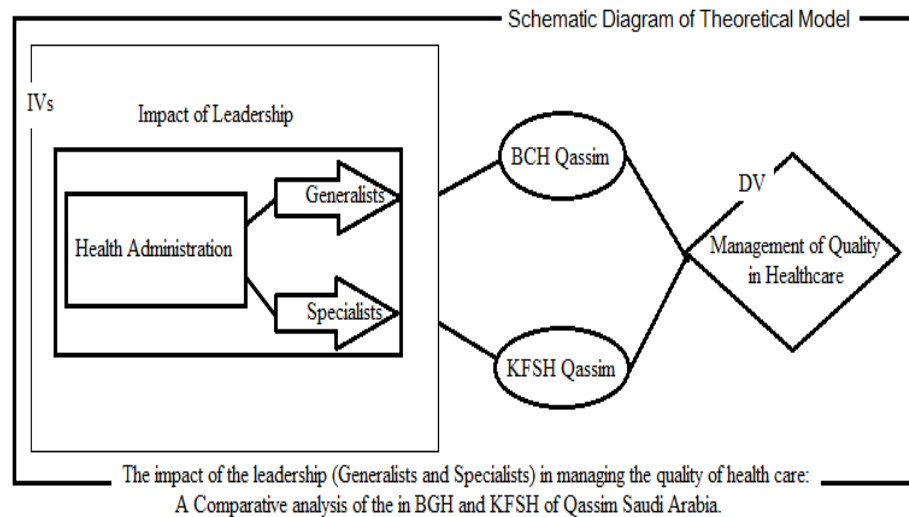
patient safety (Al-Ahmadi, 2005). The study further points that leadership ignore the issues in implementation of the quality standards that occur time and again, however, organizational learning/continuous improvement, and teamwork within units, feedback and communication about errors were reported that need further improvement in the organizational quality systems. Therefore, to develop culture of quality of care the Saudi healthcare organizations will be expected to improve and enhance the organizational, managerial, human, and technical mechanisms in order to jettison the fear of blame and build an environment of uncluttered communication and uninterrupted learning to reap the fruits of quality-based care and satisfaction of the patients.

Theoretical Framework

The below schematic diagram of the theoretical model of the study is based on the research variables of the study in hand. This model explains the association/relationship among the independent variables (IVs) and a dependent variable (DV) (Correlation analysis) and also explain the impact of the independent variables and demographic characteristics of the respondents along with the role of mediating variables (MVs) on the dependent variable (regression analyses and test of significance i.e. t-test and ANOVA).

Figure 1

Schematics Diagram of the Theoretical Framework



Proposed Hypotheses of the Study

Based on the review of the previous studies, and the theoretical model of the study, the researcher has proposed the below main hypothesis, which were further divided into sub-hypotheses in the subsequent large-scale study:

- H₁: All IVs, MVs and DV are mutually correlated with one another.
- H₂: Predictors have positive and significant impact in prediction of the criterion variables.
- H₃: The demographics of the leadership have positive and significant impact on the IVs and DV.

Method

The survey approach is the most widely used mode of observation in the social sciences for data collection (Babbie, 1993: 256-257). The survey research enables the researcher to assemble every kind of data to answer every question about the topic (Yin, 1994:6). Given the human and social nature of the topic, the researcher employed survey approach since surveys are the best tools to measure attitudes and behavioral orientations in a large population

(Sekaran, 2004: 257). The Buraydah Central Hospital and King Fahd Specialist Hospitals were selected for data collection of the study. A survey questionnaire was administered in these hospitals among the healthcare professionals including health physicians, nurses, technicians, administrators, and medical staff. As population of the study was finite in nature, therefore, sample size was determined through a statistical formula $n = \frac{\sigma^2}{(E^2/Z^2 + \sigma^2/N)}$ for finite population developed by Weiers (1984:126). A pilot study was also conducted to determine the sample size with 95% confidence level, generally accepted and used in social science research, which equals 1.96 z-values. Sample size was 179. To investigate the issue under study, a structured questionnaire on 5-point Likert scale ranging from Strongly Agree, Agree, 3. Neutral, 4. Disagree and 5. Strongly Disagree (SDA to DA, Neutral, AG and SAG) was used in pilot as well as subsequent study. To check the photometric properties (Nunnally, 1978) and reliability of the scale, the instrument was measured through Cronbach alpha test suggested by (Cronbach, 1951), whereas minimum threshold value generally acceptable in social science research is 0.7 and better if above. Both descriptive and inferential analysis were done through SPSS 21. Frequencies were obtained and cross tabulation were used for descriptive analysis besides measures of central tendency and measures of dispersion. T-test, ANOVA were run respectively for test of significance and mean difference between two or more groups, while Pearson correlation coefficient and stepwise regressions were employed to understand the relationship, and impact among and on the independent variables and dependent variable of the study.

Findings

Reliability Analysis

The reliability and internal consistency of the instrument was checked through Cronbach alpha in SPSS 21. The results given below illustrate the overall alpha score (.84) that is above the threshold value of .06, thus it was considered that instrument is reliable and consistent to accurately measure responses. The core is consistent with that of Nunnally (1978), who has recommended the minimum acceptable value as 0.6. The aim of calculating the Cronbach's alpha is to assess its generalizability and acceptability since reliability analyses give a lower-bound for reliability of the scale.

Table 1

Cronbach alpha Score

Items	Statements	Cronbach alpha
4	55	.841

Descriptive Statistics

The below table illustrates the characteristics of the sample respondents. The measures of central tendencies, measures of dispersion, minimum, maximum and standard error were also obtained using descriptive statistics to recognize the character of each variable. The variables included Leadership Style/approach (LSA), Organizational Culture (OGC), Quality Awareness (QTA) and Management of Quality in healthcare (MQH).

Table 2

Descriptive Statistics

	n	Min.	Max.	Mean	SD
	Statistic	Statistic	Statistic	Statistic	SE
LSA	200	2	5	4.88	.057
OGC	200	1	6	4.03	.039
QTA	200	1	4	3.54	.041
MQH	200	2	4	3.72	.054
Valid n (list wise)	179				

Hypotheses Testing

The proposed hypotheses were tested by relevant tests i.e. person correlation coefficient, multiple regression, t-test and ANOVA.

Association/Relationship b/w IVs and DVs

H₁: All IVs and DV are mutually correlated with one another. To test the relationship between the independent and dependent variables, the researcher has used correlation coefficient analysis, the results are presented in the below table.

Table 3
Correlation Coefficient Analysis

		LSA	OGC	QTA	MQA
LSA	r	1	.545**	.534**	.493**
OGC	r	.545**	1	.548**	.479**
QTA	r	.534**	.548**	1	.591**
MQA	r	.493**	.479**	.591**	1

** . n= 179, correlation is significant at the 0.01 level (2-tailed).

It is a clear from the above-mentioned results concerning association between the IVs and DVs of the study, that positive and significant association exist between the predictor and criterion variable of the study with 0.000 p-value giving 100% significance of the relationship. Therefore, it is concluded that dependent variable of the study is highly correlated with all the independent variables. Thus, based on the results, therefore, we have accepted our hypothesis as true and substantiated. This implies that both in the case of Saudi Arabia and Australia, people have similarly of perception, based on this findings, it is inferred that leadership style/approach, organizational culture, quality awareness essentially play significant role in achieving the goals of effective quality management in healthcare system.

Impact of Predictors on the Criterion Variables

H₂: The second hypothesis was proposed to understand the impact of independent variables over the dependent variable. It was hypothesized that “the predictors have significant positive impact on the criterion variables”. Multiple regression analysis test was run, below tables highlights the results for hypothesis 2:

Table 4
Model Summary of Regression Analysis

Model	R	R ²	Adjusted R ²	Std. Error of the Estimate
1	.741 ^a	.74	.055	.33148

a. Predictors: (Constant), LSA, OGC, QTA, MQA

Table 5
ANOVA of Regression Analysis

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	1.533	4	.391	3.560	.004 ^b
Residual	18.784	175	.108		
Total	20.332	176			

a. *Dependent Variable: TMORALE*

b. Predictors: (Constant), LSA, OGC, QTA, MQA

Table 5
Coefficient of Regression Analysis

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.855	.203		14.587	.000
	LSA	.020	.028	.053	.255	.006
	OGC	.019	.056	.043	.164	.001
	QTA	.054	.058	.094	.947	.005
	MQA	.086	.045	.194	1.848	.043

a. Dependent Variable: Management of Healthcare Quality

The results from the multiple regression analysis in above tables bring into fore that predictors of the study significantly positively predict variation in the criterion variable, that are explaining 74% ($R^2 = .74$) of variation in the management of healthcare quality with 3.560 F value at .004 level of significance. Furthermore, the Beta values for LSA and OGC are greater than the QTA and MQA respective p-values as .006 and .001 for LSA and OGC, this means that LSA and OGC have more impacts as compared to QTA. In social sciences including healthcare research we make a decision, we need .050 p-values at 95% level of confidence; thus, R^2 at 74% suggests the acceptance of our second hypothesis.

Tests of Significance

Test of significance is employed to know the significance mean difference in opinion of the two (t-test) or more groups (ANOVA). Since, this study was based on the opinion of two or more groups, therefore, the researcher has used t-test and ANOVA respectively.

H₃: The third hypothesis was to know the significance mean difference between two groups of generalists and specialists in health administration concerning impact of leadership in management of quality in health care. It was assumed that “Generalists are more effective than the specialists in managing the quality of healthcare”.

Table 6
T-test Results

	Healthcare Managers	n	Mean	SD	t-tab	t-cal	Sig
MQA	Generalists	109	4.37	.58	1.960	2.550	.003
	Specialists	91	4.15	.45			

It could be seen from the results in above table that there is significant mean difference between the opinion of generalist and specialists with regard to effective management of quality of care in Saudi hospitals. The mean values respectively stand, as 4.37 for generalist and 4.15 for specialists with .003 p-value, likewise calculated t-value 2.550 is greater than the tabulated value of 1.960. Based on the results, therefore, we accept our H₃. This implies that generalists are playing more effective role in management the quality of healthcare in Saudi hospitals as compared their specialists counter parts. The reason for such results may be that most of the high rank positions in Saudi ministry of health are currently occupied by the generalist that is their role is perceived and considered by respondents, whereas specialists are mostly working in the clinics and wards or specific units, so it has been considered that they are less effective.

H4: It was proposed in the fourth hypothesis that “there is significant mean difference in the opinion of bachelor and master level qualified professional’s with respect to quality awareness. “Since, again there were two groups, so researcher used t-test to know the significance mean deference.

Table 6
T-test Results

Quality Awareness	Master	115	4.22	.56	1.960	2.399	.001
	Bachelor	85	4.34	.51			

The results illustrate the mean difference for both groups respectively 4.22 and 4.34, while values of standard deviation values as .56 and .51 for master and bachelor qualifications with p-value .001. Furthermore, the t-calculated value 2.399 is also greater than the tabulated value of 1.960. Thus, it suggests the acceptance of our hypothesis H₄ that implies that knowledge and qualification play greater role in bringing awareness and developing sense of responsibility among the professionals working in the healthcare sector of Saudi Arabia. This necessitates that more opportunities be provided to the current employees to improve their level of qualification for better understanding of the health systems and quality requirements.

H5: In fifth hypothesis, it was hypothesized that there is significant mean difference in the opinion of physicians and non-physicians for leadership styles / approach, “physicians claim that participative leadership approach of the management is more powerful in implementing the quality systems than the non-participative style. “Again, t-test was used; the table below describe the results of t-test for 5th hypothesis of the study:

Table 7
T-test Results

	Types	n	Mean	SD	t-tab	t-cal	Sig
Leadership Style/ approach	Physicians	49	3.66	.35	1.960	3.340	.005
	Non-Physicians	130	3.18	.34			

The results in table 7 points to significant mean difference between the opinion of the physicians and non-physicians regarding approach or style of leadership. It could be see that mean score for the physicians is 3.56and 3.18 for non-physicians. It evident on the difference, similarly, t-calculated 3.340 is greater than the tabulated value of 1.960 with .005 significance level. Hence, our hypothesis is substantiated and accepted. Therefore, it could be safely infer that participative style of the leader encourage the people to give their input in decision making and formulation of plans but also play greater role in implementation too, thus if work climate is friendly, accommodative, democratic, encouraging and liberal with less retractions and less work pressure, it is expected that this kind of environment increase the level of performance and help achieve the desired goals of quality management in healthcare and result into better outcomes.

H7: In seventh hypothesis, it was proposed that generalists, specialists, and physicians share different views with reference to role of organizational culture of quality. The hypothesis stated that generalists are enjoying high ranks positions, so they have significant impact and play instrumental role in determining the successful of quality programs than the specialists and physicians. As there were three groups of the respondents, therefore, to check the significance of the mean difference, researcher has used ANOVA. Below table illustrates results for the H₇.

Table 8
ANOVA Results

Quality Management of Healthcare					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.852	6	.157	1.283	.002
Within Groups	18.348	174	.135		
Total	20.221	176			

It is evident from the ANOVA table that professional cadre play significant role in determining the success of quality program in healthcare. Based on the results from above table, therefore, the researcher accepts the hypothesis as true and substantiated. The results bring into fore the significance of the role of professional cadre in determining the significant role they could play with p-value .002.

Discussion and Conclusion

Quality of life depends on the quality of care. Quality of care could justify the funds invested in any healthcare facility. Saudi government is generously spending at present in its health sector. The healthcare unit, like two hospitals used as sample in this study has state-of-the-art building and infrastructure and equip with all essentials. It was found that both of these two hospitals are largely dependent on the foreign nationals (physicians, technicians, and paramedics) though the managerial positions are enjoyed by Saudi nationals. Both are trying best to implement the quality standards approved by CBAHI and JCI. However, lack of knowledge, awareness about the significance of quality, patient safety, avoidance of risk and managerial expertise are key issues faced by the administration in effectively managing the quality of service in these hospitals. It was found that leadership style, organizational culture plays more significant role as compared quality awareness with regards to management of quality in healthcare institutions. Likewise, it was found that generalists are playing are more influential and effective in managing the quality of healthcare in Saudi hospitals. It has been observed that specialist is deprived of going up in the organizational hierarchy as high rank positions in Saudi ministry of health are occupied by the generalist. Thus, they are more responsible for deficient quality of management and increased cost of service since specialists are kept limited to clinics and wards or specific units. Furthermore, role of level of qualification was measured, which accounts for significance difference with regard to quality awareness. It has been inferred from the results that knowledge and qualification are key to education of the people responsible for provision of care. More qualification and exposure to knowledge bring greater awareness and develop the sense of responsibility among these professionals. Which suggest increasing the opportunities for the existing employees for improving their level of qualification so that could get better understanding of the health systems and quality requirements. As for as role of physicians and non-physicians is concerned for leadership styles / approach, physicians were of the view that participative leadership approach of the management is more powerful in implementing the quality systems than the non-participative style. This finding of the study was consistent with that previous studies, based on this argument, it has been suggested that participative style of the leader not only encourage the people to give their input in decision making and formulation of plans but also play greater role in implementation too. Therefore, friendly, accommodative, democratic, encouraging, and liberal work environment may be created by management of the hospitals because such kind of an environment increase the level of performance and advantageous in materializing the predefined objectives of quality management, that also supplements better healthcare outcomes. Similarly, the blame is commonly shifted to medical errors, and it is generally believes not to report them frequently since it shakes the trust and confidence of the patients on the attained service. Researchers are of the opinion that to develop a culture of quality, it is equally imperative to develop the culture accepting the responsibility and discourage the practice of buck-passing. Since, this study has identified that generalists, specialists, and physicians share different views with reference to role of organizational culture in achieving the desired level of excellence and quality, therefore, efforts could be made bring harmony and to avoid discord by promoting and encouraging the culture of consensus, cooperation, and coordination for more efficient, effective, transparent, and patient oriented system of healthcare in the hospitals. This on one hand will reduce the cost of the services and win the confidence of the patients on the other.

In future researcher can conduct studies with larger sample to generalize the findings since this study used a small sample size only from one region.

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