

A Critical Review of Patient Satisfaction and Value Based Health Care

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ABSTRACT

Welcome to a new horizon in healthcare where patient satisfaction is not just a goal, but the cornerstone of value-based health care delivery services. In an age where every patient is a discerning customer, doesn't it make you wonder what truly drives their satisfaction? Delving into this realm, a burgeoning number of scientific research studies are zeroing in on this very question, seeking to unveil the elements that craft a patient's healthcare journey into a fulfilling experience. This systematic study stands at the vanguard, committed to dissecting those elusive drivers that assure the quality of services aligns perfectly with patient expectations and demands. With a meticulous analytics-based approach, we aim to bridge the literature gap and illuminate the pathways that lead commercial healthcare settings towards exemplary service delivery. Join us as we explore the intricacies of patient satisfaction through the lens of the latest research, professional insights, and real-world outcomes.

Welcome to research paper trove of insights, where meticulous research meets the art of demystifying the complex world of patient satisfaction. Have service provider ever wondered what truly lies at the heart of patient happiness within the healthcare system? Drawing on the rigor of The Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) method, researcher embarked on a comprehensive review, plunging into the depths of esteemed databases like Scopus, Web of Science, and PubMed. Researcher quest spanned studies from the evolution of care in 2010 to the innovations of 2023, all penned in articulate English and filtered through stringent inclusion and exclusion criteria. From an initial wave of prospective research, we distilled our findings to an enlightened set of 50 pivotal items. With surgical precision, researcher wielded co-citation and bibliographic analysis to unearth the true gems—those factors that don't just influence patient satisfaction but redefine it, outlined by pioneering authors and monumental documents. In this blog post, we'll share our voyage through the data, classify the myriad factors impacting patient satisfaction into criterion and explanatory variables, and delve into what researchers deem essential, as well as the authentic sources of patient contentment. Join us as we unravel the most important factors that are sculpting the landscape of patient care today.

Keywords – Value based healthcare, Patient satisfaction, Patient reported outcomes.

INTRODUCTION

Healthcare systems are gradually transitioning to "value-based healthcare" (VBHC) (Porter and Teisberg, 2006), with the goal of increasing care quality and performance, as well as equitable, sustainable, and transparent resource use (Hurst et al. 2022). So far, there is no generally agreed- upon definition of VBHC (Schapira et al., 2020). However, a feature shared by most VBHC programs is a multimodal strategy that, in addition to clinical results, prioritizes patient-reported quality and performance measures. "Patient Reported Outcome Measures" (PROMs) and "PatientReported Experience Measures" (PREMs) are two examples (EXPH, 2019).

Employee well-being should be included in the imperatives of healthcare organizations, according to the early proponents of VBHC, because healthcare professionals play an important role in VBHC (Porter and Teisberg, 2006).

This correlates with the quadruple goal of (Porter and Teisberg, 2006) increasing patient health outcomes, (EXPH, 2019) improving patient experience, (Hurst et al., 2022) improving healthcareprofessional experience, and (Schapira et al., 2020) decreasing cost (Bodenheimer and Sinsky, 2014). In comparison to normal care approaches, VBHC may have an impact on professionals' work by introducing new or shifting emphasis toward

value-promoting care activities and team-based care (Bohmer, 2011). Discussing value with patients, reaching a consensus, learning and improving Such steps include offering care in pathways based on quality and performance criteria (van, 2021; Steinmann et al., 2021).

Although these behaviors are not new, the difference is that they are now used as a means to an end rather than an end in themselves. VBHC differs from typical treatment in that it requires additional professional skills (Weinberger, 2011). However, data from psychological research on VBHC is dispersed, including insights into how professionals contribute to VBHC and how VBHC affects their well-being. Understandably, the majority of VBHC studies focus on patients and clinical outcomes (Van, 2019; Gabriel, 2019) and expand on implementation science insights (Mjset, 2020; Zipfel, 2019).

Previous studies on healthcare professionals and VBHC looked into education and interventions to reduce low-value behavior (Colla, 2017). According to current research, VBHC aligns with professionals' interests, i.e., providing value to patients (Porter and Teisberg, 2006), and contributes positively to their job experience (Speerin, 2020). However, neither the association between VBHC and professional interests, nor the contribution of VBHC to their work experience, has been decisively demonstrated. According to current research, there is a link between VBHC and a number of job demands and resources, including work pressure, emotional demands, and autonomy (Mordang, 2020).

Furthermore, evidence suggests that there are both positive and negative correlations between VBHC and professional well-being, such as greater engagement (Nilsson, 2017) and potential worries about, among other things, accountability and value-based competition on results (Porter and Teisberg, 2006). This systematic literature review synthesizes empirical findings based on the question "how does VBHC relate to the healthcare professional and vice versa?" The review aims to give a comprehensive assessment of professionals' responsibilities in VBHC, as well as experienced employment demands and resources, and the impact that value-based work may have on professionals' well-being. This study may help VBHC healthcare practitioners prevent or eliminate unfavorable psychosocial elements at work while also boosting good psychosocial components.

METHODS

The PRISMA2020 (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines were followed in this systematic investigation (Page et al. 2021).

SEARCH STRATEGY

- In collaboration with co-authors, an extended three-armed search approach was devised. The search string is followed by keywords describing the population, such as healthcare professionals, their teams, or specific jobs, the intervention, such as VBHC, and the results, such as how the population influences VBHC or vice versa (Porter and Teisberg, 2006). The first part of the search string included general descriptors of professionals or care teams including "professional," "staff," "nurse," and "clinician," as well as occupations generated by the International Standard Classification of words.
- We looked for the terms "value-based" OR "value-based" OR "high-value" OR "value-driven" within three words of the words "care" OR "healthcare" in the second arm of the search strategy.
- Finally, we sought keywords that described a professional relationship, a professional characteristic or action, or a professional outcome. A relationship can be described using words like "affect," "cause," and "benefit." Keywords used to define a professional's quality or conduct included "attitude," "knowledge," and "behavior."

SELECTION PROCESS

Three of the writers worked independently to complete a two-step screening process that includes title and abstract screening as well as full-text evaluation. The screening of titles and abstracts produced studies appropriate for full-text review. In both steps, studies were subjected to pre-defined qualifying criteria. Papers with title and abstract screening results that differed between the first and second screeners were included for full-text examination. The writers discussed the manuscript in the case of discordant screening findings in full-text review.

ELIGIBILITY CRITERIA

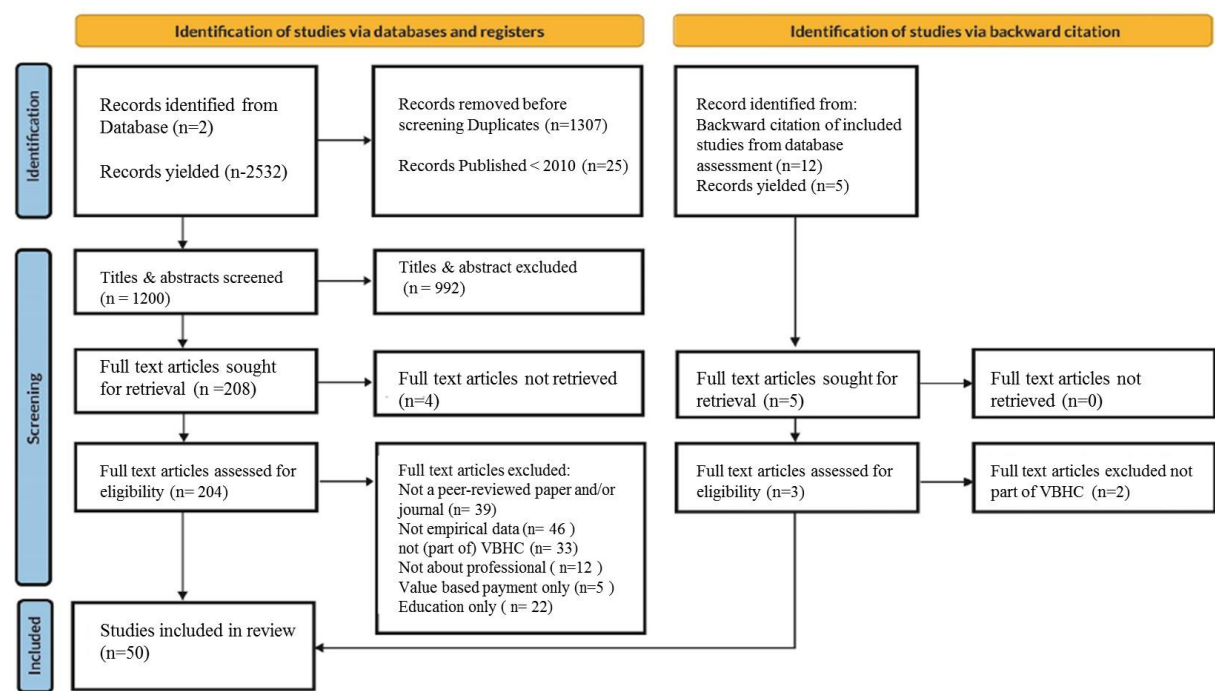
The criteria for excluding all studies were as follows: "not a peer reviewed paper and/or journal," "no empirical data," "not part of/contributing to VBHC or synonym," "there is no relation to the healthcare professional," "only about VBHC education," "only about value-based payment or synonym," and/or "non-English." In the absence of agreement on a VBHC definition (Schapira et al. 2020), we relied on the authors' discretion, which meant that any study in which the original author defined the intervention as "value-based healthcare" or its synonyms was considered VBHC. A healthcare professional is someone who provides care to or strives to treat patients or clients and has obtained formal training to do so. As a result, consultants, administrative personnel, and data analysts, to name a few, were not considered healthcare practitioners.

EXTRACTION OF DATA

There were two steps to data extraction. The general study characteristics were first retrieved. Following that, data on the relationship between VBHC and healthcare was extracted.

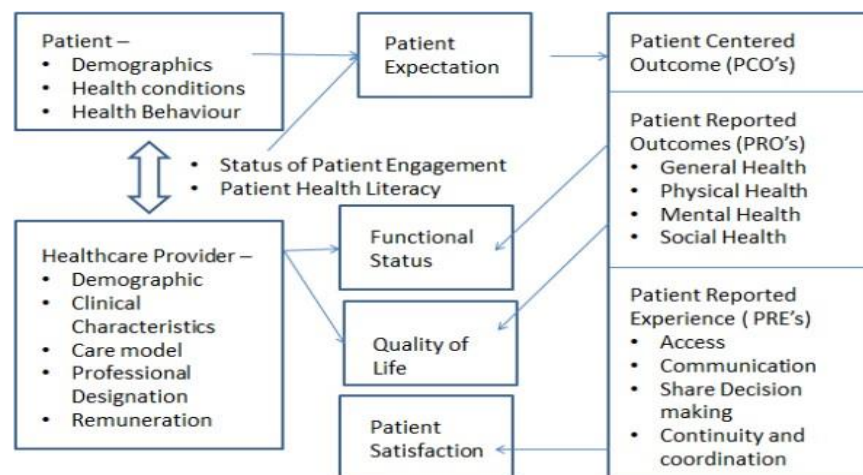
RESULTS SELECTED STUDIES

The search produced 2,532 results. Duplicates and content created prior to the deployment of VBHC in 2010 were removed, yielding 1,200 titles and abstracts for screening. Following a reverse citation search of the listed studies, three additional articles were included. Fifty studies were eligible for inclusion based on the exclusion criteria. The PRISMA diagram is illustrated below.



Source - Author compilation

Inductive analysis was utilized to identify the conceptual framework and research elements, which were then used for deductive analysis.



Source - Author compilation

Summary of the VBHC Specific variables

- Demographics of patient
- Type of Healthcare Provider
- Patient engagement in decision
- Patient health Literacy
- Patient expectations
- Patient centered outcomes (PCO's)
- Patient Reported Outcomes (PRO's)
- Patient report Experience (PRE's)

INTERACTION OF VBHC AND PATIENT SATISFACTION

Hulka et al. (1970) developed the "Satisfaction with Physician and Primary Care Scale" to take the first steps in measuring patient satisfaction in healthcare. This was followed by Ware and Snyder (1975), who developed a "Patient Satisfaction Questionnaire" to aid in the planning, administration, and assessment of health-care delivery programs. Larsen et al. (1979) developed the "Client Satisfaction Questionnaire" as an eight-item scale for assessing general patient satisfaction with healthcare services at the end of the 1970s, and it was supplanted by their "Patient Satisfaction Scale" in the 1980s. Numerous instruments have been developed since that time, but the question of their validity and reliability persists.

Furthermore, satisfaction measurement differs depending on the assumptions made about what satisfaction means (Gilbert et al., 2004), and several approaches to measurement can be identified: expectancy-disconfirmation; performance only; technical-functional split; satisfaction versus service quality; and attribute importance (Gilbert and Veloutsou, 2006).

However, patient happiness and value are commonly confused. While the patient satisfaction movement has focused on treating people with dignity and respect, the ultimate purpose of health care is to promote health. The purpose of value is to help patients. In satisfaction surveys, patients are asked, "How were we?" Value-based care providers inquire, "How are you?"

By focusing on the outcomes that are most important to them, value connects care with how patients perceive their health. In this setting, health outcomes might be expressed in terms of capacity, comfort, and tranquillity. Capability refers to a patient's ability to do activities that set them apart as individuals and allow them to be themselves. It is typically measured using functional metrics. The lack of physical and emotional discomfort is

defined as comfort. Aside from pain alleviation, improving patients' comfort entails addressing the discomfort and concern that often accompany or worsen illness. The ability to function properly while receiving treatment is referred to as calm.

It involves independence from the chaos that patients frequently find in the health-care delivery system, which is especially important for people suffering from chronic or long-term diseases. Take note of Improves patient experience by improving results in all three of these categories. Furthermore, capability, comfort, and serenity are benefits that emerge from the efficacy and empathy of health care rather than its hospitality.

To address the current lack of clarity on defining and measuring satisfaction, as well as to evaluate the quality of medical care using three components (Donabedian, 2005; Ayanian, 2016; Ferreira, 2018; Ferreira, 2018), it is useful to consider the widely cited Donabedian framework on how to examine the quality of health services: structure, process, and outcome (results):

- Structure: The environment, provider skills, and administrative mechanisms in which healthcare is supplied;
- Process: The components of the received care (measures regarded adequate by doctors and medical professionals); and
- Outcome: The result of the offered care, such as recovery, avoidable readmission, or survival.

To construct patient satisfaction in terms of expectations and perceptions, Donabedian's triangle is used. For example, if the patient's expectations are realized, he or she will be pleased with the features of the hospital (Ferreira, 2018). One of the most prevalent criticisms aimed at patient satisfaction ratings, however, is an inability to express medical care expectations, which may be influenced by earlier healthcare experiences (Schoenfelder, 2011).

The patient will be satisfied with the therapy if the symptoms are reduced. If there is a recovery, it will show that the perspective of received care corresponds to earlier expectations. Donabedian considered "outcome" to be the most crucial component of his approach, describing it as a change in a patient's current and future health status that can be safely linked to previous therapy (Ferreira, 2018).

A SUMMARY OF RESEARCH PAPERS PASSING THE PRISMA

Author (Year of Publication)	Contribution / Findings
Etges APBDS et. al.2020	Cost-assessment methodologies that can give high-quality cost information are required for the implementation of value-based initiatives. To close the cost- information gap, time-driven activity-based costing (TDABC) is increasingly being adopted.
Walraven J et. al. 2021	Introduces the existing VBHC value framework as the cornerstone of modern CEA and supports health economists' assumption that valuable synergies result from combining the unique strengths of CEA and VBHC. CEA can help build robust methodologies for VBHC implementation through integration, while the latter can supplement the former with a new perspective and conceptual toolkit for patient centricity and value definition.
F. Hernández et. al.2021	Value-based healthcare (VBHC) alters the paradigm from a supply-driven to a patient-centered approach, allowing decision-makers to make the greatest use of limited resources while improving results. Documentation was reviewed in five countries: Argentina, Brazil, Chile, Colombia, and Mexico, to determine alignment with six VBHC domains: enabling policies, integrated healthcare, patient-centered outcome measurements, alternative payment models, IT infrastructure, and stakeholder engagement.
G. Prada et. al. 2021	Traditional procurement methods limit the realization of value from healthcare investments.

Aurelio et. al. 2021	Most predictive analytics indicate high levels of performance in assisting doctors and patients with treatment management and while predicting health outcomes.
Yolima et. al. 2022	Through an evidence-based, collaborative approach, value-based healthcare (VBHC) attempts to improve patient outcomes while maximizing the use of hospital resources among medical personnel, administrations, and support services.
Jivraj A et. al. 2022	Implementing Value-Based Oral Health Care (VBOHC) is hindered by a largenumber of system-level and contextual issues, including the siloed innovation culture of dentistry, which has evolved independently of the broader medical system.
Maisa et. al. 2023	Integrating dPROMs in clinical settings is feasible and is the first critical step towardVBOHC implementation.
Boland G. et. al. 2017	The ACR's Economics Committee on Value-Based Payment Models examined theentire imaging value chain, suggesting radiology operations and the process components that add meaningful value and can be quantified and tabulated for use indetermining future payments in value-driven payment systems.
Ben and Chenxu 2023	The evaluation procedure is implemented in this research by collecting relevant patent data and developing an intuitionistic fuzzy set evaluation system. The evaluation results provide a value ranking for the patent portfolio, which assists decision-makersin carrying out industrial patent layout planning and implementing open innovation-oriented patent licensing strategies.
Marcia et. al. 2020	Brazilian nonprofit private healthcare provider Hospital Israelita Albert Einstein. In our clinical setting, physician knowledge of fundamental VBHC concepts is still uneven. Promoting opportunities for physicians to participate in VBHC discussions is critical for a successful value-driven healthcare transformation.
Sandra et. al. 2021	This study discovered that WHFEs have a wide range of effects, including worse disease-specific health status and increased psychological stress, financial burden, and efforts to reduce healthcare expenditures, but also a greater readiness to pay for extra therapies to enhance health status.
Holtzman J. et. al. 2020	The authors believe that by introducing medical students to the ideas of VBHC, students will thrive as critical thinkers, collaborative team members, and discerning care providers throughout their period of residency and clinical practice.
S. Colman et. al. 2023	Treatment satisfaction, functional status, and health-related quality of life (HRQOL) are all relevant factors to consider in this study.
S. Kuipers et. al. 2019	To discover links between patient-centered care, co-creation of care, physical well-being, social well-being, and satisfaction with care, correlation and regression analyses were used.
Arms RG et. al. 2015	Within 6 weeks of surgery, general health, symptom burden, and sexual function restored to or improved above baseline levels in this prospective trial. Women were generally pleased with their decision to have robotic surgery. In this study, additional research is needed for the adoption of artificial intelligence in a value-based health system.
Zanotto BS et. al. 2021	Value-based initiatives are becoming increasingly important as strategic models of healthcare administration, necessitating an in-depth examination of their outcome metrics. This systematic review sought to identify measures utilized in the implementation of the value agenda.

S. Moonesinghe et. al. 2019	Patient-centered outcomes are becoming more common in perioperative clinical trials. The study suggests HRQOL, life impact, and functional-outcome metrics that researchers developing clinical trials in perioperative medicine might utilize rightaway.
Sullivan S. et. al. 2023	The COMPLEXedex-SDH provides the classification of high-need patients and value-based utilization into actionable cohorts for the purpose of prioritizing outreach calls to improve health equality and outcomes.
Rosalia et. al. 2021	<p>The modified value definition consists of four parts:</p> <ol style="list-style-type: none"> 1. Allocative "value": Equitable resource distribution across all patient categories. 2. Technical "value": Achieving the greatest feasible results with the resources available. 3. Personal "value": Appropriate care to help patients reach their personal objectives. 4. Societal "value": Healthcare's contribution to social involvement and connectedness. <p>Adopting digital health innovation to map patient-reported outcomes would result in operational excellence in healthcare, as well as the establishment of a transparent ecosystem in which all patients are adequately informed throughout their care pathway to achieve better health outcomes.</p>

STATISTICAL EXAMINATION OF THE USE AND IMPORTANCE OF SATISFACTION CRITERIA AND VARIABLES

Satisfaction factors can be criteria variables or explanatory variables. Because of the numerous criteria, qualitative and dubious issues that must be addressed, evaluating hospital service quality can be a difficult task (Büyükoçkan, 2011).

Using the papers we collected, we analyzed how each factor was employed in connection to patient satisfaction. We also examined the significance of each component. The percentage of usage is the ratio of studies that use it to the total number of examined studies, whereas the importance rate of a factor is the proportion of papers that conclude that this factor is important for patient satisfaction.

In general, patient satisfaction surveys seek to find factors associated with his/her overall satisfaction with one or more services (96% of studies collected) or want to refer to the hospital/clinic (9%) instead. Only 7% of research (Aiken et al., 2012; Boudreaux et al., 2000; Cheng et al., 2003; Brown et al., 2005; Haase et al., 2006; Chahal, 2010; Otani et al., 2011 and Otani et al., 2012) included both dependent variables. One dependent variable (typically total satisfaction) is explained by a set of criteria and other external factors. Additional dependent dimensions, on the other hand, can be employed as proxies for such total enjoyment.

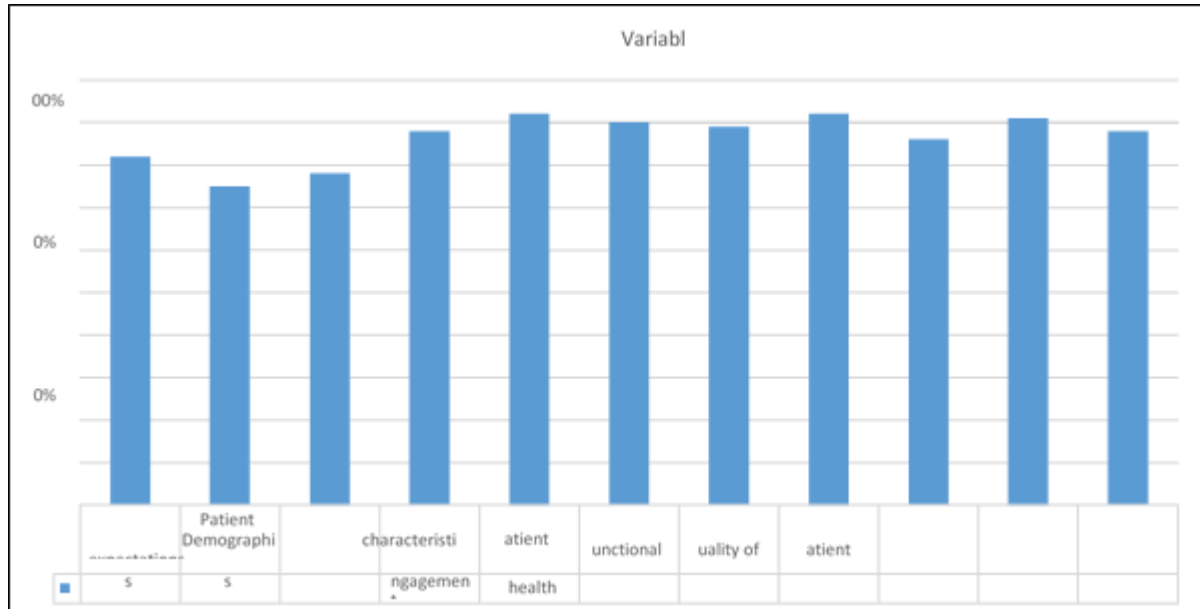
Some examples are medical service satisfaction, accommodations service satisfaction, nursing service satisfaction (Matis et al. 2009), contentment with the quality of medical information (Soufi et al., 2010), and healthcare quality (Widayati et al., 2017). Other research, in relation to overall satisfaction and willingness to recommend hospitals/clinics, are few among the PRISMA-passing articles. We conducted three independent analyses due to the numerous dependent variables used in each publication: global analysis regardless of the dependent variable utilized, overall patient satisfaction, and willingness to recommend a hospital/clinic. We merged numerous patient satisfaction-related criteria that were linked to one another into a single factor to present a more full view of the analysis.

Here are a couple such examples:

- Hospital staff characteristics
- Hospital characteristics

- Patient social characteristics

We started by looking at all of the features linked with patient satisfaction and categorizing them based on satisfaction criteria and explanatory variables, regardless of the dependent variable used by the researchers. As the name implies, explanatory variables are useful for finding potential sources or determinants of pleasure.



Despite the similarities in outcomes between earlier evaluations and this one, some other aspects appear to be of considerable importance to researchers.

METHODS EMPLOYED IN THE LITERATURE

Logistic regression analysis, factor analysis, structural equation modeling (SEM), and multiutility satisfaction analysis (MUSA) were recognized as the four key approaches. However, in addition to those four, a variety of additional approaches are applicable for satisfaction analysis. We can see that regression analysis is preferred by the majority of academics (54%). Factor analysis is used 34% of the time, which is followed by SEM (10%) and MUSA (2%).

DISCUSSION OF THE MOST USED MODEL/METHOD IN LITERATURE

When investigating patient satisfaction, researchers generally look at the link among overall satisfaction and partial satisfaction for each of the criteria. This needs the application of a multivariate model, which is typically based on regressions. However, this model possesses limitations because: (a) large numbers of samples are needed due to the coefficients are calculated applying maximum likelihood; and (b) the proportional odds presumption has to be met, which means that the odds ratio for each of the covariates in the model is constant across the cut-off point. If the assumption is not accurate, the parameter estimate produced is inaccurate.

CONCLUSION COMMENTS AND FUTURE RESEARCH DIRECTIONS

This study looked at studies on patient satisfaction indicators that were published in databases between 2010 and 2023. To evaluate the factors that influence patient satisfaction and the researchers' techniques, a statistical study was conducted. The findings of the statistical analysis indicated a variety of satisfaction drivers across many research domains, including medicine, business, and social sciences. Medical care, contact with the patient, waiting time, patient age, perceived health state, and patient education are the factors that have the greatest influence on patient satisfaction. Each of these factors may have a positive or negative impact on the patient's experience. Patient happiness is inextricably linked to loyalty to the healthcare provider. Patient loyalty encourages positive behaviors such as healthcare provider referrals, compliance, and increasing usage of healthcare services, all of which boost profitability.

As previously indicated, the importance of patient satisfaction components can be investigated in a number of methods. Because of their ease of use and computation, factor and regression analyses are the most commonly used healthcare management methods. Despite its low usage rate, MUSA is a useful tool with various advantages over traditional customer satisfaction models. The findings of this systematic review can be seen as an important foundation for future research and can be used to increase the understanding of healthcare practitioners, researchers, and scholars.

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