



## Patient Satisfaction as a Mediator Between Healthcare Staff Performance and Patient Loyalty in Jordan's Public Health Sector

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### ABSTRACT

**Purpose:** This study aims to demonstrate the importance of patient satisfaction in the relationship between patient loyalty, staff performance, and the staff performance.

**Design / Methodology:** A total of 357 patients from Jordanian government hospitals were required to complete the questionnaires in 11 government hospital in Jordan. Structure Equation Modeling (SEM) used to analyze the collected data.

**Findings:** Findings that providers in government hospital in Jordan are attempting to deliver well improved healthcare services to their customers. Results confirmed that better staff performance to build satisfaction and loyalty among patients. The staff performance (communication and knowledge) are positively related with patient loyalty which is mediated through patient satisfaction.

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### 1. INTRODUCTION.

Our health care encompasses more than just the care we receive from doctors and hospitals; it is a vital aspect of everyone's life, whether or not they are patients. Our main source of social standing for work and survival, health care takes up a significant portion of our life. Given the importance of health care in many people's lives, the level of patient dedication to the services it offers and the issues. Most of healthcare organizations are currently focusing attention on safety culture and environment as a means of improving overall hospital performance (Stock, Mcfadden, & Stock, 2017) of concern must be coordinated throughout the entire procedure. As a result, hospitals and healthcare facilities are essential parts of any well-run, caring community and will unavoidably get social resources. They ought to be safe havens, not just for patients but also for the general public. In healthcare settings, there isn't a single term that captures the essence of what a devoted patient is. As a result, the concept of loyalty is primarily borrowed or modified from other domains, including marketing banking insurance and business. However, there is currently an increasing demand and belief to understand the traits of patient loyalty in the healthcare industry. Prior studies on patient loyalty have mostly focused on customer growth, healthcare benefit earning, and expense control.



The performance and profitability of the business are largely dependent on the loyalty and happiness of its customers. Loyalty requires a methodical procedure and is not always the result of satisfaction. Customers move through several stages, including awareness, exploration, expansion, commitment, and dissolution, which are referred to. One could argue that consumer satisfaction leads to customer loyalty. Customer loyalty results from business customers being satisfied (Fornell 1992). When satisfaction reaches a specific level, client loyalty will rise dramatically; conversely, if satisfaction falls to a certain threshold, consumer loyalty will immediately decrease.

Additionally, customers who are extremely satisfied are more likely to remain loyal than those who are only content. All things considered, it is evident that customer loyalty and customer satisfaction are significantly positively correlated. Sales and profitability both rise as a result of customer loyalty (Chi, 2005).

### **1.2 Research Question:**

**Following question are aimed to be addressed by this study**

- RQ1. How staff performance factors (i.e. communication and knowledge) could effect on patient loyalty and patient satisfaction of government hospital in Jordan?
- RQ2. Is patient satisfaction mediating the relationship between Staff performance and patient loyalty?
- RQ3. Is there any difference/gap in the staff performance dimensions (i.e. communication and knowledge)?
- Q4. How staff performance dimensions (communication and knowledge) relate to patient loyalty?

### **1.3 Research objectives:**

2. To examine the effect of staff performance on patient satisfaction and patient loyalty.
3. To determine the effect patient satisfaction on patient loyalty.
4. To determine the level of staff performance that lead to achieved patient's satisfaction
5. To develop the measurement model of staff performance, patient satisfaction and patient's loyalty
6. To identify the mediation effect of patient satisfaction in relationship Staff performance , patient satisfaction and patient loyalty.

## **2. LITERATURE REVIEW**

### **2.1 Staff Performance**

To improve overall hospital performance, the majority of healthcare companies are currently concentrating on safety culture and environment (Stock, Mcfadden, & Stock, 2017). According to a 2019 study by Adnan & Abdul Latif, employee performance is said to be a major factor in determining the customer satisfaction of Muslim youth. This research was conducted at Malaysian MF hotels. The study's sample consisted solely of Muslims, the majority of whom were students. This does not, however, imply that students' preferences and purchasing power should be disregarded. According to Kim et al.'s (2017) study, the evaluated variables of medical efficacy and service procedure quality had a favorable impact on care effectiveness. While care efficacy had favorably affected satisfaction with the quality of medical services, the impression that facilities and the community leave on patients has a direct bearing on the percentage of satisfaction with interpersonal medical services. However, compared to amenities and surroundings, the quality of treatment has had a greater influence on satisfaction, both directly and indirectly affecting the desire to comeback. Loyalty and a desire to return have a beneficial impact on both treatment effectiveness and satisfaction.

## **2.2 Customer Satisfaction**

Feelings derived from the fulfillment of one's wishes, expectation and need is termed as satisfaction. The business has also concept of satisfaction. By receiving more than or equal than expectation one feels good and motivated, that state is his satisfaction (Hill, Roche & Allen 2007). Customer when pays for the product purchased he makes a standard about the performance of that product. The product performing better than the expectation generates loyal customers. The satisfaction of customers is necessary for a successful organization but the value for employee satisfaction is there to achieve the vision and mission (Banker et al., 2000). The Banker also emphasized that non-financial measures play the game of your goodwill and produce the long term benefits for the organizations. The services sector specially should take good care of the employee satisfaction. In such industry customers interact directly with employees and employee behavior, attitude turns the customer to retain or to leave. And the researches have proved that satisfied employee can satisfy the customer (Johnson, 1996). Patient satisfaction is not having a clearly concept, mostly satisfaction is defined by different individuals as a consequence of varying backgrounds and experiences (Fathi & Al, 2008). Also patients' satisfaction and health market have focus Category examines to how the organization can determine the most requirements, needs, expectations, and preferences of customers or patient and markets. In addition, it examined how the organization builds relationships with customers or patient and determines the key factors that lead to customer acquisition, satisfaction, loyalty, retention, business expansion and sustainability (Hertz, 2006).

## **2.3 Customer loyalty**

Patient loyalty is a critical outcome for hospitals (Bendapudi, Berry, Frey, Parish, & Rayburn, 2006; Platonova et al., 2008). It is suggested that patient loyalty is positively associated with patient health outcomes and hospital financial outcomes. In the marketing literature, loyalty has been shown to increase retention (Yi & Jeon, 2003) and profits (Prentice, 2013). Loyalty is an essential component of any relationship. In industry, loyalty has been described as the strength of the relationship between a customer's relative attitude and repeat patronage (Dick & Basu, 1994). More clearly stated, customer loyalty is "a deeply held commitment to rebuy or repatriate a preferred product or service consistently in the future, despite situational influences and marketing efforts having the potential to call switching behavior" (Oliver, 1997, p. 392). The significance of understanding long-term relationships and customer retention is a common topic in the marketing literature (Grant & Schlesinger, 1995; Payne & Rickard, 1997; F. F. Reichheld & Scheffer, 2000). Therefore, understanding the construct of loyalty is invaluable to researchers and practitioners. The concept of patient loyalty is the adaptation of "customer loyalty" addressed within the scope of general business administration, into the health sector (Bayin & Onder, 2015).

Researchers have posited that loyalty results in two types of behavioral intentions: economic and social. Economic behavioral intentions impact the firm in three ways: volume, cost and price. Social behavioral intentions impact the firm in two ways: word-of-mouth referrals (i.e. positive) and complaints (i.e. negative) (Smith, Bolton, & Wagner, 1999). As a result, loyalty influences purchase behavior (Solvang, 2007). Not surprising, firms value consumer loyalty as it is generally less expensive to maintain existing customers than to attract a new customer (F. P. Reichheld & Sasser, 1990). Loyalty is formed by the impression a product or service leaves. Several studies have demonstrated that satisfaction, quality, and value influence consumer's loyalty to a product or service (Cronin, Brady, & Hult, 2000; Mattila, 2004; McDougall & Levesque, 2000). The development of customer loyalty appears to grow sequentially from the initial perception of reliability and assurance (Griffith & White, 1999). Literature shows that repurchase intent increases with satisfaction levels for individuals who have been customers for longer periods of time (Rust & Williams, 1994) and the strength of the relationship between customer satisfaction and loyalty is strongly influenced by personal characteristics of the customer (Homburg & Giering, 2001). The sequential development of loyalty has been shown to have several mediating variables that modify the relationship between loyalty and behavioral intentions (Homburg & Giering, 2001). In competitive markets, the level of loyalty varies significantly between satisfied and completely satisfied customers (Jones & Sasser, 1995). Customer loyalty is already catching in the seventies of the



20th century. Loyalty has been identified with repeated purchases, later this provision of another and began to look more broadly. Glinkskienė, Kvedaraitė and Kvedaras (2010) Gudynaitė argue that marketing theory of loyalty has long been seen as repeating of a certain brand, product or service purchase that was described as a constant repetitive action by the buyer. In recent years, changes in the definition of loyalty, a debate is growing about the attachment to mark the importance of loyalty, so significant is not only the act but also a psychological reason behind this action Glinskienė, Kvedaraitė, Kvedaras (2010).

Various ways and means a company that its customers can be loyal to the company, the company must continuously maintain and increase the loyalty of its customers. One of the efforts undertaken by the company in building customer loyalty, the company must have a good relationship with the customer so that companies can better understand the needs, desires and expectations of its customers. Even if the company needs it in their business activities always pay attention and give priority to the customer in all activities of the company, so that customers feel overlooked. According to Kotler and Keller (2007) customer loyalty can be defined as a customer commitment to purchase or subscribe again on specific products or services in the future even though there is the influence of the situation and marketing efforts that could potentially cause behavioral changes. Since it is likely that customers could switch your mind to the products and services of other companies due to the intense competition from other companies. However, this is disputed by the opinions Mowen and Minor (1998) which says Loyalty is a condition in which the customer has a positive attitude toward a brand, and has a commitment to the brand and intends to continue the purchase in the future, in other words that the customer which is considered loyal to subscribe or make repeat purchases over a certain period. This opinion has the support of Utami (2006) were found to have committed customer loyalty will buy goods will ignore the needs and activities of competitors who are trying to attract customers. In the opinion of Kotler et al. (2006) that maintains all existing subscribers will generally be more favorable compared to the turn of the customers because the cost of attracting new customers can be five times the cost of retaining an existing customer. Customer loyalties are the loyalty of the customer after the customer experience or feel the service provided by the company. Then the customer will compare expectations with reality perceived.

## **2.4 Staf Performance and Patient Satisfaction**

Employees' performance argues as significant factors in predicting of Muslim youth's customer satisfaction by study of Adnan & Abdul Latif (2019). This study took place in MF hotels in Malaysia. The sample of this study was limited to only Muslims and they were mainly students. However, this does not suggest that students should be ignored in terms of their purchasing power and preference. Kim et al.'s study (2017) found that the assessed variables of medical efficiency and the quality of service procedures had a positive effect on the effectiveness of care. Impression of facilities and the community has had a direct impact on the satisfaction rate of interpersonal medical services, while care efficacy has positively impacted satisfaction with the quality of medical services. Nevertheless, the quality of care has had a more significant impact on satisfaction relative to facilities and the environment, and has indirectly affected satisfaction and directly influenced the desire to revisit. Treatment effectiveness and satisfaction were both positively influenced by the intent to revisit and loyalty.

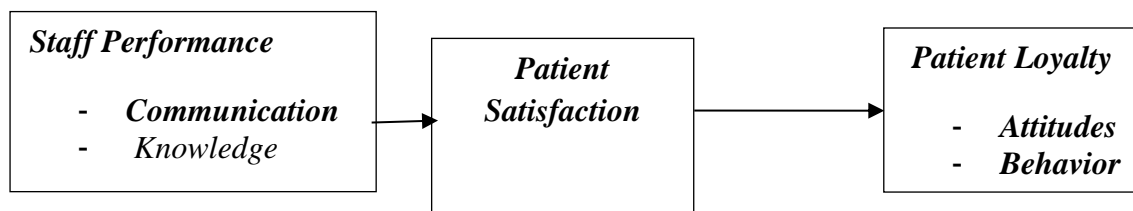
## **2.5 Theoretical framework**

Staff performance, is the independent variables, in this study will support the impact of staff performance by patient satisfaction as a mediating variable on patient loyalty, study of following

support this relation (Setyawan, et al, 2019; Reddy, et al. 2017; Lu, et al, 2017; Astuti & Nagase, 2015; Toyese, 2014; Papa & Tracy, 1987; Snyder & Morris, 1984; Camden & Witt, 1983).

The main relation in this study is the impact of patient satisfaction on patient loyalty, several researches support this relation (Uysal & Yorulmaz, 2020; Vasikarv & Durairaj, 2019; Sitio & Ali, 2019; Hamdan, et al, 2019; Pevec & Pisnik, 2018; Goetz, 2018; Gohain, 2018; Ramli & Sjahrudin, 2015; Ravichandran, 2015; Shabbir, et al, 2014; Astuti & Nagase, 2014; Wong, et al, 2014 Naidu, 2008; Boshoff and Gray, 2004; Dick and Basu, 1994; Parasuraman et al., 1985).

Therefore, based on the highlighted relations between all variables in previous researches, this study equally developed the conceptual framework in view of these relationships between staff performance as independent variables on patient satisfaction as mediating variable on the patient loyalty, on the government hospitals in Jordan



### 3. METHODOLOGY

Questionnaires from current study were used as data collection instruments in this study's quantitative research methodology. Convenience sampling was used to distribute the questionnaires to participants. Patients who were admitted to Jordanian public hospitals made up the study's population. Adult patients who are able to communicate effectively or provide information so they can complete questionnaires are sampled for this study; if they are unable to do so, family members or his family may be substituted. The minimum number of samples depending on the complexity of the model was chosen in accordance with the power of analysis. According to Green's (1991) table and were used predictors from the research framework at medium effect size as suggested by Gefen et al. (2011) for this investigation, a minimum sample size of 74 patients was established. Conversely, the larger the sample size, the higher the confidence rate, the smaller the error variance, the more outcomes are represented, and the more similar the sample will be according to Klassen et al., 2012).

## 4.0 RESULT

### 4.1 Partial Mediation

To test the mediation value, as it knowing the results of a conventional mediation test can be verified by the researcher using the bootstrapping re-sampling technique. Between 500 and 5000 bootstrap samples could be used. The IBM-SPSS-AMOS program would be used to calculate the mean and standard error for every sample. Estimates will be produced by the algorithm using the resampling process.

Table 4.1 Summary of the significance level  
(Staff Performance → Patient Satisfaction → Patient Loyalty)

	Indirect Effect (axb)	Direct Effect (c)
Bootstrapping Results	0.111	0.184



Bootstrapping P-Value	0.02	0.03
Result	Significant	Significant
Type of Mediation	<b>Partial Mediation</b> since direct effect is <b>also</b> significant	

Based on the result presented in Table 4.1 the Patient Satisfaction construct has mediated the effect of Staff Performance on Patient Loyalty. Thus, one can have concluded the research hypotheses are statistically significant.

Therefore, the results of that supported the effect of patient satisfaction as a mediation variable of relation between staff performance and patient loyalty

#### 4.2 Population

The whole group of individuals, activities, or interesting stuff that scientists want to explore and conclude" is one way to define the population (Sekaran and Bougie 2014). According to Sekaran and Bougie (2013), an accessible population is any individual or group that may have important implications but is unable to reach due to their geographical dispersion. They also note that there are other factors that can be applied as guidelines to identify the population that is available. These include a detailed demographic explanation of how the researchers want to generalize the results; the sampling strategy (including sample type, sample size, geographic location, and other descriptive data); the sampling framework; and the completion rate. Sekaran and Bougie (2013) define the population as all members of a certain group that the researcher is investigating or collecting data for in order to make data-driven judgments. An entire group of people or organizations with the ability to gather data might be referred to as a population. The study's target population consists of Jordanian public hospital patients in the Hashemite Kingdom.

#### 4.3 Sample size and selection

The sampling technique that researcher going to use is non-probability sampling technique. Non-probability sampling technique is a technique that relies on the researcher's personal judgment better than chance to select sample elements (Malhotra et al, 2012). Non-probability samples technique may yield better estimates of the population characteristics. By using non-probability sampling in this study, researcher will use judgmental sampling to select respondents. Judgmental sampling is a sampling method where the population elements are selected based on the researcher's judgment. This technique is chosen as the sample selected can be representative to the population of interest (Malhotra, 2009).

**Table 4.2 Population in North and Middle Province Government Hospital in Jordan**

North Province Hospitals			
City	Population	No of MOH Hospitals	No of Beds
Irbid	1911600	10	847
Mafrq	59300	4	291
Jarash	256000	1	159
Ajloun	190200	1	90
Total	2417100	16	1387
Middle Province Hospitals			

**Table 4.3** Composite Reliability and Average Variance Extracted (AVE)

	<b>CR</b>	<b>AVE</b>
<b>Staff Perform</b>	0.901	0.819
<b>Patient Satisfaction</b>	0.901	0.819
<b>Patient Loyalty</b>	0.912	0.838
<b>Knowledge</b>	0.867	0.619
<b>Contact</b>	0.821	0.605
<b>Main</b>	0.855	0.597
<b>Attitude</b>	0.862	0.609
<b>Behavior</b>	0.867	0.620
<b>Doctor Role</b>	0.858	0.602
<b>Communication</b>	0.855	0.597

Table 4.3 presents the Composite Reliability and Average Variance Extracted for all constructs applied in the model. The CR is believed satisfied when the construct reliability having the value more than 0.70. Given on this result, all constructs were reliable. In addition to that, the construct validity is to be tested by the AVE method. The validity is suggested established when the validity values more than 0.50. In this case, all constructs were valid. To determine the uniqueness of the construct, the discriminant validity is needed as the following table.

**Table 4.4** Discriminant Validity

<b>CONSTRUCT</b>	<b>STAFF PERFORMANCE</b>	<b>PATIENT SATISFACTION</b>	<b>PATIENT LOYALTY</b>
<b>STAFF PERFORMANCE</b>	<b>0.905</b>		
<b>PATIENT SATISFACTION</b>	0.62	<b>0.905</b>	
<b>PATIENT LOYALTY</b>	0.61	0.66	<b>0.915</b>

The Table 4.4 presents the discriminant validity result. The discriminant validity is established when the value of diagonal (bold) is higher than all construct correlations (Hair et al., 2017). In this case, the results meet with the Hair suggestions. In additions to that, the construct correlation also lowers than 0.85.

**Table4. 5: Staff Performance on Patient Satisfaction**

	<b>Estimate</b>	<b>S.E.</b>	<b>C.R.</b>	<b>P</b>	<b>Result</b>
Patient Satisfaction <--- Staff Performance	.319	.071	4.506	***	Significant

Table 5 presents the effect of Staff Performance on Patient Satisfaction. The likelihood of obtaining a crucial ratio with an absolute value of 4.506 is less than 0.001. In other words, at the 0.001 level (two-tailed), the regression weight for Staff Performance in the prediction of Patient Satisfaction is statistically different from zero. Thus, the research hypothesis for this path is supported.

**Table 4.6: Staff Performance on Patient Loyalty**

	<b>Estimate</b>	<b>S.E.</b>	<b>C.R.</b>	<b>P</b>	<b>Result</b>
Patient Loyalty <--- Staff Performance	.199	.076	2.625	.009	Significant



Table 4.6 presents the effect of Staff Performance on Patient Loyalty. The likelihood of obtaining a crucial ratio with an absolute value of 4.506 is less than 0.001. In other words, at the 0.001 level (two-tailed), the regression weight for Staff Performance in the prediction of Patient Loyalty is statistically different from zero. Thus, the research hypothesis for this path is supported.

Table 4.7: Patient Satisfaction on Patient Loyalty

		<b>Estimate</b>	<b>S.E.</b>	<b>C.R.</b>	<b>P</b>	<b>Result</b>
Patient Loyalty	<---	.377	.075	5.023	***	Significant

Table 4.7 presents the effect of Patient Satisfaction on Patient Loyalty. The likelihood of obtaining a crucial ratio with an absolute value of 5.023 is less than 0.001. In other words, at the 0.001 level (two-tailed), the regression weight for Patient Satisfaction in the prediction of Patient Loyalty is statistically different from zero. Thus, the research hypothesis for this path is supported.

#### 4.4 Mediation Testing

The researcher can use the Bootstrapping re-sampling approach to confirm the results of a traditional mediation test. The number of bootstrap samples may range from 500 to 5000. The technique would determine the mean and standard error for each sample using the IBM-SPSS-AMOS software. The algorithm will generate estimates based on the re-sampling procedure.

The total effect, direct effect, and indirect effect in the relationship between constructs are calculated using the sampling distribution. Finally, the total, direct, and indirect effect 95% confidence intervals are given. The algorithm computes the effects' lower and upper bounds, as well as their two-tailed significance. The outcomes of the bootstrap procedure will be compared to conventional approaches. Both outcomes are typically constant. However, if any of the results were conflicting, the bootstrapping results would be acceptable.

Table 8: Standardized Indirect Effect (p-value)

	<b>Staff Performance</b>
<b>Patient Loyalty</b>	.002

Table 9: Standardized direct Effect (p-value)

	<b>Staff Performance</b>	<b>Patient Satisfaction</b>
<b>Patient Satisfaction</b>	.003	...
<b>Patient Loyalty</b>	.003	.002

Table 10: Standardized direct Effect

	<b>Staff Performance</b>	<b>Hospital Infrastructure</b>	<b>Health Service</b>	<b>Patient Satisfaction</b>
<b>Patient Satisfaction</b>	.321	.234	.252	.000
<b>Patient Loyalty</b>	.184	.184	.159	.347



Table 11 Standardized indirect Effect

	<b>Staff Performance</b>	<b>Hospital Infrastructure</b>	<b>Health Service</b>
<b>Patient Loyalty</b>	.111	.081	.087

## 5.0 Discussion

Current study examines the research question, i.e. the effect of staff performance factors influences the patient's satisfaction that aides in constructing loyalty intentions in hospitals of Jordan. The purpose of the study was to assess patients' perspectives on various aspects of staff performance, including communication and staff knowledge, and to examine how these perceptions influence patient satisfaction and loyalty intentions. The study is descriptive, aiming to explore key research questions. Data was collected from private hospitals to evaluate patients' perceptions and determine whether they are satisfied and loyal.

The results indicate that in government hospitals, performance of staff plays a significant role in fostering patient loyalty and is a strong predictor of patient satisfaction. It highlights that the physical facilities, infrastructure, hospital operations, medical equipment, staff appearance, and other aspects are well-maintained. Additionally, the hospital management places a strong emphasis on, all of which are essential for patients' healthcare experiences.

## 6.0 Conclusion and future study

Based on the model researcher build this will support a significant contribution to the body of knowledge in the relation between staff performance and patient satisfaction that impact on patient loyalty. This model also emphasizes the importance of patient satisfaction role in the relation between staff performance and patient loyalty that help public hospitals in Jordan to respond more in relation with patients' needs. In other hand this model will assist health managers and planers to develop the health system. This model still needs to be extended in future studies to include other factors that have impact on patient satisfaction and patient loyalty. It's also recommended to examine this model in privet hospital in Jordan and make comparative statics between public hospitals and privet on the level of health services. The patients need to take protection such as insurance or takaful (2019a, 2019b, 2017, 2012(a), 2012(b) and 2012(c)). There are many types of protection even though in business, life, house, accident, vehicles, fire, flood and others (Azhar et.al.,2017). But in getting health quality services in hospital can give better services if the patients can choose many protections to cover their life and accident by using takaful or insurance. for the future study the researcher recommended for next studies first, Encouraging healthcare professionals, particularly doctors and nurses, to maintain consistent and clear communication with patients, ensuring they fully understand care plans and treatment methods, **also** public hospitals and administrators should prioritize and inspire high-quality service delivery when interacting with patients, as their initial experience often shapes their lasting perception, as well implementing strong external communication strategies is essential to assess staff performance, address issues through constructive suggestions, and leverage feedback for continuous improvement.

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