

# THE RELATIONSHIP BETWEEN EMOTION AND PHYSICAL ENVIRONMENT ON THE PATIENT' OVERALL SATISFACTION IN THE JORDANIAN OUTPATIENT PRIVATE CLINICS

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## ABSTRACT

**Background:** Patient satisfaction has received universal acceptance as indicator of quality in numerous services, and it has evolved into a quality attribute and a desired healthcare goal. Patient satisfaction is a complicated mixture of perceived need, expectations, and care experience. Therefore, understanding the elements that contribute to and improve patient satisfaction is critical for healthcare administration in determining how to employ limited resources effectively. **Aim:** To study the relationship between emotions and physical environment on patients' overall satisfaction in the Jordanian outpatient private clinics. **Method:** Privet clinics in Irbid /Jordan were choose as sit for this study. This research was a cross-sectional study. The study instrument was face-to-face questionnaire; the questionnaire adopted from previous published instrument, and delivered to people who receive medical care in private clinics via a random sample. The sample size was 400 people who filled it out. **Results:** As a result, found that that, no significant relationship between emotions and overall patient's satisfaction. On other hand, physical environment has a positive significant relationship with overall patient's satisfaction. **Conclusion:** Improving the various dimensions of health care delivery in the Jordanian private sector contributes to raising the level of overall patient's satisfaction.

**Keywords:** Emotion, Patient Satisfaction, Healthcare Quality Services, Patient Safety, and Outpatient Private Clinics.

## INTRODUCTION

The healthcare sector considers a vital part of any country due to its influence on other sectors like political, social, and business. In addition, healthcare plays a major role in different economic implication (Bahadori et al., 2018). So, satisfaction of services provided through the healthcare system has been a major source of concern for a number of governments around the world. Responses of patients to the healthcare services are considered as a means to obtain information regarding patient's perception of the quality of the healthcare system (Kamimura et al., 2015). Therefore, patients become more satisfied when the healthcare enhances their treatment through delivering required and essential services (Aljuaid et al., 2016). Healthcare organization which include different institutions such as hospitals and clinics that consider as the main fields to provide of healthcare services for a community. As a growing and increasing demand for healthcare services, different issues have emerged that need radical solutions to ensure the sustainability of services provided at a high level of quality (Slatten, Krogh, & Connolley, 2011). One of these issues is patient satisfaction which becomes an important topic that concerns the management of the healthcare system. Girma et al., (2008) stated that poor

service is linked with patient dissatisfaction and increases the inefficiency of the healthcare system. Thus, understanding factors that contribute and enhance to have a satisfied patient are essential for healthcare management to determine the methods to allocate the limited resources effectively.

In general, different tangible (i.e. physical environment, medical personnel competency, and the adequacy of facilities and equipment) and intangible components influence satisfaction in the healthcare industry (i.e. personal preferences, personality traits, and life experience) (Fotiadis & Vassiliadis, 2013). So, Patient's emotions consider as one of these components that have a direct impact on patient satisfaction. Many scholars (Vinagre & Neves, 2010; Wilde-Larsson, 2010) have explained the role and influence of positive and negative emotions on satisfaction within the healthcare system. Vinagre & Neves (2010) established a care-context adapted version of the Emotional Stress Reaction Questionnaire and found that patient's feelings and emotions during sicknesses and treatment periods affect patients' satisfaction. Also, Derksen et al. (2013) found that when patients feel a high level of empathy during a consultation with doctors, they felt satisfied with the healthcare services provided. Findings of a study conducted in Italy revealed that cognitive component and emotional responses have an impact on patient satisfaction, therefore, results showed that patients become more satisfied toward the positive emotions particularly when they received medical care in private hospitals (Pinna, Chiappa, Atzeni, 2018).

Similarly, the physical environment which defines as the tangible element has an association with patient satisfaction. A growing body of literature explored the influence of the physical environment and its role in shaping the patient experience in the healthcare sector. Pouragha and Zarei (2016) found that the quality of the physical environment has a direct effect on patient satisfaction. Studies done in South Korea, England, and Italy, resulted that the convenience and cleanliness of the clinic were the most important factors of the physical environment influencing patient satisfaction (Grogan et al., 2000; Jung, 2009; Carlucci, 2013). Also, respondents who visited outpatient clinics in China considered noise, air freshness, cleanliness, and seating design as highly important factors of the physical environment which affect directly their perspectives and satisfaction (Zhao, 2017).

Generally, patient satisfaction can be used to predict the future of services offered, and the ways to sustain the utilization of these services (Kuosmanen, 2006). It can be defined as a tool that is used to evaluate the quality and outcome of a set of healthcare services (Devreux et al., 2012). Hence, patients are more likely to be healthy and follow their treatment plan when they report a high level of satisfaction (Aljuaid et al., 2016).

### **Aim**

Investigate the relationships between Emotions, and Physical environment on patient's overall satisfaction in the Jordanian outpatient private clinics.

### **Study Objectives**

1. To identify the association between emotion and patient satisfaction
2. To identify the association between the physical environment and patient satisfaction

### **Research question:**

To what extent do the dimensions of study influence patients' satisfaction in Jordanian private clinics?

## HYPOTHESES

- H1* There is the association between the emotion and patient satisfaction in Jordanian private clinics.
- H2* There is the association between physical environment and the patient satisfaction in Jordanian private clinics.

## LITERATURE REVIEW

### Patient' Satisfaction

Patient satisfaction is an important component and critical outcome of the healthcare system is mostly used as a standard for measuring the quality of services provided through the healthcare system (Al-Refaie, 2011). According to Donabedian, (1988) clarify that, one of the pioneers of quality of care theory, who identifies patient satisfaction as a criterion for predicting healthcare outcomes, which is regarded as one component of quality assessment methodologies. Several studies have found a substantial correlation between patient satisfaction and healthcare system outcomes such as referral, adherence to treatment plans, readmission rate, recovery, and patient retention. (Reader, 2014; Ferrand et al., 2016; Trzeciak, 2016; Mohammed et al., 2016).

### Patient's Emotions

Various studies define emotions in a different way, one of these definitions when (Burns and Neisner, 2006) stated the emotions as intentional and are related to different and specific objects, also (Bagozzi et al., 1999,) define Emotions are "mental state[s] of readiness that arise from cognitive appraisals of events or one's own thoughts". Being emotionally healthy is not only free from pain, depression, or any physiological and psychological problems but involve to be emotional well-being, which includes a sense of feeling good, happiness, life satisfaction, and self-confidence that lead to having a greater impact on people's overall mental and physical health (Huppert & So, 2013). Health services are high emotion services, which include numerous unfamiliar situations and patient become at risk due to many procedures, go wrong that may lead to death (Berry et al., 2015). Also, sometimes patients feel powerless and cannot control the procedures that taken over their bodies (McColl-Kennedy et al., 2012). Furthermore, when the patient attends a public or private clinic or is admitted to a hospital, healthcare services will be highly personal, which often consider an intrusive procedure, therefore, as a consequence, emotionally charged (McColl-Kennedy et al., 2017).

Actually, the main purpose of healthcare is "does no harm", and this includes a commitment to many aspects of patient well-being. One of these aspects of well-being is a patient's emotions which physical and psychological status has a direct impact on the patient's emotional state and vice-versa. During healthcare services provision, health care professionals should take into account the patient's emotions to assist in applying a practical definition of health and subjective patient's wellbeing (Lee et al., 2013). Emotions have been linked to satisfaction in several ways, but three main streams of research can be identified: 1) satisfaction is in itself seen as an emotional response to a product (Oliver, 1993; Dabholkar, 1995) 2) emotions are treated as a mediator between cognitive evaluations, such as perceived product performance or disconfirmation of some comparison standard, and overall satisfaction; and 3) emotions are modeled as an independent factor contributing to the level of perceived satisfaction.

Street et al. (2009) suggested that, in some cases, when there is effective communication between doctor and patient that fosters well-being and satisfaction. For instance, doctors' talk to validate patients' concern and perspective, or express empathy may help to reduce negative emotions (e.g., fear, worry, anxiety), and enrich positive ones (e.g., hope, optimism, and self-worth). A study by Koelemeijer et al. (1995) supported emotions, satisfaction, and service quality as independent constructs. They tested two different models: a 'two sources model' and a 'two routes model'. The 'two sources' model assumes that emotions and perceived service quality have independent effects on consumer dis/satisfaction, which in turn affects behavioral intentions. The second model assumes that service quality influences both emotions and consumer dis/satisfaction, which both influence behavioral intentions. Both models were supported for goal-directed emotions.

Understanding and managing customer emotions during service delivery are considered as an important matter for services researchers and practitioners (Ostrom, Parasuraman, Bowen, Patricio, & Voss, 2015), which emotions have an influence on those involved both directly and indirectly in the service provision process (Fredrickson & Joiner, 2002; McColl-Kennedy, Patterson, Smith, & Brady, 2009). Particularly in the healthcare setting, where patients can feel a wide variety of emotions, that contributing to produce a profound effect on service processes and patient-relevant outcomes (Berry & Bendapudi, 2007; Berry, 2015; Gallan, 2013).

### **Physical Environment**

Patient satisfaction is considered as one component of patients' experiences (Berkowitz, 2016), that is influenced by several factors of the physical environment, either directly or indirectly. The physical environment refers to "physical facilities, infrastructure, hospital functions, medical apparatus, medical staff's cleanliness and environmental peacefulness, vital for the patient's health condition" (Fatima, 2018). Analyzing previous literature revealed about several environmental factors have an impact on patient satisfaction, which included layout, temperature (Devlin and Andrade, 2017), parking location, cleanliness, private rooms (MacAllister et al., 2016), waiting rooms, quietness, privacy, and music (Ulrich et al., 2008; MacAllister et al., 2016; Devlin and Andrade, 2017).

A systematic literature review conducted by MacAllister et al. (2016) established two categories that have a relation with patient satisfaction—the physical ambient environment and the interpersonal aspects of the care environment. So, among the factors that are considered as part of the physical ambient environment and have an effect on patient satisfaction are outside views to nature, color, full-spectrum lighting, as well as aesthetics and decor (Ulrich, 1984; Ulrich et al., 2008; Becker et al., 2008; Gray et al., Siddiqui et al., 2015). Also, a noise was mentioned as one factor of the physical ambient environment that relates to auditory senses, which reducing the noise in the treatment environment has a positive significant influence on patient satisfaction (Hagerman et al., 2005). Other studies have recognized the factors of the physical environment which included location, equipment, lighting, and other factors that were important in optimizing the level of patient satisfaction (Woodside et al., 1988). Through different features of the physical environment can improve patient safety such as hospital-acquired infection, and enhance the outcome of their treatment (Ulrich et al., 2004; Carr, 2012). In addition, building distinguishes healthcare environment elements aid in the keeping of patient's confidentiality and privacy through promoting social support and fostering performance, productivity, and satisfaction of employees and eventually the quality of health services and system (Tanja-Dijkstra et al., 2010).

A study was used social media as a means to evaluate the experience of the patient and their families regarding the factors related to the physical environment in several healthcare settings. The study was involved different elements of the physical environment (location, parking structure, cleanliness, private rooms, waiting rooms, music, and privacy) and findings revealed that these elements can be a critical part of patient satisfaction (Alkazemi et al., 2019). Designing environment of a health care facility in a suitable manner that has a positive impact on both patients and staff, thus, that force healthcare management and medical professional to increase their focus on creating the environment that supports and help patients to be more comfortable with their process of treatment (Ulrich et al., 2004; Dijkstra et al., 2008). Several studies defined the effect of consumer's perceptions on the level of their satisfaction. (Han and Ryu, 2009; Ryu, Lee, & Kim, 2012). Therefore, creating a good perception about the environment in which consumers take their services that contribute to foster consumer satisfaction about provided services and the possibility to recommended others to consume several services in that place (Cornelius, 2009).

## METHOD

### Study Design

This research was a cross-sectional study using a quantitative research approach (cross-sectional survey). Patient satisfaction evaluated using a self-administrated questionnaire that filled by 400 patients who were visiting private clinics.

### Data collection

In the study, a self-administered questionnaire with four major elements was used. The questionnaire included sections on socio-demographics, emotions, physical environment, and patient satisfaction. This research was carried out in private clinics in Irbid, Jordan. The questionnaire consisted of 5 Likert-scale-type items. The questionnaire is divided into four sections, which are as follows:

**Section One:** Demographic variables. The demographic information was collected with closed-ended questions, through (7) factors. (age, gender, Income, Educational level, Nationality, Residency, and Type of clinic).

**Section Two:** Emotion variable. In the second category dealing with the patient's emotions was prefixed "how often feel...". When responding to a question (variable), the patient chose one of the five options on offer: 1 = None of the time, 2 = Almost never, 3= Neutral, 4 = Almost every time, 5 = All of the time.

**Section three:** Physical Environment. In the third category, dealing with physical environment questions and covered by five-point Likert scale (Extremely dissatisfied=1, Very Dissatisfied=2, Neutral=3, Very Satisfied=4, Extremely Satisfied=5) was used to measure it.

Section four: Overall Patient satisfaction, this part includes 10 items, which were identified based on relevant literature review. A five-point Likert-type scale (Extremely dissatisfied=1, Very Dissatisfied=2, Neutral=3, Very Satisfied=4, Extremely Satisfied=5) was used to measure it.

### Reliability and validity of instrument

To test the reliability of the instruments used in this study, Cronbach's alpha was determined using SPSS Version 22. The instrument's average Cronbach's alpha reliability coefficient was 0.952, which was within the acceptable reliability range, indicating that the tools were reliable. Random sampling techniques were used in this study to ensure internal validity of tools by enhancing homogeneity and representativeness of the selected population, while random selection of a large sample of study respondents and comparison of results with other studies were done to improve external validity of the study.

## Data analysis

Data analyzed using descriptive and inferential statistic methods using Statistical Package for Social Sciences (SPSS V.22, IBM corporation). All responses to the questionnaires coded at the original English version. Descriptive statistics including the frequencies, means, and standard deviations (according to the measurement level) used to analyze the demographic characteristics of participants. Data entered into (SPSS) software cleaned, verified and analyzed through using a Liner regression.

## RESULTS

### Reliability Test

Internal consistency was used to test reliability, the findings revealed that all of the independent variables are reliable. This is due to that all of the scores obtained have above the minimum alpha value of 0.7.

<b>Dimensions</b>	<b>Cronbach's Alpha</b>
Emotions	.760
Physical environment	.946
Overall patient' satisfaction	.951

### Validity Test: Correlation Method

Pearson correlation analysis was used to determine construct validity. Construct validity relates to the degree of similarity and discrimination of an instrument's items or sub-scales (Bagozzi & Phillips, 1991). Correlation analysis results showed that the correlation coefficient between emotion and patient satisfaction was not significant, that outside the range of 0.01, whereas physical environment showed a strong and positive correlation with patient satisfaction.

<b>Correlations</b>				
		<b>Patient Emotions</b>	<b>Physical environment</b>	<b>Patient satisfaction</b>
Patient Emotions	Pearson Correlation	1		
Physical environment	Pearson Correlation	.029	1	
Patient satisfaction	Pearson Correlation	.002	.654**	1

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

## Demographic Characteristics of the Respondents

The characteristics of 400 patients who participated in the study are given in table 1. The age of participants ranged from 18 to 80 years old. The highest aged groups among the sample that participated in this study ranged between 18-28 years, with a percentage of 42.3% of the total sample. However, the least aged groups rate between 71-80 years was found to be .5% out of the total sample. The demographic outcomes show that the sample comprises 104 males 26%, while females consist of 296 of the total sample 74% from the whole population. In addition, the most of patients reported that their income were less than 500 JD 68.3%. With regard to the patient's education, most of the patients have Bachelor degree 57.3%, and the least of them have PhD degree with 1.0%. The majority of patients were Jordanian 92.8% and living in Irbid city 78.5%. The proportion of patient attending specialization clinics 54.5% was higher compared to other type of clinics.

	<b>Variable</b>	<b>Frequency</b>	<b>Percent</b>
Age	18-28	169	42.3
	29-39	145	36.3
	40-50	71	17.8
	51-60	10	2.5
	61-70	3	.8
	71-80	2	.5
	Total	400	100.0
Gender	Male	104	26.0
	female	296	74.0
	Total	400	100.0
Income	>500	273	68.3
	500-1000	89	22.3
	1000-1500	13	3.3
	<1500	5	1.3
	Missing	20	5.0
	Total	400	100.0
Education	Secondary school	98	24.5
	Bachelor	229	57.3
	Master	25	6.3
	PhD	4	1.0
	Diploma	38	9.5
	Missing	6	1.5
	Total	400	100.0
Nationality	Jordanian	371	92.8
	non Jordanian	29	7.3
	Total	400	100.0
Residency	Irbid	314	78.5
	Amman	51	12.8
	Ajloun	23	5.8
	Jerash	1	.3
	Almafaq	11	2.8
	Total	400	100.0
Clinic type	GP	76	19.0
	Specialization	218	54.5
	Dental	104	26.0
	Missing	2	.5

	Total	400	100.0
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### Descriptive Analysis of Variables

Based on the table 4, the average and standard deviation for each of the predictor variables are as follows: Emotions ( $\mu=3.389$ ,  $SD=.835$ ) with a medium degree, Physical environment ( $\mu=3.873$ ,  $SD=0.756$ ) with a high degree and Overall patients' satisfaction ( $\mu=4.186$ ,  $SD=.735$ ) with very high degree.

No.	Dimensions	Mean	Std. Deviation	Classification
1	Emotions	3.389	.835	Medium
2	Physical environment	3.873	.756	High
5	Patients' satisfaction	4.186	.735	Very high

### Descriptive Analysis of Patient's Emotions

Patient's emotions factor is measured with one main construct using sets of items measured by 5-Likert Scale. Table 5 presents the first construct's descriptive analysis through the common tests that belong to this type of analysis called Mean and Standard Deviation SD.

Item	Item code	Statement	Mean	Std. Deviation
PtE Patient 'Emotions	PtE1	Feeling satisfied	3.94	1.077
	PtE2	Feeling safe	4.16	1.035
	PtE3	Feeling anger	2.19	1.210
	PtE4	Feeling nervous	2.28	1.207
	PtE5	Feeling sad	1.98	1.210
Average			2.91	1.1478

As presented in table 5, the mean score for those indicators ranged from 1.98 to 4.16, reflecting the agreement level toward these items. For example, most of the responses revealed that PtE2 (Feeling safe) was a common feature of patient's emotions variable. The SD is used to see the amount dispersion of the mean's data; the values of SD were ranged between 1.035-1.210.

### Descriptive Analysis of Physical Environment

Physical environment factor is measured with one main construct using sets of items measured by 5-Likert Scale. Table 6 presents the second construct's descriptive analysis through the common tests that belong to this type of analysis called Mean and Standard Deviation SD.

Item	Item code	Statement	Mean	Std. Deviation
	PhE1	Air freshness	4.03	.933
	PhE2	Furniture layouts	3.98	.981
	PhE3	Entertainment facilities	3.47	1.128



PhE (Physical Environment )	PhE4	Indoor plants, interior/exterior landscaping	3.55	1.078	
	PhE5	Presence of coordinated art objects	3.48	1.143	
	PhE6	Exterior view	3.81	.946	
	PhE7	Noise	3.72	1.081	
	PhE8	Cleanliness	4.25	.805	
	PhE9	Architectural design of the space	3.95	.959	
	PhE10	Pleasant color scheme	3.91	.997	
	PhE11	Spaciousness	3.92	1.057	
	PhE12	Availability of daylight	3.93	1.003	
	PhE13	Adequate illumination	4.12	.836	
	PhE14	A thermally comfortable environment	4.05	.987	
	PhE15	Seating sufficiency	3.77	1.183	
	PhE16	Seating comfort	4.06	1.007	
	Average			3.875	1.008

As presented in table 6, the mean score for those indicators ranged from 1.85 to 4.25, reflecting the agreement level toward these items. For example, most of the responses revealed that PhE8 (Cleanliness) was a common feature of physical environment variable. The SD is used to see the amount dispersion of the mean's data; the values of SD were ranged between .805-1.183.

## Regression Analysis

*H1: To Identify the Association between Emotion and Patient Satisfaction*

From the table 7, we observed that emotions have no significant relationship with overall patient's satisfaction, which have a positive influence but minor effect of 0.2 percent on overall patient's satisfaction.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.181	.154		27.138	.000
	Patient 'Emotions	.002	.044	.002	.038	.970
a. Dependent Variable: Patient Satisfaction						
R <sup>2</sup> = .000						

*H2: To Identify the Association between Physical Environment and Patient Satisfaction*

Based on the table 8, the physical environment has the significant positive influence towards overall patient's satisfaction, which possessed the strongest positive effect, with a Beta = 0.654.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.724	.145		11.851	.000

	Physical Environment	.636	.037	.654	17.245	.000
a. Dependent Variable: Patient satisfaction						
R <sup>2</sup> =.428						

## DISCUSSION

### **Discussion of H1: There is the Association between the Emotions and Patient Satisfaction in Jordanian Private Clinics.**

According to this research, the results had shown that there is no a significant relationship between patient's emotions and overall patient's satisfaction in Jordanian outpatient private clinics, which is contradictory to previous studies (Vinagre and Neves .2010; Derksen et al. 2013; Pinna, Chiappa, Atzeni, 2018). The non-significant path could be attributed to several factors, according to Mazzocco and his colleagues (2019), they stated that emotions are characterized by their complexity and multi aspects, thus the patient's emotions may be influenced by how he or she feels when received the survey, and this is consistent with Frida's suggestion when he declared that evaluation of feelings is often unconscious of an event or stimulus, which in turn identifies and characterizes the person's feelings and emotions subjectively (Frijda.2007).

The concept of emotions is symbolized as an "umbrella" that contains different affective, mental, behavioral, expressive, and physiological changes (Tyng, 2017), hence, the health status of patients in that time could contribute to formulating of their emotions. In addition, Jack and Schyns (2015) developed a subjective approach which used to assess subjective feelings and experiences, so, patients may form their feelings about a particular clinic based on their experience or recommendation or previous experience of other people. Likely, many patients have thoughts that when experienced their emotions even in a positive or negative side that can reflect their awareness personality or level of education, and this is similar to several studies that have shown that individual differences, including personality traits (Montag & Panksepp, 2017), and intellectual ability (Brackett et al., 2004), show a significant impact on person's emotions. On another side, it was found that beliefs, thoughts, and a person's knowledge might control the emotional status of patients, for example, there is a belief from patients, which includes that when expressing their emotions positively, it will support that clinic, or they are afraid if they do not reflect their feelings towards the clinic positively, it will prevent them from receiving a good service. So, the patient's emotions may not play as a strong predictor of patient satisfaction because some different triggers and stimuli are involved in the formation of the emotional state of the patients.

### **Discussion of H2: There is the Association between the Physical Environment and Patient Satisfaction in Jordanian Private Clinics.**

Several studies indicated the importance of the physical environment in achieving positive outcomes to patient satisfaction. The findings from this research also indicate that the physical environment will positively influence overall patient satisfaction. This study found evidence to support the positive hypothesized influence of physical attributes on patient satisfaction. This result is confirming with earlier research (Raposo et al., 2009). Evidence from the Middle East shows that patients prioritize the appearance of institutions when evaluating their healthcare structures, with fewer contemporary facilities receiving lower evaluations. (Zineldin, 2006). Besides that, the study conducted by Fatima, Malik, and Shabbir (2018) found that the physical environment is considered as a good interpreter and a strong predictor of patient

satisfaction. Also, Bovenberg et al. (2010) reported that physical aspects of a healing environment for example daylight and nature, which have been shown to improve patients' health and satisfaction.

All physical entities in and around organizations are included in the physical environment (Mobach, 2009). Ulrich (1984), who studied the effect of patients' views in hospital rooms, is frequently cited in evidence-based research on the positive benefits of environmental factors in healthcare settings. According to this study, patients who had a view of trees used less pain medication and had a shorter length of stay than patients who had a view of a brick wall. Similarly, the presence of plants in a healthcare facility that give the patient a homelier feeling which results in less anxiety and become more satisfied (Dijkstra et al., 2006). Already in the nineteenth century, Florence Nightingale (1863) wrote about the benefits of daylight and ventilation on patients' health. One aspect of the physical environment that contributes to patient satisfaction is adequate illumination (Ulrich et al., 2008). The existence of daylight can be confirmed by using big windows and eliminating other structures that prevent light for others, which improves patient satisfaction (Ulrich et al., 2008).

The presence of art, which can be a positive attraction for patients, is another part of the physical environment that contributes to reaching a high level of patient satisfaction (Herweijer-van Gelder, 2016). Leather and his colleagues (2003) conducted a study that used a two-model comparison design and collected data from patients at a pre-relocated and post-relocated neurology outpatient clinic. The design of the pre-relocated waiting room was defined as 'traditional,' while the design of the post-relocated waiting area was defined as 'nouveau,' implying a purposeful attempt to create a different image. The 'nouveau' waiting space was found to be connected with more positive environmental assessments, increased mood, altered physiological state, and higher reported satisfaction. According to Herweijer-van Gelder (2016), making the atmosphere more pleasant and aesthetically pleasing reduces patient stress and increases patient satisfaction with the quality of healthcare. In general, for patient satisfaction, harmonizing colors and a consistent color scheme with warm and cool colors are desirable. (Herweijer-van Gelder, 2016).

Physical healthcare environmental elements, as essential aspects, can recover patient safety (by minimizing hospital-acquired infections and medication mistakes), outcomes (by alleviating pain, enhancing sleep, reducing stress and depression), spatial disorientation, patient privacy and confidentiality (by encouraging social support), and, eventually, healthcare quality (Ulrich et al., 2004; Tanja-Dijkstra et al., 2010; Carr .2012). The visual look and modernization of available infrastructure and facilities, such as buildings and equipment, have been demonstrated to influence patient impressions of the services available in a health facility (Wanjau and Wangari, 2012). Facilities that are well-maintained and visually appealing are thought to be a sign of quality. Proper upkeep and use of contemporary technologies influence patients' preferences for preferred service providers as well as their level of satisfaction (Hutchinson et al., 2011).

## CONCLUSION

The study provides preliminary empirical evidence linking patient satisfaction. According to the findings, patients' emotions about the treatments provided by private clinics do not have a direct meaningful effect on predicting satisfaction. Jordanian patients, on the other hand, are more delighted if private clinics have a modern appearance. Furthermore, customers are satisfied if the physical environment is nice and pleasant

## Managerial Implication

Because of increased competition in the health care sector and privatization, we assume that this study will be beneficial to health care providers while also being beneficial to business organizations because it includes customers. The study's findings could be used to enhance the quality of health care services while also developing trust by achieving a high degree of patient satisfaction.

## Limitations

The study was limited during data collection. The study was in private clinics that were facing a lack of support from doctors, in addition, due to the Covid-19 virus, patients were afraid of transmission of infection when filling out the questionnaire through papers and pens.

## Future Research

The topic we chose was good, yet due to its limitations and outcome, there is a need for additional research. Employees who provide services to patients were not considered in this study. Further research can be conducted to evaluate the impact of employee behavior, communication, and clinic reputation on patient satisfaction in the private healthcare industry. Additional study can be design to exam these variables by using other techniques of data gathering i.e. interviews, archival research and experimental research to figure out which one will be the most effective. Also future study could be needed to test the same variables in other service sector.

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