

Main factors affecting perceived quality in healthcare: a patient perspective approach

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Abstract

Purpose – Delivering patient-centered healthcare is now seen as one of the basic requirements of good quality care. In this research, the impact of the perceived quality of three experiential dimensions (Physical Environment, Empowerment and Dignity and Patient–Doctor Relationship) on patient's Experiential Satisfaction is assessed.

Design/methodology/approach – 259 structured interviews were performed with patients in private and public hospitals across Italy. The research methodology is based in testing mediation and moderation effects of the selected variables.

Findings – The study shows that: perceived quality of Physical Environment has a positive impact on patient's Experiential Satisfaction; perceived quality of Empowerment and Dignity and perceived quality of Patient–Doctor Relationship mediate this relationship reinforcing the role of Physical Environment on Experiential Satisfaction; educational level is a moderator in the relationship between perceived quality of Patient–Doctor Relationship and overall Satisfaction: more educated patients pay more attention to relational items. Subjective Health Frailty is a moderator in all the tested relationships with Experiential Satisfaction: patients who perceive their health as frail are more reactive to the quality of the above-mentioned variables.

Originality/value – Physical Environment items are enablers of both Empowerment and Dignity and Patient–Doctor Relationship and these variables must be addressed all together in order to improve the value proposition provided to patients. Designing a hospital, beyond technical requirements that modern medicine demands and functional relationships between different medical departments, means dealing with issues like the anxiety of the patient, the stressful working environment for the hospital staff and the need to build a sustainable and healing building.

Keywords Healthcare marketing, Patient experience, Patient satisfaction, Italy, Patient empowerment

Paper type Research paper

Background

Today patient experience is recognized as one of the key elements of quality control within healthcare organizations (James, 2013), becoming crucial for a competitive growth strategy (Needham, 2012; Ismail *et al.*, 2014; Larson *et al.*, 2019).

Delivering patient-centered healthcare is now seen as one of the basic requirements of good quality care (Ismail *et al.*, 2014). From 2000 to 2009, more than 400 articles were published on patient experience (Lecroy, 2010) showing that positive patient experiences are associated with improved health outcomes, patient loyalty and satisfaction (Murante *et al.*, 2014).

With the term “experience” usually people refer to all the elements of the patient journey: Needham (2012) uses the term “roller-coaster” to synthesize the alternation of different

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emotional and physical status that patient experience while going through the healthcare treatments. Other authors (Bowling *et al.*, 2012) define the patient experience as the main output coming from all the different healthcare-related elements that patients observe. More in general different studies relate the patient experience to two main domains: the physical ambience and the human interactions (Frampton, 2012), as they can be perceived by both patients and caregivers in any medical touch point (Weiss and Tyink, 2009). Human interaction in this specific field is further analyzed with a focus on both interactions with medical staff and on the patient empowerment dimension (Hewitson *et al.*, 2014).

With the term “satisfaction” it is common to refer to all patient opinions with regards to the received assistance (Bate and Robert, 2007; Tsianakas *et al.*, 2012; Health Foundation, 2013; Crow *et al.*, 2002). Studies in the healthcare setting provide some evidence that hospitals’ service quality has a positive influence on patient satisfaction (Nor Khasimah and Wan Normila, 2013; Murti *et al.*, 2013; Alrubaiee and Alkaa’ida, 2011; Helena Vinagre and Neves, 2008; Wu, 2011; Cham *et al.*, 2015), it means that healthcare providers should adopt a marketing approach to deeply understand patients’ needs and expectations in order to meet them (Lee *et al.*, 2010). It is also common to consider patient experiences as an indicator of the quality of a specific hospital (Wilson and Strong, 2014; Health Foundation, 2013) as experience evaluation is a fundamental instrument to be able to reach expectations (Shannon, 2013; AbuDagga and Weech-Maldonado, 2016). Bright and beautiful lobbies, rooms with big windows and access to outdoor gardens, dining options and innovative hospital designs have changed patients’ experiences and expectations of what a hospital should be. Research has shown that hospitals that feature new designs and amenities positively affect patient satisfaction (Goldman and Romley, 2008), improve therapeutic benefits (Marcus and Barnes, 1995), reduce pain and allow a shorter hospital stay (Roger *et al.*, 2004).

Studies about patient experience have often been found to be of poor quality since patients’ involvement has not been fully considered and the effects on quality of care have not been reported (Crawford *et al.*, 2002). Moreover also hospital strategic planning was rarely linked with patient involvement (Daykin *et al.*, 2007). Until now, research on patients’ satisfaction has been focused on environmental or relational items of the patient experience while a comprehensive and holistic approach to the mutual interdependencies of these dimensions has been mostly ignored both by the scientific research and by the health managerial practice (Beattie *et al.*, 2014). The present study aims at providing this incremental value, by analyzing the interdependencies between the main patients’ experiential items and how they can be combined in order to maximize the positive impacts on patients’ experiential satisfaction.

Adopting an experiential marketing approach: the items of patient experience

It is currently argued that patients’ opinions should supplement traditional indicators of quality in the healthcare domain (Wilson and Strong, 2014; Health Foundation, 2013) because they provide information on the ability to meet their expectations (Shannon, 2013).

Through a literature review it was possible to identify several elements of patient experience, which largely influence the perceived quality of care. Those elements and their measurements vary depending on the study considered (Health Foundation, 2013). Researchers have proposed various instruments as the “Customer Quality Index Cataract Questionnaire”, the “Picker Patient Experience Questionnaire” (Jenkinson *et al.*, 2002), the “Hospital Consumer Assessment of Healthcare Providers and Systems” (Raman and Tucker, 2011). Both qualitative and quantitative approaches are utilized.

Starting from the available scientific literature, we identified three main dimensions of the inpatients' healthcare experience as follows:

Physical Environment. A key component of customer experience is related to aesthetic sensory and physical aspects of the healthcare facilities (Eroglu and Machleit, 1993). Research has highlighted how physical environmental elements directly affect customers (Baraban and Durocher, 2001; Siberil, 1994), evoking internal responses (Lin, 2004) and indirectly influencing their behaviors (Plichon, 1999; Bitner, 1992). Literature (summarized in Table 1) suggests that environmental aspects of the experience can include variables such as ambience/atmosphere, color (Bellizzi and Hite, 1992; Gorn *et al.*, 1997), shape (Zhang *et al.*, 2006), sound (Lichtle *et al.*, 2002; Yalch and Spangenberg, 1990; Dubé *et al.*, 1995), cleanliness (Bitner *et al.*, 2000), waiting time (Burt, 2006), comfort and services (Reese, 2009; Meyers, 2009), food quality (Calderoni *et al.*, 1999; Webb, 2007), lighting (Golden and Zimmerman, 1986) and smell (Bitner *et al.*, 2000; Bitner, 1992; Chebat and Michon, 2003; Joy and Sherry, 2003; Baker *et al.*, 1992; Baraban and Durocher, 2001; Donovan and Rossiter, 1982). Focusing on the role of the experience in healthcare, studies show that some of the above-mentioned factors also improve inpatient's experience (Nemetz, 2010) and satisfaction (Susilo *et al.*, 2020). Although some of the above-described elements are recurring in patient experience research, they have been analyzed separately so far. Hence, it appears difficult to find studies that jointly examine those items and provide a unique classification of the key experiential components related to the environment.

Empowerment and dignity

The World Health Organization (WHO, 2000) introduced the definition of "patients' respect", articulating it in three dimensions:

- (1) Respect for the patients' dignity;
- (2) Privacy with regards to medical information;
- (3) Autonomy of the patient in deciding about his own healthcare.

Patients' respect is related to how the hospital staff interacts with patients, specifically with regards to the level of empathy, relationship skills, listening skills and the interest toward the patient as a person (Dawood and Gallini, 2010; Wu, 2011; Şener; Melotti *et al.*, 2009; Avis *et al.*, 1995). Other important elements are represented by spiritual care, staff's willingness to listen to patients' fears (Puchalski *et al.*, 2009), the focus on pain management (Darr, 2001) and the privacy that patient experience through the different phases of his medical treatments (Piper *et al.*, 2012; Bate and Robert, 2007; Melotti *et al.*, 2009). The concept of empowerment means

Color and shape	Lupi (1999), Bellizzi and Hite (1992), Gorn <i>et al.</i> (1997), Zhang <i>et al.</i> (2006)
Cleanliness	Finzi <i>et al.</i> (2009), Bitner <i>et al.</i> (2000)
Smell	Webb (2007), Bitner <i>et al.</i> (2000), Bitner (1992), Chebat and Michon (2003), Joy and Sherry (2003), Baker <i>et al.</i> (1992), Baraban and Durocher (2001), Donovan and Rossiter (1982)
Lighting	Philips Luminares (2007), Bitner <i>et al.</i> (2000), Bitner (1992), Chebat and Michon (2003), Joy and Sherry (2003), Baker <i>et al.</i> (1992), Baraban and Durocher (2001), Donovan and Rossiter (1982)
Sound	Burt (2006), Lichtle <i>et al.</i> (2002), Yalch and Spangenberg (1990), Dubé <i>et al.</i> (1995)
Waiting times	Burt (2006)
Services	Reese (2009), Meyers (2009)
Food quality	Lichtle <i>et al.</i> (2002), Yalch and Spangenberg (1990), Dubé <i>et al.</i> (1995)

Table 1.
Physical environment elements

inclusion of patients in the decision-making process, as well as the degree of such participation (Andrade *et al.*, 2013; Kjekken *et al.*, 2006) by considering it a bricolage of tactical interactions with social environments rather than as the consequence of an external strategic process (Schneider-Kamp and Askegaard, 2020). Contradicting the traditional paternalistic approach, today it is important to give patients the ability to get personal information about their disease (for instance through an easy access to their Personal Health Record also during the hospitalization), understand and rationally analyze the available options and apply their personal beliefs to the medical decisions (Buccoliero *et al.*, 2016a). As a result, patients are nowadays more involved in the healthcare decision-making process while having to decide which medical treatments to undergo (Bos *et al.*, 2008; Stump and Coustasse, 2012) and medical consultations are becoming increasingly based on mutuality, meaning that patients are gaining a greater control over that relationship with a clear link between physician relationship and patient involvement determining satisfying patient empowerment (Ippolito *et al.*, 2019).

Empowerment may be referred to:

- (1) Patients – patients assume an active role in their own healthcare choices (Bellio *et al.*, 2009);
- (2) Caregivers and family members – patients’ relatives involvement in the care process (Conway *et al.*, 2006);
- (3) Medical staff – increased control of clinicians over both the content and context of their practice (Meyers, 2009) and also to the continuity of care, meaning that they are able to take care of the patient even after their hospital journey (Webb, 2007).

Patient–Doctor relationship. Communication between doctors and patients is one of the most complex relationships among inter-personal ones and is thus attracting more attention within healthcare studies (Chaitchik *et al.*, 1992).

A traditional or paternalistic approach with regards to that relationship usually involved high physician control compared to patients’ one and can thus be described as a model where the doctor is dominant and acts as a “parent” figure who decides the care process on patients’ place. However, nowadays medical consultations are becoming increasingly based on mutuality, meaning that patients are gaining a greater control over that relationship. In fact, the patient–doctor relationship has been described in economic terms as an “agency relationship” where informed agents make decisions for uninformed clients. In the context of the above-mentioned trends of patient empowerment, patient loyalty to a medical doctor does not seem to be guaranteed and it is thus becoming more important to change the traditional agency relationship into a more collaborative one (Einwiller, 2003; McKnight and Chervany, 2001). In that direction moves the consumerist approach, that involves a situation in which the roles are reversed, the patient interpret the active role and the doctor adopts a fairly passive role, acceding to the patient’s requests for a second opinion, referral to hospital, a sick note and so on (Morgan, 2003).

On one hand, patients complain that many of their questions to doctors go unanswered. The need of more detailed information is arising (Buccoliero *et al.*, 2016b), patients are becoming less reliant on doctors as Internet acts as an alternative source of information (Charles *et al.*, 2003; Godolphin, 2003). On the other hand, patients express the need of reaching a positive relationship with doctors as they miss the warmth and trust in the interaction.

The quality of the relationship can be improved by perceiving the staff team as a harmonious group (Borrill *et al.*, 2000) where the professional role of each member can be easily identified by the patient. This is normally obtained by the use of different colors in

employees uniforms. Courtesy, attention, empathy capabilities, professionalism of staff members and their ability to establish and maintain a positive relation with their patients affect patients' satisfaction (Avis *et al.*, 1995, Şener).

Certain aspects of doctor-patient communication seem to have an influence on patients' behavior and well-being, for example satisfaction with care, adherence to treatment, recall and understanding of medical information, coping with the disease, quality of life and even state of health (Smith *et al.*, 1981; Ong *et al.*, 1995). The assessment of these impacts is very often based on small samples, given the need to implement controlled clinical trials to this extent. Otherwise, subjective perceptions are considered instead.

Research objectives

As we stated above, the interdependencies between the three main pillars of patient experience (environment, relation and empowerment) have not been analyzed or implemented so far. Consequently, there is a lack of knowledge about the joint impact of these health service dimensions in shaping patients' experience and affecting their satisfaction. There is, therefore, a clear gap in the existing literature with reference to the above-mentioned three patient experience dimensions' if based on their relevance from patients' viewpoint. Through this study we want to provide a detailed analysis of the value elements of an inpatients experience, by combining the three dimensions and assessing their strengths for different cluster of patients (with a specific focus on different patients' subjective perceptions on their current health conditions) (see Figure 1).

Variables considered for the assessment of the different dimensions of the model are listed in Table 2.

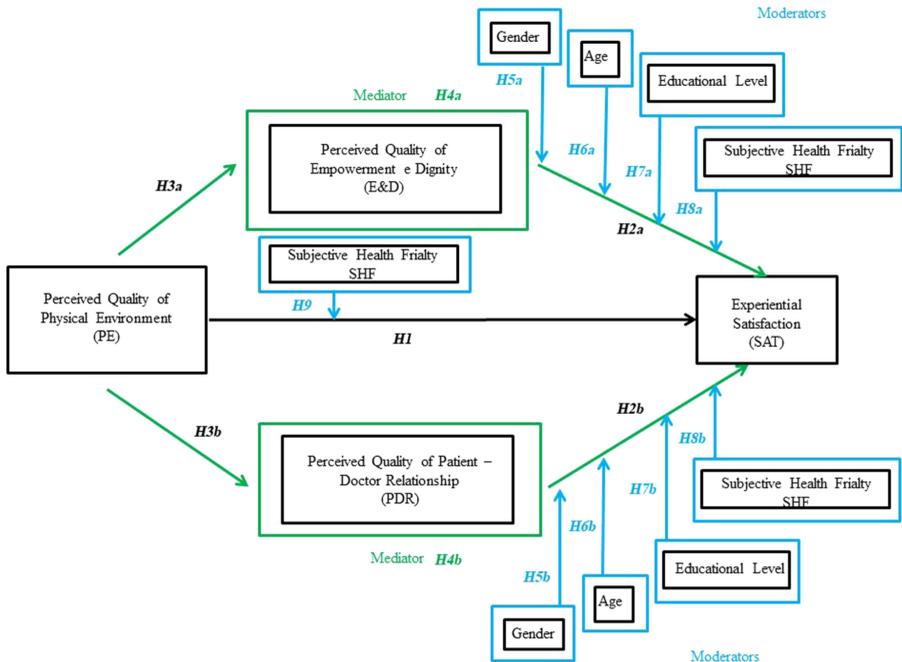


Figure 1.
The research model

Dimensions	Variables
PE Physical Environment	(1) Accessibility (2) Cleanliness (3) Smell (4) Lighting (5) Noise (6) Furniture (7) Temperature (8) Food (9) Leisure
E&D Empowerment and Dignity	(1) Involvement in the care process (2) Complete and clear information (3) Privacy and respect with regard to private information
PDR patient–doctor Relationship	(1) Ability to recognize medical uniforms (2) Team collaborative attitude (3) Relationship with the medical staff
SAT Overall Satisfaction	(1) Perceived security inside the hospital (2) Degree of serenity in the hospital experience (3) Overall evaluation of the hospital experience
SHF Subjective Health Frailty	(1) Health self-assessment (2) Perceived outcome of care and medication

Table 2.
Variables and
dimensions of
the model

From the model we developed the following hypothesis:

- H1.* Perceived quality of Physical Environment is positively related to Experiential Satisfaction.
- H2.* Perceived quality of Empowerment and Dignity and perceived quality of Patient–Doctor Relationship are positively related to Experiential Satisfaction.
- H2a.* Perceived quality of Empowerment and Dignity is positively related to Experiential Satisfaction.
- H2b.* Perceived quality of Patient–Doctor Relationship is positively related to Experiential Satisfaction.
- H3.* Perceived quality of Physical Environment is positively related to perceived quality of Empowerment and Dignity and perceived quality of Patient–Doctor Relationship.
- H3a.* Perceived quality of Physical Environment is positively related to perceived quality of Empowerment and Dignity.
- H3b.* Perceived quality of Physical Environment is positively related to perceived quality of Patient–Doctor Relationship.
- H4.* The positive relationship between perceived quality of Physical Environment and Experiential Satisfaction is mediated by perceived quality of Empowerment and Dignity and perceived quality of Patient–Doctor Relationship. The assumption is that perceived quality of Physical Environment does not affect directly Experiential Satisfaction. Rather, these perceptions become stronger according to perceived quality of Empowerment and Dignity and perceived quality of Patient–Doctor Relationship.
- H4a.* The positive relationship between perceived quality of Physical Environment and Experiential Satisfaction is mediated by perceived quality of Empowerment and Dignity.

H4b. The positive relationship between perceived quality of Physical Environment and Experiential Satisfaction is mediated by perceived quality of Patient–Doctor Relationship.

With reference to socio-demographic factors, literature allows to identify some specific clusters of patients defined by gender, age and education (Fox *et al.*, 2000; Fox, 2006), while there is no significant evidence of the effect of income on behaviors (Fox *et al.*, 2000; Ha and Cohen, 2008). Results show that as education level increases, patient satisfaction decreases, while as the age of the patient increases, so does the satisfaction level of the patient.

Therefore it is hypothesized that:

H5. Gender moderates the relationship between perceived quality of Empowerment and Dignity and perceived quality of Patient–Doctor Relationship and Experiential Satisfaction.

H5a. Gender will moderate the relationship between perceived quality of Empowerment and Dignity and Experiential Satisfaction; specifically, perceived quality of Empowerment and Dignity will be more strongly related to Experiential Satisfaction in females rather than in males.

H5b. Gender will moderate the relationship between perceived quality of Patient–Doctor Relationship and Experiential Satisfaction; specifically, perceived quality of Patient–Doctor Relationship will be more strongly related to Experiential Satisfaction in females rather than in males.

H6. Age moderates the relationship between perceived quality of Empowerment and Dignity and perceived quality of Patient–Doctor Relationship and Experiential Satisfaction.

H6a. Age will moderate the relationship between perceived quality of Empowerment and Dignity and Experiential Satisfaction; specifically, perceived quality of Empowerment and Dignity will be more strongly related to Experiential Satisfaction in young patients rather than in older ones.

H6b. Age will moderate the relationship between perceived quality of Patient–Doctor Relationship and Experiential Satisfaction; specifically, perceived quality of Patient–Doctor Relationship will be more strongly related to Experiential Satisfaction in young patients rather than in older ones.

H7. Education level moderates the relationship between perceived quality of Empowerment and Dignity and perceived quality of Patient–Doctor Relationship and Experiential Satisfaction.

H7a. Education level will moderate the relationship between perceived quality of Empowerment and Dignity and Experiential Satisfaction; specifically, perceived quality of Empowerment and Dignity will be more strongly related to Experiential Satisfaction in well educated patients rather than in less-educated ones.

H7b. Education level will moderate the relationship between perceived quality of Patient–Doctor Relationship and Experiential Satisfaction; specifically, perceived quality of Patient–Doctor Relationship will be more strongly related to Experiential Satisfaction in well educated patients rather than in less educated ones.

H8. Subjective Health Frailty moderates the relationship between perceived quality of Empowerment and Dignity and perceived quality of Patient–Doctor Relationship and Satisfaction.

- H8a.* Subjective Health Frailty will moderate the relationship between perceived quality of Empowerment and Dignity and Experiential Satisfaction; specifically, perceived quality of Empowerment and Dignity will be more strongly related to Experiential Satisfaction in higher levels of Subjective Health Frailty.
- H8b.* Subjective Health Frailty will moderate the relationship between perceived quality of Patient–Doctor Relationship and Experiential Satisfaction; specifically, perceived quality of Patient–Doctor Relationship will be more strongly related to Experiential Satisfaction in higher levels of Subjective Health Frailty.
- H9.* Subjective Health Frailty moderates the relationship between perceived quality of Physical Environment and perceived quality of Patient–Doctor Relationship and Experiential Satisfaction in higher levels of Subjective Health Frailty.

Methods

Sample and interviews

The research methodology is quantitative, based on the use of standardized structured interviews with patients staying in five departments: surgery, oncology, orthopedics, gynecology and general internal medicine from four different private and public hospitals across Italy (two based in Milan, one in Cagliari and one in Caserta). All the considered Hospitals operate within the Italian National Health Service (public funding and universal access).

The sampling was simple and not stratified. Interviews were administered to autonomous and collaborative patients selected by the hospitals' staff (excluded when in critical clinical or mental conditions). Each interview lasted approximately 120 min. The interview was based on 74 questions, which require either a dichotomous or a scale answer (liker scale 1–5 used), it is based on six main topics:

- (1) Socio-demographic information;
- (2) Perceived quality of Physical Environment;
- (3) Perceived quality of Empowerment and Dignity;
- (4) Perceived quality of Doctor–Patient Relationship;
- (5) Experiential Satisfaction;
- (6) Internet use in accessing health information.

This study is based on part of the collected data. For instance section 6 and other items have not been used in this paper.

Questions used for the assessment of patients' experience were adapted from the following questionnaires "Patient-Perceived Total Quality Service (TQS)" (Duggirala *et al.*, 2008) and "Patient Satisfaction Questionnaire (PSQ)" (Marshall and Hays, 1994); while the assessment of Subjective Health Frailty was based on the VOICE questionnaire (Evans *et al.*, 2012) and items selected by the SWB model (Sun *et al.*, 2016).

259 interviews were carried out. Once the data was collected, descriptive statistics were calculated.

Statistical analysis

Statistical Package for the Social Sciences Program (SPSS) version 21 is used for the statistical analysis. An early investigation of the sample composition is made through descriptive statistics. Respondents' Experiential Satisfaction is investigated by testing the mediating role of Empowerment and Dignity and of Patient–Doctor Relationship. According

to [Baron and Kenny \(1986\)](#) suggestions, there are four steps to examine this effects, in which several regression analyses are conducted and significance of the coefficients is examined at each step. Regression analysis is also performed in the light of various socio-demographic variables tested as moderators ([MacKinnon and Dwyer, 1993](#)).

Results

Sample description

The average age of the sample is 50.37 years (youngest respondent 16 y.o.; oldest 94 y.o.). Females represent 60.2% of the sample; males represent 39.8%. When asked to specify their educational level, 23.6% said primary school, 29.7% middle school, 36.3% high school and 10.4% declared to have an academic degree. The 95% of respondents were Italian citizens. Finally, regarding their job status, the 28.2% of patients indicated retired and 23.6% housewife, 8.5% employee, 8.1% freelance professional, 5.8% worker, 3.1% student and 22.7% other.

Hypothesis testing

The experiential items are derived in this study through an aggregation of various items, Cronbach's alpha coefficients were performed to test their reliability ([Cronbach, 1951](#)). Test scores exhibit a good internal consistency reliability with all Cronbach's alpha higher than 0.7 as shown in [Table 3](#).

The study uses simple regression analysis to examine the relationship among PE, E&D, PDR and SAT by considering age, gender and education level as control variables.

As shown in [Table 4](#), perceived quality of Physical Environment (Beta 0.899 Sig. 0.000), perceived quality of Empowerment and Dignity (Beta 0.666 Sig. 0.000) and perceived quality of Patient–Doctor Relationship (Beta 0.642 Sig. 0.000) are positively and significantly related to Experiential Satisfaction. In addition, perceived quality of Physical Environment is positively and significantly related to perceived quality of Empowerment and Dignity (Beta 0.907 Sig. 0.000) and perceived quality of Patient–Doctor Relationship (Beta 0.879 Sig. 0.000). This allows to state that **H1, H2a, H2b, H3a, H3b are all supported**.

The impact of perceived quality of Physical Environment elements above Experiential Satisfaction was further analyzed by testing a mediation effect for the two variables perceived quality of Empowerment and Dignity ([H4a](#)) and perceived quality of

Table 3.
Reliability analysis

Variables	Cronbach's alpha
PE	0.888
E&D	0.834
PDR	0.782
SAT	0.879
SHF	0.709

Table 4.
Regression analysis

Variables	Beta	R ²	t	F	Sig.
PE to SAT	0.899	0.753	9.102	21.382	0.000
E&D to SAT	0.666	0.552	15.061	76.119	0.000
PDR to SAT	0.642	0.512	13.557	64.864	0.000
PE to E&D	0.907	0.768	9.469	23.229	0.000
PE to PDR	0.879	0.767	9.151	23.029	0.000

Patient–Doctor Relationship (H4b). In the two analyses we controlled for age, gender and education level.

H4a (see Table 5): the study first lets perceived quality of Physical Environment be the independent variable, and perceived quality of Empowerment and Dignity the dependent one. Results show that perceived quality of Physical Environment significantly and positively affects perceived quality of Empowerment and Dignity (Beta 0.907 Sig. 0.000).

Furthermore, we considered perceived quality of Physical Environment as the independent variable, and Experiential Satisfaction the dependent one. In this scenario, results indicate that perceived quality of Physical Environment significantly and positively affects Experiential Satisfaction (Beta 0.899 Sig. 0.000). Moreover, perceived quality of Empowerment and Dignity significantly and positively accounts for Experiential Satisfaction (Beta 0.666 Sig. 0.000). Once obtained the above-mentioned results, the study regresses perceived quality of Physical Environment toward Experiential Satisfaction by adding as mediating variable perceived quality of Empowerment and Dignity. Perceived quality of Empowerment and Dignity significantly and positively affects Experiential Satisfaction. Results demonstrate that Beta value for Experiential Satisfaction in model 3 is lower than in the second model (Beta 0.516 lower than Beta 0.899): therefore, a partial mediation effect is registered thus **H4a is confirmed**.

H4b (see Table 6): the study first lets perceived quality of Physical Environment be the independent variable, and perceived quality of Patient–Doctor Relationship the dependent one. Results show that perceived quality of Physical Environment significantly and positively affects perceived quality of Patient–Doctor Relationship (Beta 0.879 Sig. 0.000). Then perceived quality of Physical Environment is considered the independent variable, and Experiential Satisfaction the dependent one. Results indicate that perceived quality of Physical Environment significantly and positively affects Experiential Satisfaction (Beta 0.899 Sig. 0.000). Moreover, perceived quality of Patient–Doctor Relationship significantly and positively accounts for Experiential Satisfaction (Beta 0.642 Sig. 0.000). Once obtained the above-mentioned results, the study regresses with Experiential Satisfaction on perceived quality of Physical Environment by adding as the mediating variable perceived quality of Patient–Doctor Relationship. Perceived quality of Patient–Doctor Relationship significantly and positively affects Experiential Satisfaction. Results demonstrate that Beta value for Experiential Satisfaction in model 3 is lower than in the second model (Beta 0.520 lower than Beta 0.899): therefore, a partial mediation effect is registered thus **H4b is confirmed**.

Table 5.
Mediating test of
perceived quality of
Empowerment and
Dignity

Variable	Model 1	Model 2		Model 3
	E&D	SAT	SAT	SAT
PE	0.907 Sig. 0.000	0.899 Sig. 0.000		0.516 Sig. 0.011
E&D			0.666 Sig. 0.000	0.423 Sig. 0.027
Adj R ²	0.735	0.718	0.545	0.757
F	23.229	21.382	76.119	20.919

Table 6.
Mediating test of
perceived quality of
Patient–Doctor
relationship

Variable	Model 1	Model 2		Model 3
	PDR	SAT	SAT	SAT
PE	0.879 Sig. 0.000	0.899 Sig. 0.000		0.520 Sig. 0.008
PDR			0.642 Sig. 0.000	0.432 Sig. 0.023
Adj R ²	0.734	0.718	0.504	0.759
F	23.029	21.382	64.864	21.183

In order to test **H5**, **H6**, **H7**, **H8** and **H9** a moderator effect was evaluated for Gender, Age, Educational Level and Subjective Health Frailty.

H5: first the moderator role was considered in the relationship between perceived quality of Empowerment and Dignity and Experiential Satisfaction for gender. In this case **H5a (Sig. 0.749) is refused**, then the moderator role was considered in the relationship between perceived quality of Patient–Doctor Relationship and Experiential Satisfaction for gender. In this case, **H5b (Sig. 0.220) is also refused**.

H6: first the moderator role was considered in the relationship between perceived quality of Empowerment and Dignity and Experiential Satisfaction for age. In this case **H6a (Sig. 0.184) is refused**, then the moderator role was considered in the relationship between perceived quality of Patient–Doctor Relationship and Experiential Satisfaction for age. In this case, **H6b (Sig. 0.402) is also refused**.

H7: first the moderator role was considered in the relationship between perceived quality of Empowerment and Dignity and Experiential Satisfaction for education level. In this case **H7a (Sig. 0.989) is refused**. Consequently, the moderator role was considered in the relationship between perceived quality of Patient–Doctor Relationship and Experiential Satisfaction for education level. In this case, **H7b (Sig. 0.036) is accepted** in fact the effect of perceived quality of Patient–Doctor Relationship on Experiential Satisfaction is stronger when the patient is more educated.

H8: first the moderator role was considered in the relationship between perceived quality of Empowerment and Dignity and Experiential Satisfaction for Subjective Health Frailty. In this case **H8a (Sig. 0.015) is accepted**, then the moderator role was considered in the relationship between perceived quality of Patient–Doctor Relationship and Experiential Satisfaction for Subjective Health Frailty. In this case, **H8b (Sig. 0.000) is also accepted**.

H9: the moderator role was considered in the relationship between perceived quality of Physical Environment and Experiential Satisfaction for Subjective Health Frailty. In this case **H9 (Sig. 0.032) is accepted**.

Discussion and conclusion

Our results allow to state that the three identified patient experience dimensions significantly impact on patient Experiential Satisfaction, thus establishing the relevance of the considered variables. The analyses provide a clear evidence that patients' satisfaction is determined by a blend of positive patient experiential items.

A perceived high quality of Physical Environment enables an improvement of both Empowerment and Dignity and Patient–Doctor Relationship, and positively affects the Experiential patients' Satisfaction. Moreover, increased levels of Empowerment and Dignity and Patient–Doctor Relationship further reinforce (as shown through their mediation role) the impact of Physical Environment on Experiential Satisfaction. These relationships are qualified as even stronger for two selected clusters of patients (as shown through the moderation analyses): patients who perceived their health as frail and people with higher levels of education.

Therefore, we demonstrate that an improvement in hospital Physical Environment creates a better context in terms of perceived quality of patient empowerment and relationship and increases the Experiential Satisfaction in a sort of “virtual circle”. People who are more afraid of their health condition show to be even more sensitive to these “circular” relationships as they need a better understanding of their conditions and fears.

In order to satisfy patients' experiential needs, a greater attention is required in renewing the different physical elements of the hospital, as from our study this dimension is confirmed to be relevant in affecting patients' Experiential Satisfaction. Moreover, we also demonstrate that the relations with patients and the perceived patient empowerment could take significant benefits from these environmental improvements. Experiential marketing interventions on

selected items of physical environment (shown in Table 1 with references to existing scientific literature) could play an important role to this extent. For instance, the insights collected during our study clearly show that colors and music are among the most effective factors. As for the colors, 212 respondents out of 236 declared to appreciate the presence of different colors inside the hospital. As for the music, 60% of the sample stated to prefer the presence of music inside the hospital environment also in order to filter out typical hospital noises.

Evidence from our study also suggest that the best impact on patients' Experiential Satisfaction is achieved when these environmental projects are linked to the improvement of the relational skills and of the overall patient empowerment (by providing patients with better information and with the opportunity to play an active role in the care process).

The introduction in the healthcare sector of the managerial role of the Chief Experience Officer might contribute to the development and improvement of the patient journey (Needham, 2012). A strong cooperation between the Chief Experience Officer and the Hospital Chief Architects could enrich the overall value provided to patients instead of focusing only on organizational and functional needs.

This current study could be further developed by including the assessment of the clinical outcome of patients (monitored through controlled clinical studies), in order to measure potential impacts of the considered variables also on this dimension (improvements in patients' compliance or long term health outcomes). Furthermore, also the value of the digital patient experiential items could be investigated.

The main strength of this study is measuring hospital performance from the patients' perspective rather than from the providers' point of view. This perspective has been so far missing especially in the public healthcare sector in Italy which should get rid of its traditional bureaucratic organizational approach, focusing instead on customers' experience and activating customer oriented developments in accordance with the competitive environment (Hsiao and Lin, 2008).

References

- AbuDagga, A. and Weech-Maldonado, A. (2016), "Do patient, hospital, and community characteristics predict variations in overall inpatient experience scores? A multilevel analysis of hospitals in California", *Health Services Management Research*, Vol. 29, pp. 25-34.
- Alrubaiee, L. and Alkaa'ida, F. (2011), "The mediating effect of patient satisfaction in the patients' perceptions of healthcare quality-patient trust relationship", *International Journal of Marketing Studies*, Vol. 3, p. 103.
- Andrade, C., Lima, M.L., Pereira, C.R., Fornara, F. and Bonaiuto, M. (2013), "Inpatients' and outpatients' satisfaction: the mediating role of perceived quality of physical and social environment", *Health and Place*, Vol. 21, pp. 122-132.
- Avis, M., Bond, M. and Arthur, A. (1995), "Exploring patient satisfaction with out-patient services", *Journal of Nursing Management*, Vol. 3, pp. 59-65.
- Baker, J., Levy, M. and Grewal, D. (1992), "An experimental approach to making retail store environmental decisions", *Journal of Retailing*, Vol. 68.
- Baraban, R.S. and Durocher, J.F. (2001), *Successful Restaurant Design*, Wiley, John Wiley & Sons, New York.
- Baron, R.M. and Kenny, D.A. (1986), "The moderator-mediator variable distinction in social psychological research: conceptual, strategic, and statistical consideration", *Journal of Personality and Social Psychology*, Vol. 51, pp. 1173-1182.
- Bate, P. and Robert, G. (2007), *Bringing User Experience to Healthcare Improvement: The Concepts, Methods and Practices of Experience-based Design*, Radcliffe Publishing, Oxford.

- Beattie, M., Lauder, W., Atherton, I. and Murphy, D.J. (2014), "Instruments to measure patient experience of health care quality in hospitals: a systematic review protocol", *Systematic Reviews*, Vol. 3 No. 4, doi: [10.1186/2046-4053-3-4](https://doi.org/10.1186/2046-4053-3-4).
- Bellio, E., Buccoliero, L. and Prenestini, A. (2009), "Patient web empowerment: la web strategy delle aziende sanitarie del SSN", Rapporto OASI 2009, L'aziendalizzazione della sanità in Italia, E. Anessi Pessina and E. Cantù, MILANO, EGEA: 413-434.
- Bellizzi, J.A. and Hite, R.E. (1992), "Environmental color, consumer feelings, and purchase likelihood", *Psychology and Marketing*, Vol. 9, pp. 347-363, doi: [10.1002/mar.4220090502](https://doi.org/10.1002/mar.4220090502).
- Bitner, M.J. (1992), "Servicescapes: the impact of physical surroundings on customers and employees", *Journal of Marketing*, Vol. 56 No. 2, pp. 57-71.
- Bitner, M.J., Brown, S.W. and Meuter, M.L. (2000), "Technology infusion in service encounters", *Journal of the Academy of Marketing Science*, Vol. 28 No. 1, pp. 138-149.
- Borrill, C.S., Carletta, J., Carter, A., Dawson, J.F., Garrod, S., Rees, A., Richards, A., Shapiro, D. and West, M.A. (2000), *The Effectiveness of Health Care Teams in the National Health Service*, University of Aston, Birmingham.
- Bos, L., Marsh, A., Carroll, D., Gupta, S. and Rees, M. (2008), "Patient 2.0 empowerment", *Proceedings of International Conference on Semantic Web and Web Services*, pp. 164-168.
- Bowling, A., Rowe, G., Lambert, N., Waddington, M., Mahtani, K., Kenten, C., Howe, A. and Francis, S. (2012), "The measurement of patients' expectations for health care: a review and psychometric testing of a measure of patients' expectations", *Health Technology Assessment*, Vol. 16 No. 30, pp. i-xii, 1-509, doi: [10.3310/hta16300](https://doi.org/10.3310/hta16300), PMID: 22747798.
- Buccoliero, L., Bellio, E., Mazzola, M. and Solinas, E. (2016a), "A marketing perspective to 'delight' the 'patient 2.0': new and challenging expectations for the healthcare provider", *BMC Health Services Research*, Vol. 16 No. 47.
- Buccoliero, L., Bellio, E., Mazzola, M. and Solinas, E. (2016b), "Technology innovation in healthcare and changing patient's behaviors: new challenges for marketing", *Mercati e Competitività Rivista della Società Italiana di Marketing*, pp. 45-70.
- Burt, T. (2006), "Reinventing the patient experience", *Healthcare Executive*, Vol. 1, pp. 8-14.
- Calderoni, D., Ferretti, A., Cuoghi, D. and Maurizi, P. (1999), "La ristorazione", in CLUEB (Ed.), *Il Comfort in Ospedale*, Agenzia Sanitaria Regionale Emilia Romagna, Clueb, Bologna.
- Chaitchik, S., Kreitler, S., Shared, S., Schwartz, I. and Rosin, R. (1992), "Doctor-patient communication in a cancer ward", *Journal of Cancer Education*, Vol. 7, pp. 41-54.
- Cham, T.H., Lim, Y.M. and Aik, N.C. (2015), "A study of brand image, perceived service quality, patient satisfaction and behavioral intention among the medical tourists", *Global Journal of Business and Social Science Review*, Vol. 2, pp. 14-26.
- Charles, C.A., Whelan, T., Gafni, A., Willan, A. and Farrell, S. (2003), "Shared treatment decision making: what does it mean to physicians?", *Journal of Clinical Oncology*, Vol. 21, pp. 932-936.
- Chebat, J.C. and Michon, R. (2003), "Impact of ambient odors on mall shoppers' emotions, cognition, and spending. A test of competitive causal theories", *Journal of Business Research*, Vol. 56, pp. 529-539.
- Conway, J., Johnson, B., Edgman-Levitan, S., Schlucter, J., Ford, D., Sodomka, P. and Simmons, L. (2006), "Partnering with patients and families to design a patient- and family-centered health care system", *The Institute for Patient- and Family-Centered Care*, June 2006.
- Crawford, M., Rutter, D. and Manley, C. (2002), "Systematic review of involving patients in the planning and development of health care", *BMJ British Medical Journal*, Vol. 325, pp. 1263-1268.
- Cronbach, L. (1951), "Coefficient alpha and the internal structure of tests", *Psychometrika*, Vol. 13, pp. 297-334.
- Crow, R., Gage, H., Hampson, S., Hart, J., Kimber, A., Storey, L. and Thomas, H. (2002), "The measurement of satisfaction with healthcare: implications for practice from a systematic review of the literature", *Health Technol Assess*, Vol. 6, pp. 1-6.

- Darr, K. (2001), "The manager and pain control for patients", *Hospital Topics*, Vol. 79 No. 4, pp. 27-29, doi: [10.1080/00185860109597915](https://doi.org/10.1080/00185860109597915).
- Dawood, M. and Gallini, A. (2010), "Using discovery interviews to understand the patient experience", *Nursing Management*, Vol. 17, pp. 26-31.
- Daykin, N., Evans, D., Petsoulas, C. and Sayers, A. (2007), "Evaluating the impact of patient and public involvement initiatives on UK health services: a systematic review", *Evid Policy*, Vol. 2007 No. 3, pp. 47-65.
- Donovan, R.J. and Rossiter, J.R. (1982), "Store atmosphere: an environmental psychology approach", *Journal of Retailing*, Vol. 58, pp. 34-57.
- Dubé, L., Chebat, J.C. and Morin, S. (1995), "The effects of background music on consumers' desire to affiliate in buyer-seller interactions", *Psychol Mark*, Vol. 12, pp. 305-319, doi: [10.1002/mar.4220120407](https://doi.org/10.1002/mar.4220120407).
- Duggirala, M., Rajendran, C. and Anantharaman, R.N. (2008), "Patient-perceived dimensions of total quality service in healthcare", *Benchmarking: An International Journal*, Vol. 15, pp. 560-583, doi: [10.1108/14635770810903150](https://doi.org/10.1108/14635770810903150).
- Einwiller, S. (2003), "When reputation engenders trust: an investigation in business-to-consumer electronic commerce", *The International Journal of Electronic Commerce and Business Media*, Vol. 13, pp. 196-209.
- Eroglu, S. and Machleit, K. (1993), "Atmospheric factors in the retail environment: sights, sounds and smells", *Advances in Consumer Research*, Vol. 20, p. 34.
- Evans, J., Rose, D., Flach, C., Cspike, E., Glossop, H., Mccrone, P., Craig, T. and Wykes, T. (2012), "VOICE: developing a new measure of service users' perceptions of inpatient care, using a participatory methodology", *Journal of Mental Health*, Vol. 21 No. 1.
- Finzi, G., Lazzari, C. and Belgiovine, R. (2009), "La realizzazione di linee guida per l'accreditamento volontario dei servizi di pulizia e sanificazione ambientale", *GSA - il giornale dei servizi ambientali*, No. 4, April 2009, pp. 16-18.
- Fox, S. (2006), *Health Information Online*, Pew Internet & American Life Project, Washington, DC.
- Fox, S., Horrigan, J., Lenhart, A., Spooner, T., Burke, M. and Lewis, O. (2000), *The Online Health Care Revolution: How the Web Helps Americans Take Better Care of Themselves*, The Pew Internet & American Life Project, Washington, DC.
- Frampton, S. (2012), "Healthcare and the patient experience: harmonizing care and environment", *Health Environments Research and Design Journal*, Vol. 5 No. 2, pp. 3-6.
- Godolphin, W. (2003), "The role of risk communication in shared decision making: first, let's get to choices", *BMJ*, Vol. 327, pp. 692-3.
- Golden, L.G. and Zimmerman, D.A. (1986), *Effective Retailing*, Houghton Mifflin, Boston.
- Goldman, D. and Romley, J.A. (2008), Hospitals as hotels: the role of patient amenities in hospital demand NBER", Working Paper, National Bureau of Economic Research, Cambridge, MA.
- Gorn, G.J., Chattopadhyay, A., Yi, T. and Dahl, D.W. (1997), "Effects of color as an executional cue in advertising: they're in the shade", *Management Science*, Vol. 43 No. 10, pp. 1387-1400.
- Ha, T.T. and Cohen, G.R. (2008), *Striking Jump in Consumers Seeking Health Care Information*, Health System Change, Washington, DC.
- Health Foundation (2013), *Measuring Patient Experience: No. 18, Evidence Scan*, Health Foundation.
- Helena Vinagre, M. and Neves, J. (2008), "The influence of service quality and patients' emotions on satisfaction", *International Journal of Health Care Quality Assurance*, Vol. 21, pp. 87-103.
- Hewitson, P., Skew, A., Graham, C., Jenkinson, C. and Coulter, A. (2014), "People with limiting long-term conditions report poorer experiences and more problems with hospital care", *BMC Health Services Research*, Vol. 14, p. 33, doi: [10.1186/1472-6963-14-33](https://doi.org/10.1186/1472-6963-14-33).
- Hsiao, C.-T. and Lin, J.-S. (2008), "A study of service quality in public sector", *International Journal of Electronic Business Management*.

- Ippolito, A., Smaldone, F. and Ruberto, M. (2019), "Exploring patient empowerment", *The TQM Journal*, Vol. 33 No. 1, ISSN: 1754-2731.
- Ismail, B., Tuba, B. and Burcu, E. (2014), "The impact of total quality service (TQS) on healthcare and patient satisfaction: an empirical study of Turkish private and public hospitals", *International Journal of Health Planning and Management*, Vol. 29, pp. 292-315.
- James, J. (2013), *Health Policy Brief: Patient Engagement*, Health Affairs, Bethesda, MD.
- Jenkinson, C., Coulter, A., Bruster, S., Richards, N. and Chandola, T. (2002), "Patients' experiences and satisfaction with health care: results of a questionnaire study of specific aspects of care", *Qual Saf Health Care*, Vol. 11, pp. 335-339.
- Joy, A. and Sherry, J. Jr (2003), "Speaking of art as embodied imagination: a multisensory approach to understanding aesthetic experience", *Journal of Consumer Research*, Vol. 30 No. 2, pp. 259-282, doi: [10.1086/376802](https://doi.org/10.1086/376802).
- Kjeken, I., Dagfinrud, H., Mowinckel, P., Uhlig, T., Kvien, T.K. and Finset, A. (2006), "Rheumatology care: involvement in medical decisions, received information, satisfaction with care, and unmet health care needs in patients with rheumatoid arthritis and ankylosing spondylitis", *Journal Arthritis Care and Research*, Vol. 55, pp. 394-401.
- Larson, E., Sharma, J., Bohren, M.A. and Tunçalp, Ö. (2019), "When the patient is the expert: measuring patient experience and satisfaction with care", *Bulletin of the World Health Organization*, Vol. 97, p. 563.
- Lecroy, N. (2010), "Anticipating the changes in Medicare reimbursement", *The Beryl Institute's 2010 Conference Highlights Ideas on Improving Patient Experience*, Bedford, TX, The Beryl Institute.
- Lee, W., Chen, C., Chen, T. and Chen, C. (2010), "The relationship between consumer orientation, service value, medical care service quality and patient satisfaction: the case of a medical center in Southern Taiwan", *African Journal of Business Management*, Vol. 4, pp. 448-458.
- Lichtle, M.-C., Llosa, S. and Plichon, V. (2002), "La contribution des differents elements d'une grande surface alimentaire a la satisfaction du client", *Recherche et Applications en Marketing (French Edition)*, Vol. 17 No. 4, pp. 23-34, doi: [10.1177/076737010201700402](https://doi.org/10.1177/076737010201700402).
- Lin, I.Y. (2004), "Evaluating a servicescape: the effect of cognition and emotion", *International Journal of Hospitality Management*, Vol. 23 No. 2, pp. 163-178, ISSN 0278-4319, doi: [10.1016/j.ijhm.2003.01.001](https://doi.org/10.1016/j.ijhm.2003.01.001).
- Lupi, G. (1999), *Il comfort nelle strutture sanitarie. Il comfort in ospedale*, CLUEB, Agenzia Sanitaria Regionale Emilia Romagna.
- MacKinnon, D. and Dwyer, J. (1993), "Estimating mediated effects in prevention studies", *Evaluation Review*, Vol. 17, pp. 144-158.
- Marcus, C.C. and Barnes, M. (1995), *Gardens in Healthcare Facilities: Uses, Therapeutic Benefits, and Design Recommendations*, The Center for Health Design, Berkeley, CA.
- Marshall, G.N. and Hays, R.D. (1994), *The Patient Satisfaction Questionnaire Short-form (PSQ-18)*, Rand Santa Monica, CA.
- McKnight, D. and Chervany, N. (2001), "What trust means in e-commerce customer relationships: an interdisciplinary conceptual typology", *International Journal of Electronic Commerce*, Vol. 6, pp. 35-59.
- Melotti, R.M., Bergonzi, A., Benedetti, A., Bonarelli, S., Campione, F., Canestrari, S., Castagnoli, A., Chattat, R., Di Nino, G., Fortuna, D., Gambale, G., Gamberini, E., Guberti, A., Manici, M., Meli, M., Pasetto, A., Ridolfi, L. and Zanell, M. (2009), "Progetto umanizzazione delle cure e dignità della persona in terapia intensiva della Regione Emilia-Romagna", *Anestesia Forum*, Vol. 2, pp. 75-82.
- Meyers, S. (2009), "The total picture: developing a patient experience", *Trustee*, Vol. 62, pp. 18-22.
- Morgan, M. (2003), "The doctor-patient relationship", Chapter in *Sociology as Applied to Medicine*, Saunders Elsevier, Philadelphia.

- Murante, A.M., Seghieri, C., Brown, A. and Nuti, S. (2014), "How do hospitalization experience and institutional characteristics influence inpatient satisfaction? A multilevel approach", *The International Journal of Health Planning and Management*, Vol. 29 No. 3, pp. e247-e260.
- Murti, A., Deshpande, A. and Srivastava, N. (2013), "Patient satisfaction and consumer behavioural intentions an outcome of service quality in health care services", *Journal of Health Management*, Vol. 15, pp. 549-577.
- Needham, B.R. (2012), "The truth about patient experience: what we can learn from other industries, and how three ps can improve health outcomes, strengthen brands, and delight customers", *Journal of Healthcare Management*, Vol. 57 No. 4, pp. 255-63, PMID: 22905604.
- Nemetz, F. (2010), "The patient experience", *HFM Magazine*.
- Nor Khasimah, A. and Wan Normila, M. (2013), "Perceptions of service quality and behavioral intentions: a mediation effect of patient satisfaction in the private health care in Malaysia", *International Journal of Marketing Studies*, Vol. 5, p. 15.
- Ong, L.M., De Haes, J.C., Hoos, A.M. and Lammes, F.B. (1995), "Doctor-patient communication: a review of the literature", *Social Science and Medicine*, Vol. 40, pp. 903-918.
- Philips Luminaires (2007), "Designing people-centric hospitals using Philips lighting solutions", *Inspiration for Healthcare Environments*, 2014 Koninklijke Philips N. Document order number: HEALTHCAREAPPGUIDE#2 – 5/14 INT.
- Piper, D., Iedema, R., Gray, J., Verma, R., Holmes, L. and Manning, N. (2012), "Utilizing experience-based co-design to improve the experience of patients accessing emergency departments in New South Wales public hospitals: an evaluation study", *Health Services Management Research*, Vol. 25, pp. 162-172.
- Plichon, V. (1999), *Analyse de l'influence de la satisfaction des états affectifs sur le processus de satisfaction dans la grande distribution*, Université de Bourgogne, Dijon.
- Puchalski, C., Ferrell, B., Virani, R., Otis-Green, S., Baird, P., Bull, J., Chochinov, H., Handzo, G., Nelson-Becker, H., Prince-Paul, M., Pugliese, K. and Sulmasy, D. (2009), "Improving the quality of spiritual care as a dimension of palliative care: the report of the consensus conference", *Journal of Palliative Medicine*, Vol. 12 No. 10, pp. 885-904, doi: [10.1089/jpm.2009.0142](https://doi.org/10.1089/jpm.2009.0142), PMID: 19807235.
- Raman, A. and Tucker, A. (2011), "The Cleveland Clinic: improving the patient experience", *Harvard Business Review*, September 12.
- Reese, S. (2009), "Patient experience correlates with clinical quality", *Managed Healthcare Executive*, Vol. 19, pp. 24-25.
- Roger, U., Xiaobo, Q., Craig, Z., Anjali, J. and Ruchi, C. (2004), "The role of the physical environment in the hospital of the 21st century: a once-in-a-lifetime opportunity", *The Center for Health Design*, Vol. 311.
- Schneider-Kamp, A. and Askegaard, S. (2020), "Putting patients into the centre: patient empowerment in everyday health practices", *Health: An Interdisciplinary Journal for the Social Study of Health, Illness and Medicine*, Vol. 24, pp. 625-645.
- Şener, H.Y.J. (2014), "Improving patient satisfaction in health services: an application at dumlupinar university kutahya evliya celebi education and research hospital", *European Journal of Business and Management*, Vol. 6 No. 30, pp. 172-181.
- Shannon, D. (2013), "Physician well-being: a powerful way to improve the patient experience", *Physician Executive*.
- Siberil, P. (1994), *Influence de la musique sur les comportements des acheteurs en grandes surfaces de vente*, Université de Rennes, Rennes.
- Smith, C.K., Polis, E. and Hadac, R.R. (1981), "Characteristics of the initial medical interview associated with patient satisfaction and understanding", *The Journal of Family Practice*, Vol. 12, pp. 283-288.
- Stump, T. and Coustasse, A. (2012), "The emergence and potential impact of medicine 2.0 in the healthcare industry", *Hospital Topics*, Vol. 2, pp. 33-38.

- Sun, S., Chen, J., Johannesson, M., Kind, P. and Burstro, K. (2016), "Subjective well-being and its association with subjective health status, age, sex, region, and socio-economic characteristics in a Chinese population study", *Journal of Happiness Studies*, Vol. 17, p. 40.
- Susilo, R., Innocentius, B. and Agus, P. (2020), "Effect of trust, value and atmosphere towards patient satisfaction (case study on preama clay of WaeLaku, Indonesia)", *International Journal of Advanced Science Technology*, Vol. 29, pp. 6716-6723.
- Tsianakas, V., Maben, J., Robert, G., Richardson, A., Dale, C. and Wiseman, T. (2012), "Implementing patient centred cancer care: using experience-based co-design to improve patient experience in breast and lung cancer services", *Journal Support Care Cancer*, Vol. 20, pp. 2639-2647.
- Webb, K. (2007), "Exploring patient, visitor and staff perspectives on inpatients' experiences of care", *Journal of Management and Marketing in Healthcare*, Vol. 1, pp. 61-72.
- Weiss, M. and Tyink, S. (2009), "Creating sustainable ideal patient experience cultures", *MedSurg Nursing*, Vol. 18 No. 4, pp. 249-52, PMID: 20552854.
- WHO (2000), "The World health report 2000", *Health Systems: Improving Performance*, WHO, Geneva.
- Wilson, E.V. and Strong, D.M. (2014), "Editors' introduction to the special section on patient-centered e-health: research opportunities and challenges", *Communications of the Association for Information System*, Vol. 34, pp. 323-336.
- Wu, C.-C. (2011), "The impact of hospital brand image on service quality, patient satisfaction and loyalty", *African Journal of Business Management*, Vol. 5, p. 4873.
- Yalch, R. and Spangenberg, E. (1990), "Effects of store music on shopping behavior", *Journal of Consumer Marketing*, Vol. 7 No. 2, pp. 55-63, doi: [10.1108/EUM0000000002577](https://doi.org/10.1108/EUM0000000002577).
- Zhang, Y., Feick, L. and Price, L.J. (2006), "The impact of self-construal on aesthetic preference for angular versus rounded shapes", *Personality and Social Psychology Bulletin*, Vol. 32 No. 6, pp. 794-805, doi: [10.1177/0146167206286626](https://doi.org/10.1177/0146167206286626).

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