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Need for Empathetic Leadership in Indian Healthcare System: An Exploratory Study Probing Patients' Satisfaction

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Abstract
The current healthcare landscape in India is jeopardized with multiple challenges, varying from resource constraints to ensuring quality patient care. A critical aspect of leadership, Servant Leadership, which emphasizes on empathy, ethical conduct, and selfless approach, presents an evidence-based framework for enhancing patient satisfaction. The existing literature highlights a substantial research gap in exploration of healthcare quality and patients' outlook on care delivery. Therefore, the need to explore relationships between servant leadership and patient satisfaction cannot be overemphasized, especially in context of high-populous, developing countries, like, India. Consequently, the primary objective of study is to examine the critical impact of the construct, servant leadership on various aspects of the construct, patients' satisfaction. The contextual set-up of the study is Tier 3 cities, in India, thus exhibiting all the regulatory challenges and resource constraints. Further, the study utilizes Structural Equation Modelling (SEM) to examine the proposed hypotheses.

Keywords: Servant Leadership, Patient Satisfaction, Healthcare Sector, India, AMOS-SEM.

Paper type: Research paper

1. Introduction

Healthcare corporations are shifting their focus to effortless care delivery assuring the stakeholders remain intact and satisfied, sustaining a prominent role in access and care delivery as healthcare systems are the focal point for patient or consumers. Healthcare has become a competing business worldwide where the customers, the 'patients' are asking for no less than a cost-efficient quality care. What is health value and what difference does it make? As stated in a report published by Deloitte (2022), health value has been elucidated as more than just fair admittance to care yet the capability to realize the human potential in all parts of health and well-being. Moreover, it is a prospect to accomplish a general condition of well-being incorporating clinical, social, mental, emotional, physical, and even spiritual health, and it is affected by healthcare, further in addition social, financial, and environmental elements (Global Healthcare outlook, 2022). In continuation to it, the healthcare organizations are under growing pressure from regulators and stakeholders to adopt more environmentally friendly practices (Trasande et al., 2024). Further, responding in increasing stress on medical companies to enhance the quality and focal point of their service delivery to satisfy expanding patient needs and other stakeholders. Medical care organizations in this manner set out on research ventures to find new and better approaches to staying up to date with changing consumer needs and how best to fulfil these needs sufficiently. To address these consumer needs, leadership has a prevailing context, as leadership embarks a process by which one individual sets the purpose or direction for at least one or more persons and assists them with continuing capability and with full responsibility. As health care organizations face challenges to work on quality and proficiency while reducing expenses, leaders are embracing management techniques and tools those are being considered in different industries. Acknowledged work on leadership proposes that there are many fitting ways of leading with considerate leadership styles. A few studies proclaim leadership as a process; however, most theories and studies depict leadership as characteristics, qualities, and ways of behaving of a leader. Mostly researchers emphasized on two types of leadership: 'transactional leadership' in which leaders motivate employees through outcomes and rewards and 'transformational leadership' in which leaders support and tend to meet the emerging needs of employees meanwhile developing and engaging them fully in the process of work, while servant leadership is understood as one of the types of transformational leadership. Greenleaf's servant leadership theory emphasizes that leaders should prioritize serving their followers. Unlike other leadership theories that concentrate on the leader's actions, servant leadership defines leaders by their character and dedication to serving others. Some researchers have suggested that servant leaders aim to build sustainable organizations, nurture the potential of their employees, and contribute to the well-being of the community (Aij, Rapsaniotis; 2017). Many studies have stipulated that servant leaders typically foster a people-focused culture built on trust, care for others, a commitment to learning, and a spirit of service. For health care providers ensuring that consumers are gratified is a non-stop effort, therefore it becomes

critical to them that the exact state of consumer fulfilment is known. Patients being the healthcare consumers are the deciding factor of service delivery hence their satisfaction substantially affects the sustainability of the medical sector patient satisfaction is a subject that is vital both to medical (health) care providers, the patients (as consumers) themselves and other stakeholders in the medical care industry. Patients often desire to be seen and acknowledged for their individuality and humanity, highlighting the importance of compassion in the healthcare field. Compassionate and concern care involves responding to patients and their families as well with kindness and empathy, especially during vulnerable, difficult and challenging times. This can include situations where patients are facing the loss of autonomy, dignity, or control over their bodies, as well as dealing with the uncertainty of their future or end-of-life care. Corresponding research indicates that empathy and compassion not only improve patients' health outcomes and satisfaction levels but also reduce the likelihood of malpractice complaints (De Zulueta, 2018). However, even after huge significance, the abstraction of patient satisfaction remains compact as well as underexplored with reference to leadership perceptions of patients, specifically servant leadership in the healthcare industry. Eventually, emerging the need to study the concept in relation to servant leadership in the medical sector. Besides, it is noted that SL literature lacks robust empirical support that explore the theories of the concept in the organizational setting (Parris & Peachey, 2013). Moreover, the literature shows knowledge gap as the existing studies in the area witnesses' dearth of the concept that researcher aims to study by emphasizing over SL and patient satisfaction in context to developing economies. Additionally, previous research lack empirical foundation in relation to SL and patient outcomes directing the objective of scrutinizing the apprehension using SEM AMOS in the context of healthcare.

2. Literature review

Servant Leadership

Servant leadership offers an interesting perspective on leadership narratives, as it represents the only theory that defines a leader as a servant; It goes beyond being attentive to people with the aim to meeting their highest needs. Greenleaf originally described the term servant leadership as a natural feeling or impulse to serve the humans/employees. The concept of SL can be understood as the intention of a leader to serve his followers, as the servant leader is primarily seen as a servant of the disciples, and then he is a leader, moreover, he understands and empathizes with the disciples and shows genuine concern for the well-being of his subordinates (Maula-Bakhsh, R., & Razik, A. 2016; Kötzer, M. F., Bussin, M. H. & Geldenhuis, M. 2017).In addition, the idea of SL works with the different vision that unites and transforms both individuals and organizations, while the visionary and profound nature of the servant leader strengthens and helps sustain followers (Bekker, C. J. 2010), by fulfilling the higher order needs. Furthermore, historical and philosophical definitions in the literature assert that a leader can attain lasting power by practicing generosity and empathy and ensuring selfless service towards his followers. As opposed to servant leaders, a leader with the selfish needs can destroy a leader's viability, stating that a well-coordinated leader is a person who can follow his caution in times of pain and pleasure (Sharma, A. 1948). In addition, the leader must act as a servant, one who is kind and compassionate, willing to work selflessly, shows genuine care and concern towards the followers, understands and is competent to be completely relaxed even in problematic situations, since the leader's behaviour must be directed towards the well-being of the followers. Above all, the goal of productive leadership should be to serve followers to help them achieve their desired level of performance (Rarick, C. A. 2007). Patterson's (2003) servant leadership model was a characteristic extension of Burns' (1978) transformational leadership theory. However, the two theories differ in how and on what the leader focuses his attention on, while transformational leaders focus on the needs of the organization, the servant leaders concentrate and focus on the requests of their followers (Northouse, 2013; Yukl, 2006).

Servant leadership irrespective of other leadership styles, fosters a supportive and nurturing environment for employees and demonstrates compassion for patients, resulting in highly satisfying care delivery in healthcare sector (Demeke et al., 2024). Consequently, the literature of SL indicates that this selfless leadership approach can foster an engaged and motivated workforce, resulting in improved care delivery and patients feedback (Purwanti et al., 2023). Although the theory of servant leadership has been studied and framed in the West, there are no known studies that can test the SL model in the cultural context of India (Irving, 2010). Amy and Honeycutt (2011) supported the perspective that serving the interests of their followers first over the interests of the organization will ultimately lead to a stronger organization, they also stated in their study that servant leaders create a hierarchical culture that facilitates communication and information sharing, fostering greater trust and stability among the people in the organization. In addition to this, the researchers also found that servant leadership culture hinders and thrives in a more collaborative and coordinated workplace, better decision-making, higher productivity and overall employee morale, and lower employee turnover.

Patient Satisfaction

Recognition of the quality of satisfaction and service has been considered critical to the development of service development strategies for some time. In his early work on quality assurance, Donabedian (1980) recognized the importance of patient satisfaction and maintained a significant basis for the study of quality assurance in health care. In the field of health care, the importance and value of patient satisfaction assessments are well expressed (Lin & Kelly, 1995), as patient satisfaction has been widely viewed and measured as an independent concept and as part of the quality of outcomes (Heidegger et al., 2006) and specifically, in studies to assess the quality of health care (Sofaer & Firminger,

1995). 2005). In addition, satisfaction is defined when there is coordination between the patient's as well as health service provider's opinion of what is satisfaction (Fox & Storms, 1981). The theoretical basis of patient satisfaction is the basis of theoretical models such as: Linder-Peltz's (1982) theory of expected values, Fox and Storms' (1981) theories of inconsistencies and transgressions, Linder-Peltz's (1982) theory of expected values, Ware et al.'s (1983) theory of determinants and components, Fitzpatrick and Hopkins' (1983) theory of multiple models, Donabedian's (1980) theory of health care quality. Despite these theoretical models, patient satisfaction is hampered by the lack of conceptualization of the concept, a situation that has not changed primarily since the 1970s (Hawthorne, 2006). Although many health researchers have examined patients' perceptions of elements of quality of service (perceived quality of service), this has been limited (Clemes et al., 2001) and they have not yet attempted to assess the components of quality of care in health services, continue to estimate patient satisfaction (Lee et al., 2006). In addition, there is no agreement on the most effective method to better assess the relationship between patient satisfaction and perceptions of the quality of their health care.
In addition, O'Connor and Shewchuk (2003) noted that much of the work on patient satisfaction depends on descriptive analyses and basic correlation that lack theoretical structure. This is what they reasoned, when it comes to health benefits, the focus should be on estimating technical and functional quality (how care is transmitted) to record patient satisfaction.

Servant Leadership and Patient Satisfaction

So far, there is no evidence that service leaders can be connected to the stakeholders they want to serve, such as customers or patients (Neubert et al., 2017). To the contrary, servant leadership upfronts compassion, empathy and careful leadership approach, promising support for its positive association with followers' perspectives and behaviours, as well as productive work outcomes (Hunter et al., 2013; Neubert, Kacmar, Carlson, Chonko, & Roberts, 2008). Despite of few evidence the deficient research background in the sphere put forward the need to pen down the significance of servant leadership enhancing outcomes. Furthermore, a study claims whether the purpose of servant leadership is to influence the organization or the individuals, the research arguments in the support fall short. To support this, two notable exemptions show that SL affects customer behaviours in the context of services like food, hairdressing, and transport, mere studies depict the relation of servant leadership with that of patients' behaviour outcomes (Chen, Zhu, & Zhou, 2015; Liden et al., 2014).

Theoretical framework

The theoretical framework elucidates how the principles of SL align with and enhance existing theories related to leadership, organizational management, and sustainability. Moreover, these implications proffer a theoretical foundation for why and how SL practices can contribute to the long-term viability and success of healthcare organizations.
The concept of servant leadership and sustainability is underpinned in theories such as; stewardship theory, resource-based view theory (RBV), social exchange theory and triple bottom line sustainability theory. Stewardship theory eemphasizes upon the leaders acting as stewards of organizational resources in effect to ensure the responsible and ethical use of resources, which is critical for the long-term sustainability of healthcare organizations. While Resource-Based View (RBV) theory focuses on utilizing internal resources to gain a sustainable competitive advantage. The theoretical inference here is that servant leadership, with its emphasis on cultivating the growth and well-being of healthcare professionals, plays a role in forming a valuable internal resource – a proficient and motivated workforce. This, in turn, has the potential to bolster the sustainability of healthcare organizations.
According to social exchange theory, positive interactions between leaders and followers result in reciprocity and commitment. The theoretical implication is that servant leadership has the capacity to build a supportive organizational climate through the creation of beneficial relationships. As a result, healthcare professional dedication may be strengthened, potentially leading to an increase in organizational sustainability.
For sustainability, Triple bottom line theory considers economic, social, and environmental factors. Theoretically, servant leadership fits with the social and ethical elements of the triple bottom line, leading to a more comprehensive and sustainable healthcare sector by prioritising employee well-being, patient satisfaction, and ethical decision-making.
One of the important elements of triple bottom line theory focuses on a company's social influence or dedication to people. While the companies have embraced sustainability, they are considering and paying attention to adding and creating value for all stakeholders and others affected by their actions, including buyers, staff, and community members. Social sustainability is a people-centred dimension that emphasizes human well-being and the equitable distribution of resources (Chiu, R.L.H., 2003). Given the particularities of the healthcare environment in which the idea of social sustainability is studied, the people-centred methodology is one of the most appropriate. Because this context indicates the improvement of patients' well-being, as well as the demand for justice in the distribution of resources, the people- centred social sustainability factor becomes paramount in this context (Maghsoudi, T., Cascón-Pereira, R., & Beatriz Hernández Lara, A., 2020). To put it comprehensively, studying the sustainability of people, the patient's point of view in terms of satisfaction as the main actor in the health sector is considered, hence the following hypothesis has been proposed:
H1: Servant leadership (SL) has a significant impact on patient satisfaction in healthcare sector.

3. Method

Sample

In total, 173 patients were selected as a sample of the study. To conduct the survey, patients were randomly selected from Uttarakhand. For the selection of area, the Indian state of Uttarakhand is divided into two regions i.e. Garhwal region and Kumaon region, making a ratio of 3:2 which means three districts from Garhwal and two districts from Kumaon region have been considered. The sample was selected using simple random sampling for this study. To gain the respondents' trust and establish a positive rapport, the conversation was conducted in person. Respondents were promised to keep their responses confidential. The questionnaire was then administered to the respondents. Out of 200 questionnaires, 173 were collected giving a return rate of 86.5%. Out of the 200 responses, 27 responses being incomplete were discarded, so 173 questionnaires were finally used for the research.

Measure

Servant Leadership (SL): Servant leadership was measured using five dimensions namely building community, interpersonal support, altruism, egalitarianism and moral integrity adapted from the Executive Servant Leadership Scale (ESLS) (Lora L. Reed et. al, 2011). The ESL scale is validated and useful across diverse contexts and situations. Given the absence of servant leadership scales meant for the top executive, ESLS provides a useful tool for researchers concerned in exploring the effects of such a form of ethical and moral leadership on organizational processes and performance. Servant leadership was tested using five items (eg. My doctor treats me with dignity and respect) where every item was rated on a five-point Likert scale ranging from "Strongly Disagree-(1)" to "Strongly Agree-(5)".

Patient Satisfaction (PS): Patient satisfaction was measured by adapting Patient Satisfaction Questionnaire (PSQ) given by Rheumatism research unit, University of Leeds using five dimensions namely giving of information, general satisfaction, empathy with patients, attitude towards the patient and access & continuity. PSQ is useful for assessment of satisfaction with care, and also to identify concerns of patients. PS was tested using 14 items (eg. I feel that I am in safe hands when I visit my hospital). All of 14 items were rated on a five-point Likert scale ranging from "Strongly Disagree-(1)" to "Strongly Agree- (5)"

Statistical analyses

To check the proposed hypothesis firstly Confirmatory Factor Analysis (CFA) was performed and finally, Structural Equation Modelling (SEM) was conducted on the data using AMOS 21. SEM has been applied in the current study to investigate the relationship between patient satisfaction and servant leadership, both causally and consequentially, the constructs of the study. SEM is the most preferred and widely used tool to test the causal relationships between constructs with multiple measurement items and also to empirically examine the theories and model of the study (Ong and Puteh, 2017; Hair et al., 2014; Fan et al., 2016).

4. Results

Demographics

Table 1 represents the demographic details of the patients that have participated in this research study where it was noticed that the major age category of patients that contributed 97 towards the study was 30 – 39 years of age with 36.9% of the whole participants, followed by 40 – 49 years with 25.5%, then 19 – 29 years with 17.8%, then 50 -59 years with 16.8% and eventually 60 – 69 years of age category with 3% of overall participants. Following that 56.4% of males and 43.6% of females respectively were the participants in this study, where it can be observed the maximum participation was shown by male patients. Further treatment type was recorded where it was found that 16.6% of the patients were going under the treatment for chronic diseases (diabetes, cancer, heart disease etc.) whereas 83.3% of the patients were suffering from non- chronic diseases (fever, infections, cough, cold etc.). Moreover, 13.2% of the patients had insurance cover that means covered medical care cost whereas 86.8% of the patients had no insurance cover. Eventually hospital type was considered, where it was seen that 79.3% of the participants considered private hospitals for their treatment while only 20.7% of the patients preferred public hospitals for treatment. The most number of patients belonged to the age category of 30-39 with 36.9 % of the total number of patients. The treatment undergone by total number of patients were classified under chronic diseases like diabetes, cancer and heart disease (Apoorva, R., 2018) and non- chronic diseases category where it was reported that 16.6% of the total number of patients were suffering from chronic diseases while the remaining 83.3 % of patients were undergoing treatments for non-chronic diseases.

Table 1 Demographics Details

Demographics	Frequency	Percentage
Age category		
19 – 29	36	17.8%
30 – 39	74	36.9%

40 – 49	51	25.5%
50 – 59	34	16.8%
60 – 69	6	03.0%
Gender		
Male	113	56.4%
Female	88	43.6%
Treatment type		
Chronic disease	33	16.6%
Non- chronic disease	168	83.3%
Insurance cover		
Yes	26	13.2%
No	175	86.8%
Hospital type		
Private hospital	159	79.3%
Public hospital	42	20.7%

This study utilized Structural Equation Modeling (SEM) and Confirmatory Factor Analysis (CFA) to analyze data and assess the connections between variables. In essence, structural equation modeling comprises a set of multivariate statistical analysis techniques designed to model intricate structural relationships among one or more measured variables and latent constructs. The Confirmatory Factor Analysis (CFA) method was employed to validate the factor structure of a group of observed variables (Joseph, Marko, Torsten, & Christian, 2012). The proposed Structural Equation Model has been constructed using two latent variables namely, Servant Leadership (SL) and Patient Satisfaction (PS). Servant leadership (SL) was an exogenous (independent) latent variable and "SL1" (interpersonal support), "SL2" (building community), "SL3" (altruism), "SL4" (egalitarianism) and "SL5" (moral integrity) were observed variables to be accepted as significant anticipator of servant leadership using CFA. Patient satisfaction (PS) was an endogenous (dependent) latent variable and "GI" (giving information), "GS" (general satisfaction), "ATP" (attitude towards patient), "EWP" (empathy with patient) and "AC" (access and continuity) were observed variables to be accepted as significant anticipator of patient satisfaction using CFA.

As mentioned above, the study adapted the scales for both the constructs namely servant leadership and patient satisfaction hence there existed no need to perform the Exploratory Factor Analysis (EFA), while it was necessary to perform Confirmatory Factor Analysis (CFA) to confirm the factors. The scale reliability was checked through reliability statistics using SPSS, where the value of Cronbach's alpha was 0.805, indicating good scale reliability.

Reliability analysis

Reliability analysis of the sample is conducted to check the consistency and stability of the questionnaire for consideration for further analysis. To check the reliability of the scale the value of cronbach's alpha is considered. A high value for Cronbach's alpha (usually greater than 0.70) indicates that the items in the scale are reliable and consistent in measuring the same construct. For this scale the sample is run through SPSS software and the value of cronbach's alpha found out to be 0.743, that is greater than 0.70 stating that the questionnaire is reliable for further analysis refer table 2.

Table 2 - Reliability Statistics

Cronbach's Alpha	N of Items
.743	19

Through table 3, the internal consistency for each of the six factors has been calculated. The values are as follows for Servant leadership (SL) is 0.902, Giving information (GI) is 0.943, General satisfaction (GS) is 0.991, Empathy with patients (EWP) is 0.995, Attitude towards patients (ATP) is 0.987, and lastly for Access and continuity (AC) is 0.995. The Cronbach alpha values for these six factors are found to be in the acceptable range, i.e., more than 0.7 (Cronbach, 1951; Joe F Hair et al., 2019). Therefore, it is concluded that scale is reliable and can be used for further analysis.

Table 3 – Reliability analysis factor wise

Factor	No. of items	Value of Cronbach Alpha
Servant Leadership (SL)	5	0.902
Giving Information (GI)	4	0.943
General Satisfaction (GS)	2	0.991
Empathy with patients (EWP)	2	0.995
Attitude towards patients (ATP)	4	0.987
Access and Continuity (AC)	2	0.995

Exploratory Factor Analysis (EFA)

Exploratory factor analysis (EFA) defines the set of variables which explains the best variance in the data. EFA is a statistical technique used to identify the number of underlying factors that are responsible for the observed correlations among a set of variables. The factors are derived by analysing the correlations between the variables and grouping them based on their similarities. EFA assumes that the variables are related to each other through underlying factors that cannot be directly observed.

In this research work, the variables are undertaken by extensive literature review of the existing theories and concepts, further the scales have been adapted in the context of the study. However exploratory factor analysis (EFA) using SPSS 21 has been performed to ensure that the factors identified through the exploratory factor analysis align with the hypothesized constructs in the research model. Later, Principal component analysis (PCA) was chosen as the extraction method, and the factors were rotated using the Varimax rotation method with Kaiser normalization. Any coefficients with values less than 0.3 were considered insignificant and were suppressed, not being included in the final rotated factor matrix. While extracting the factors, the eigen value was considered to greater than 1 as eigen values represent the amount of variance explained by each extracted factor in an exploratory factor analysis. In general, an eigenvalue greater than 1 indicates that the factor explains more variance than a single variable and thus is likely to be important in interpreting the underlying structure of the data. Following that six factors have been extracted.

KMO and Bartlett's Test

The Kaiser-Meyer-Olkin (KMO) and Bartlett's tests generally check the adequacy of a sample for factor analysis. A KMO value above 0.7 is considered acceptable, whereas a KMO value below 0.5 is considered inadequate. Bartlett's test is an inferential statistical test that evaluates the assumption of equal variances between samples. A statistically significant correlation has been found between the variables at a significance level of 5%, according to Leech et al. (2005). The KMO value is 0.767, which is more than 0.7 refer table 5.21, hence a good sample adequacy has been achieved to carry out the factor analysis further.

Table 4 - KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.76
Bartlett's Test of Sphericity	Approx. Chi-Square	3529.11
	df	17
	Sig.	.00

Table 5 represents communalities that explain the proportion of the total variance in a variable that is explained by the factors. As explained above, the communalities are defined in the initial stage of analysis, before factor extraction. The communality estimates must range from 0 to 1, with higher values indicating that more variance in the variable is accounted for by the extracted factors. As shown in table 5, all the factors are extracted under an acceptable estimate range.

Table 5 – Communalities

	Initial	Extraction
SL1	1.000	.77
SL2	1.000	.63
SL3	1.000	.80
SL4	1.000	.70
SL5	1.000	.76
GI1	1.000	.94
GI2	1.000	.86
GI3	1.000	.77
GI4	1.000	.85
GS1	1.000	.98
GS2	1.000	.98
EWP1	1.000	.99
EWP2	1.000	.99
ATP1	1.000	.95
ATP2	1.000	.97
ATP3	1.000	.96
ATP4	1.000	.96
AC1	1.000	.99
AC2	1.000	.99

Extraction Method: Principal Component Analysis.

Total Variance Explained

Total variance explained defines the proportion of the total variance in a set of variables that are accounted as extraction of variance for that factor. Table 6 depicts six factors have been found out with eigen value more than 1 and are referred to as extracted factors. In total these six factors explains nearly 89% of the total variance.

Table 6 - Total Variance Explained (Patients)

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.29	22.59	22.59	4.29	22.59	22.59	3.89	20.49	20.49
2	3.81	20.09	42.68	3.81	20.09	42.68	3.60	18.99	39.49
3	3.07	16.17	58.86	3.07	16.17	58.86	3.42	18.04	57.53
4	2.24	11.80	70.66	2.24	11.80	70.66	2.00	10.53	68.06
5	1.95	10.27	80.94	1.95	10.27	80.94	1.99	10.50	78.57
6	1.54	8.12	89.07	1.54	8.12	89.07	1.99	10.49	89.07
7	.46	2.44	91.51						
8	.42	2.24	93.75						
9	.31	1.63	95.39						
10	.23	1.24	96.63						
11	.21	1.13	97.77						
12	.19	1.01	98.78						
13	.08	.42	99.20						
14	.05	.30	99.51						
15	.03	.19	99.70						
16	.02	.13	99.83						
17	.01	.08	99.92						
18	.00	.04	99.96						
19	.00	.03	100.00						

Extraction Method: Principal Component Analysis.

Rotated Component Matrix

A rotated component matrix explains the loadings of each variable on each of the extracted factors after a rotation method has been applied. The loadings here indicate the correlation between each variable and each factor. Table 7 explains the rotated component matrix where six factors are found out as follows, SL (Servant leadership) extracted five variables

listed from SL1 to SL5, GI (Giving information) extracted four variables from GI1 to GI4, GS (General satisfaction) extracted two variables namely GS1 and GS2, EWP (Empathy with patients) extracted two variables as well that are EWP1 and EWP2, ATP (Attitude towards patients) extracted four variables from ATP1 to ATP4, and eventually AC (Access and continuity) extracted two variables again which are AC1 and AC2.

Table 7 - Rotated Component Matrix

	Component					
	1	2	3	4	5	6
SL1		.87				
SL2		.77				
SL3		.89				
SL4		.82				
SL5		.85				
GI1			.96			
GI2			.92			
GI3			.87			
GI4			.92			
GS1					.97	
GS2					.98	
EWP1				.99		
EWP2				.99		
ATP1	.96					
ATP2	.97					
ATP3	.98					
ATP4	.97					
AC1						.99
AC2						.99

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 5 iterations.

Confirmatory Factor Analysis (CFA)

The factors of the constructs SL and PS have been established using Confirmatory Factor Analysis (CFA) to confirm the factor composition and to describe how each construct is measured (Hair et al., 2013) afterwards SEM using AMOS has been performed to check the model fit. For performing CFA the construct SL had five observed variables namely "SL1" (interpersonal support), "SL2" (building community), "SL3" (altruism), "SL4" (egalitarianism) and "SL5" (moral integrity) and the construct PS also had five observed variables namely "GI" (giving information), "GS" (general satisfaction), "ATP" (attitude towards patient), "EWP" (empathy with patient) and "AC" (access and continuity).

The values of c^2 /df (chi-square /degree of freedom), Goodness of Fit Index (GFI), Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), Normed Fit Index/Tucker Lewis index (NNFI/TLI) and Root Mean Square Residuals (RMR) were examined to check the felicitousness of the factors.

Goodness of fit Measures of Measurement model

The criteria to measure the acceptability of a measurement model is to assess the goodness of fit measures that have defined and recommended values as cut-off criteria which defines whether the model is acceptable or has a good fit to run further for SEM. Some of the major indices to check goodness of fit of model are Goodness of Fit Index (GFI); Root Mean Square Residuals (RMR); Comparative Fit Index (CFI); Normed Fit Index (NFI); the Root Mean Square Error of Approximation (RMSEA) and Tucker Lewis index (TLI) (Hair et al., 2010).

Table 8 - Measurement model (CFA)

CFA model	CMIN/DF	GFI	RMR	RMSEA	CFI	NFI	TLI
CFA model	2.983	0.921	0.051	0.062	0.930	0.905	0.840

Table 8 states the model fit indices values of the measurement model (patient satisfaction) where GFI is found out to be 2.983, RMR is 0.051, CFI is 0.930, NFI is 0.905, RMSEA is 0.062 and TLI is 0.840, indicating a good model fit as all the values meet the cut-off criteria.

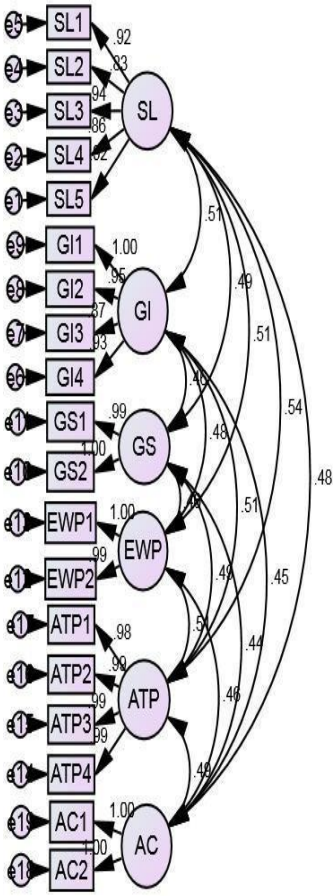

Figure 1 – (CFA) Measurement model

Validity and Reliability of the Measurement Model

A measurement model needs to achieve the validity and reliability to be considered for performing SEM further to test the hypothesis. As mentioned above validity and reliability are integral aspects of confirmatory factor analysis. For assessing the validity and reliability of this measurement model construct validity has been applied. To check construct validity, convergent and discriminant validity has been taken into consideration. Convergent validity is the degree to which different measures or items that are supposed to measure the same construct are correlated with each other, whereas Discriminant validity is the degree to which a measure or assessment tool is not correlated with measures or variables that are not related to the construct being measured.

For checking the construct reliability, Composite Reliability (CR) and Maximum Reliability MaxR(H) are considered, where the defined criteria says that the value of CR and MaxR(H) should be more than 0.7 (Gaskin and Lim, 2016). However, to check the construct validity convergent and discriminant validity are considered. For this model, convergent validity is assessed using composite reliability (CR) and Average Variance Extracted (AVE) where the value of CR should

be more than 0.7 and AVE should be more than 0.5, also CR should be greater than AVE (Gaskin and Lim, 2016). The discriminant validity is measured by considering the value of Average Variance Extracted (AVE) and Maximum Shared Squared Variance (MSV), where MSV should be less than AVE (Hair et al., 2010).

Table 9 – Construct Validity and Reliability

	CR	AVE	MSV	MaxR(H)	ATP	SL	GI	GS	EWP	AC
ATP	0.993	0.972	0.297	0.994	**0.986**					
SL	0.952	0.801	0.297	0.959	0.545	**0.895**				
GI	0.968	0.884	0.257	0.996	0.507	0.505	**0.940**			
GS	0.994	0.989	0.243	0.998	0.493	0.491	0.457	**0.995**		
EWP	0.997	0.994	0.264	0.998	0.514	0.512	0.477	0.463	**0.997**	
AC	0.997	0.994	0.237	0.997	0.487	0.484	0.451	0.438	0.457	**0.997**

Table 9 presents the values of AVE (Average Variance Extracted), CR (Composite Reliability), MSV (Maximum Shared Squared Variance), and MaxR(H) (Maximum Reliability) for each construct, where the values of CR and MaxR(H) for each construct noticed to be more than 0.7, that means the measurement model is reliable. Additionally, the AVE value for each construct is greater than 0.5, also the value of CR is above 0.7 and more than AVE value, meeting the convergent validity cut-off. Additionally, it can be seen that the value of MSV is less than the value of AVE for each construct showcasing that discriminant validity has been acquired by the measurement model. Consequently, concluding that the model is reliable to run SEM to test the hypothesis.

Structural Equation Modelling (SEM)

Once the measurement model acquired acceptable reliability and validity then structured equation modelling (SEM) has been performed using AMOS (version 23). The relationship between endogenous and exogenous constructs is checked by forming SEM for further testing the hypothesis. Remarkably, the structured model (SEM) here is reflective in nature (refer figure 2) as the constructs considered here to measure servant leadership are taken from Executive Servant Leadership Scale (ESLS) (Reed et. al., 2011) and are completely modified in context of patients, further the construct validity has been performed to confirm the validity and reliability of the constructs. It can be noticed that, within reflective constructs, the indicators are considered as outcomes or manifestations of the latent variable they represent (R.B. Kline, 2015; R.P. Bagozzi, Y. Yi, 1988; C.B. Jarvis, S.B. MacKenzie, P.M. Podsakoff, 2003). This implies that the items are observed as a result of the construct. Also, reflective indicators can be interchangeable to some extent, and in certain cases, they can even be eliminated from the analysis.

The structured model is checked whether it has good model fit or not by assessing the values of model fit indices similar to measurement model.

Table 10 - Structured Equation Model (SEM)

SEM model	CMIN/DF	GFI	RMR	RMSEA	CFI	NFI	TLI
SEM model	2.901	0.892	0.049	0.070	0.918	0.899	0.855

Table 10 shows that the structured model has a good fit, as the model meets the recommended values of fit indices where the values of CMIN/ DF is 2.901, GFI is 0.892, RMR is 0.049, CFI is 0.918, NFI is 0.899, RMSEA is 0.070 and TLI is 0.855. These fit indices show an adequate fit between the hypothesized model and the observed data (Byrne, 2013). Figure 3 shows the structural model results, drawn on AMOS (version 21) graphics.

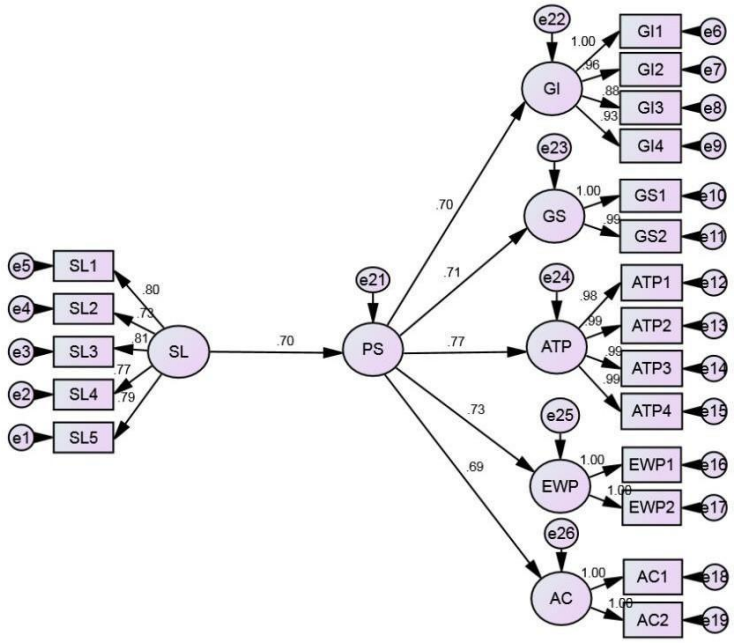

Figure 2 - Structured Equation Model (SEM)

A good model fit of SEM depicted that the model can further be considered for hypothesis testing. Eventually, the results of hypothesis testing are represented by table 11 where hypothesis H1 is accepted.

Table 11 – Hypothesis testing (Patients)

Hypothesis	Estimates	S.E	C.R	P	Conclusion
(H1) PS <--- SL	0.702	0.034	9.221	***	Accepted

H1. Servant leadership (SL) has a significant impact on patient satisfaction.
Considering table 4, the estimate value of SL on PS (Patient satisfaction) is 0.702 and p value is less than 0.01 that indicates a significant impact of SL on PS, hence H1b is accepted.
Entirely, it can be concluded that patient satisfaction plays a vital role in people sustainability, as patients are end customers of the healthcare sector hence their feedback must be taken into priority while studying people sustainability. Moreover, it is hypothetically proved that instilling servant leadership behaviour in hospitals while treating and interacting with patients will result in better patient satisfaction which will eventually help the hospital sustain.
Therefore, with the good fit of the Structural equation model (SEM), the objective of this study is achieved resulting in approval of the proposed hypothesis which says Servant leadership has a significant impact on patient satisfaction in the healthcare sector. Hence it is justified to say that if hospitals instil servant leadership towards different stakeholders mainly patients it will lead to improved and increased patient satisfaction, purposely improving the sustainability of the healthcare sector.

5. Discussion

The study aimed to examine and analyse the impact of servant leadership on patient satisfaction in the healthcare sector. The results attained through this study illustrated that there lies a positive effect of servant leadership on patient satisfaction that is with the increased servant leadership behaviour instilled in the hospitals, there would be an increased amount of satisfaction for patients which will add on to the sustainability of the healthcare sector. Furthermore, various studies echo the viewpoint that servant leaders are inclined towards fostering a sustainable organization, empowering employees to excel to benefit the community (including patients), & acting as environmental stewards (Liden et al., 2008; van Dierendonck & Nuijten, 2011; Trastek et al., 2014). Brownell (2010) argues that servant leadership aligns directly with the aim and goal of healthcare organizations. Trastek et al. (2014) identify the three reasons why is servant leadership is particularly suitable for healthcare organizations: focusing on team strengths and positives, building trust, and catering to patients' needs. The growing interest in servant leadership is driven by the increasing need in organizations for

leadership that prioritizes contribution and service to the organization and its clientele (Hunter et al., 2013; Liden et al., 2014). In contrast to other leadership styles, servant leadership highlights the interests of external stakeholders, such as the community or customers; however, there is limited research available to support this claim (Parris & Peachey, 2013; van Dierendonck, 2011). However some studies suggest that servant leaders inspire employees to act with compassion toward community members (Liden et al., 2008) and impart a climate or culture of service (Hunter et al., 2013; Liden et al., 2014; Walumbwa et al., 2010), current researchers are trying to signify the actual influence on outside stakeholders Additionally, numerous studies support the idea that servant leaders are dedicated to fostering sustainable organizations empowering employees to excel for the betterment of the community (including patients), and serving as caretakers of the environment (Liden et al., 2008; van Dierendonck & Nuijten, 2011; Trastek et al., 2014). Brownell (2010) asserts that servant leadership directly aligns with the mission of healthcare organizations. Trastek et al. (2014) outline three reasons why servant leadership is well-suited for healthcare organizations: focusing on team strengths and positive aspects, cultivating trust, and meeting the needs of patients. The rising interest in servant leadership stems from the growing demand in organizations for leadership that prioritizes serving the organization and its customers (Hunter et al., 2013; Liden et al., 2014). Unlike other leadership styles, servant leadership emphasizes the concerns of external stakeholders, such as the community or customers; nevertheless, there is limited research available to corroborate this assertion (Parris & Peachey, 2013; van Dierendonck, 2011). Further concluding that this research study provided an insightful of servant leadership and patient satisfaction, how they correlate with one another and in what sense this integrated model of SL and PS would be essential to understand perception of patients towards care delivery.

6. Implications

6.1 Practical Implications

The current study has a huge practical implication for healthcare administrators and practitioners, majorly, this study focused on developing an integrated model for the healthcare sector emphasising over sustainability of the medical sector. The present study ingrains the concept of service before self by encouraging the practice of servant leadership through imparting servant leaders' qualities like more interpersonal support, building community, altruistic behaviour and egalitarianism by treating everyone equally and developing moral integrity within hospitals, this could lead to better patient satisfaction implying a sustainable healthcare system. Moreover, the research emphasised on the benevolent need to instill a culture of servant leadership in the healthcare sector, as various contemporary studies stated that interpersonal support shown by medical staff positively influences quality of service and patient satisfaction, also noticed differences in patient perception by directly affecting their satisfaction or indirectly affecting them by attaining their trust as intervening variable of patient satisfaction. Adding more to it, this study suggests changes in the healthcare delivery settings by incorporating the practice of empathizing with the patients and guiding the medical providers to function beyond the requirements of duty, as these are more achievable aspects of altruism. Furthermore, this research guides the medical sector to equally treat patients as a moral duty and focus to develop strategies to empower patients, to increase patient satisfaction, this would mean making patients the most important stakeholder in the survival of healthcare sector. Additionally, this study has revealed the relevance of human element in health care delivery as it is both a great opportunity (if patients are well treated and satisfied, providing better feedback of care) and a great threat and competitive weakness if patients tend to feel less satisfied. Henceforth, through this research, the researcher has augmented a model and conceptualised a framework to study sustainability and servant leadership altogether in the context of healthcare sector adding relevance to the field of medicine benefiting all the stakeholders of the sector, further suggesting organizations to develop such leadership perspective where the managers or head of health departments have an easy access of serving and interacting with patients periodically putting forward their servant behaviour in addition to it is advised that hospitals improve staff members' professional abilities and communication styles in order to keep patients and give medical facilities a competitive edge as pressure from the competitors.

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6.2 Theoretical Implications

The present study expounds certain theoretical implications where the paramount is this study extends addition to the empirical research in the field of servant leadership in the context of healthcare sector. In the current research the authors have proposed a model which explains the impact of servant leadership on the satisfaction level of patients. Here the servant leadership has emerged as a significant correlation of patient satisfaction. Further from patients' perspective servant leadership aligns with the principles of patient-centred care, emphasizing the importance of tailoring healthcare services to meet patients' needs, preferences, and values promoting that the integration of servant leadership in healthcare can enhance the patient experience, leading to increased satisfaction and loyalty, which in turn contributes to the sustained success of healthcare organizations. In addition to that servant leadership's focus on continuous improvement aligns with theories of quality improvement in healthcare which annotates that organizations led by servant leaders may be more adept at implementing and sustaining quality improvement initiatives. Enhanced quality of care contributes to positive patient experiences and long-term organizational sustainability. Healthcare providers may use the current model to assess patient satisfaction by implementing the servant leadership model in their respective organizations.

7. Limitations and future scope

The significance of patient/consumer assessments in ensuring hospital sustainability through the sharing of perceptions – as explained through the present study, making it necessary for hospitals to focus on internal as well as external measures to improve patient satisfaction. This research article is of cross-sectional type. Additionally, the study focused and tapped private hospitals more than the public hospitals, further agenda for researchers should be considering larger population to record patient satisfaction. In future more qualitative studies can be conducted from patient's perspective to identify newer dimensions of patient perception in relation to healthcare sector.

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