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Healthcare Demand and the Adequacy of Its Impact on Patient Satisfaction and Quality Outcomes: A Structural Equation Modeling Approach

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Abstract

This research aims to investigate the impacts of healthcare demand and the adequacy of healthcare on patient satisfaction and healthcare quality outcomes in an effort to clarify their relationships. This study employed a quantitative approach to conduct correlational cross-sectional research, specifically utilizing a survey approach by using a convenience sampling technique. The study sample comprises 211 participants who have utilized medical services. The study employed Structural Equation Modelling (SEM) to examine the proposed hypotheses and investigate the relationships among the four study variables.The study results indicated that all relationships between the study variables were positive and statistically significant, suggesting that improving one variable leads to a significant improvement in the others. Statistical analyses further revealed that the mediating variable plays a partial role in explaining the relationship between independent and dependent variables. This means that the effect of the independent variable on the dependent variable is not entirely contingent on the presence of the mediating variable but rather contributes to strengthening the relationship between them. These findings emphasize the importance of considering all variables when designing health policies and strategies to achieve optimal outcomes.

Keywords: *Healthcare, Demand, Adequacy, Quality, Jordan.*

Introduction

Healthcare systems are among the most dynamic systems, changing in response to the needs of the communities they serve, and researchers around the world are constantly studying variables and their interactions to identify areas for improvement. Jordan, a West Asian country, is well-known for its healthcare system and for being ahead of other countries in the Levant region (JSF, 2022). Yet, Jordan still needs to put in a lot of effort to achieve its strategic goals and overcome

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the obstacles it faces (Rababa, 2023, Khader et al., 2023; Mohammad, 2025). Understanding the effects of healthcare variables on one another is one step closer to those goals. The variables we intend to address are the adequacy of healthcare, healthcare demand, quality outcomes, and patient satisfaction. What motivates us to investigate these variables is the Jordanian community's utilization patterns of healthcare services; Jordanians prefer to bypass primary healthcare (PHC) services, as evidenced by the findings of USAID reports (USAID, 2018; Ayyalsalman et al., 2024).In addition, a recent study showed that shared decision-making and patient engagement have numerous barriers in Jordan (Obeidat and Lally, 2018; Mohammad et al., 2025a), which are regarded as the primary criteria for the adequacy of healthcare.

Literature Review

This study defines demand as the regularity and manner in which patients use healthcare services (Chong et al., 2021, Ghorbani, 2021; Mohammad et al., 2025c).

Adequacy of healthcare in this study pertains to the clinical practices or standards of care that a healthcare practitioner must adhere to in order to guarantee the active involvement of their patient in the decision-making process and to ensure that the patient is consistently informed about all elements of their treatment (Forum, 2016; Mohammad et al., 2025b). This definition was proposed by The European Patients Forum (EPF), which originally originated from the definition of access that is proposed by the Patient Access Partnership (PACT)(Souliotis et al., 2016; Mohammad et al., 2025d). Adequacy is addressed in the literature by what it incorporates rather than its name, for example: involvement, shared decision-making, engagement, etc.

Healthcare institutions recognize the critical role of service quality in strengthening their position in today's highly competitive environment. Despite the constraints imposed by limited medical resources, delivering high-quality healthcare services has remained a primary objective for healthcare systems worldwide. An effective healthcare system must achieve a balance between quality, cost, and resource utilization (Marzo et al., 2021; Mohammad et al., 2025e).

Patient satisfaction serves as a reliable and straightforward tool for assessing the quality of healthcare services. Ultimately, quality reflects the extent to which healthcare services align with patients' needs and expectations (Marzo et al., 2021; Mohammad et al., 2025f). Moreover, extensive research utilizing diverse data sources and analytical methods has consistently demonstrated a positive correlation between health insurance coverage and improved health outcomes. The most compelling evidence suggests that individuals with health insurance have greater access to medical services and experience better overall health outcomes.

Theoretical Framework

Healthcare demand is defined by the regularity and manner in which patients use healthcare services (Chong et al., 2021). Adequacy represents the standards of care regarding involvement and respecting patients' preferences while ensuring the delivery of all patients' needs (Forum, 2016). Patient satisfaction is commonly understood as the subjective assessment of a patient's experience, characterized by a positive perception, during the utilization of healthcare services (Li et al., 2012). Quality outcomes refers to the effectiveness of a therapy in terms of its ability to successfully address the illness of patients while minimizing any negative consequences (Swain and Singh, 2021).

Previous research has shown that demand for healthcare services can be influenced by previous experiences, implying that a positive experience with adequate care practices will increase future

demand for healthcare (Bychkovska et al., 2022).

H1: A statistically significant correlation exists between the demand for healthcare and the adequacy of healthcare.

The adequacy of healthcare services is often assessed based on accessibility, availability, affordability, and quality. Penchansky and Thomas's (1981) healthcare access model highlights five dimensions that influence the adequacy of healthcare services:

- Availability: The sufficiency of healthcare facilities, workforce, and medical technologies.
- Accessibility: The ease with which individuals can reach healthcare services.
- Affordability: The financial capacity of individuals to pay for healthcare services.
- Acceptability: The extent to which healthcare services meet patients' cultural and personal expectations.
- Accommodation**:** The efficiency of service organization in responding to patient needs.

Empirical research indicates that individuals who demands a greater number of primary healthcare (PHC) services have more positive experiences when confronted with or adapting to sickness (Edwall et al., 2008).

H2: Healthcare demand has a statistically significant impact on patient satisfaction.

Marzban et al. (Marzban et al., 2022) assert that adequate care practices, including involvement and addressing needs, can achieve better quality outcomes and higher patient satisfaction, among other benefits.

Need-Based Factors (e.g., Perceived or Actual Severity of Illness)

As demand increases, healthcare systems may experience strain on services, leading to longer waiting times, reduced provider interaction, and a potential decline in service quality which can negatively affect patient satisfaction.

Supply and Demand Theory in Healthcare

Classical economic theory suggests that when the demand for healthcare exceeds the available supply, service quality and efficiency may decline (Arrow, 1963). High patient loads can overwhelm healthcare facilities, leading to:

- Longer appointment scheduling and waiting times
- Healthcare provider burnout, resulting in decreased attentiveness
- Limited availability of medical resources and diagnostic tools

These factors contribute to patient dissatisfaction, as delays and perceived neglect undermine trust in the healthcare system. Conversely, when demand is effectively managed with sufficient resources, patient satisfaction tends to improve.

Patient Satisfaction Model

Patient satisfaction is often assessed through frameworks such as Donabedian's Healthcare Quality Model (Donabedian, 1988), which evaluates healthcare services through three dimensions:

- **Structure:** Availability of facilities, equipment, and healthcare providers
- **Process:** Efficiency of healthcare delivery, communication, and interactions between healthcare providers and patients
- **Outcome:** Patient-reported experiences and overall satisfaction levels

When demand is high, structural and process-related issues (such as overcrowding or staff burnout) can lead to service quality deterioration, resulting in lower patient satisfaction scores. Conversely, healthcare systems that effectively manage demand through workforce optimization, process improvements, and technology integration tend to report higher patient satisfaction.

H3: The adequacy of healthcare has a statistically significant impact on the quality outcome.

The World Health Organization (WHO) Health System Performance Framework (2000) emphasizes that the adequacy of healthcare directly impacts healthcare outcomes. The model identifies three fundamental components:

- **Service delivery:** The capacity to effectively provide essential health services.
- **Resource availability:** The adequacy of healthcare professionals, medications, and infrastructure.
- **Health system responsiveness:** The ability of the healthcare system to efficiently meet patient needs.

Empirical evidence suggests that inadequate healthcare services led to overcrowding, medical errors, and delays in treatment, all of which negatively affect health outcomes (OECD, 2020).

Empirical Evidence on Healthcare Adequacy and Quality Outcomes

Studies have shown a statistically significant relationship between the adequacy of healthcare and patient outcomes. Research indicates that well-funded and adequately staffed healthcare systems experience lower mortality rates, fewer hospital readmissions, and higher patient satisfaction (Marzo et al., 2021). In contrast, healthcare deficiencies are associated with poor disease management, increased complications, and poorer overall health outcomes.

H4: Quality outcomes serve as a mediating variable in the relationship between healthcare adequacy and patient satisfaction.

Several studies have indicated a positive association between the quality of healthcare services and patient satisfaction levels. (Duggirala et al., 2008, Li et al., 2011, Padma et al., 2010). The provision of high-quality services to patients is frequently seen as the fundamental basis for attaining satisfaction with care (Cronin Jr et al., 2000, Caruana, 2002).

Quality outcomes serve as a critical mediator between healthcare adequacy and patient satisfaction. The Health System Performance Framework (WHO, 2000) emphasizes that improving healthcare quality—measured through effectiveness, safety, and responsiveness—helps bridge the gap between service adequacy and patient satisfaction.

Improved Clinical Outcomes: When healthcare adequacy ensures effective and timely care, patient health improves, leading to higher satisfaction levels.

Patient Safety and Error Reduction: Well-resourced healthcare systems reduce medical errors and enhance patient trust in the system.

Service Experience: Effective processes, shorter wait times, and positive interactions with healthcare providers contribute to a more positive patient experience, boosting satisfaction.

Empirical studies suggest that quality outcomes significantly influence the impact of healthcare adequacy on patient satisfaction, as patients perceive higher-quality care when outcomes such as recovery rates and reduced hospital readmissions are achieved (Marzo et al., 2021).

The Impact of Patient Satisfaction

Patient satisfaction is a widely used metric in healthcare quality assessments. According to Service Quality Theory (Parasuraman et al., 1985), patient satisfaction depends on how well healthcare services meet or exceed expectations. When healthcare adequacy leads to improved quality outcomes, patient satisfaction increases due to:

- Trust in the healthcare system (reliable care and positive health outcomes)
- Better communication and responsiveness from healthcare providers
- Enhanced comfort and reduced treatment-related anxiety

However, when quality outcomes decline due to inadequate healthcare services, patient satisfaction is negatively affected, regardless of the available resources in the system (Donabedian, 1988).

H5: Quality outcomes have a statistically significant impact on patient satisfaction.

Patient satisfaction is widely regarded as one of the most important indicators of healthcare quality. Over the years, a wealth of studies has explored the various determinants of patient satisfaction, with quality outcomes emerging as a central factor influencing satisfaction levels. The hypothesis that quality outcomes have a statistically significant impact on patient satisfaction is grounded in the premise that when patients experience positive health results, their satisfaction with the healthcare system improves significantly.

Much research indicates a clear relationship between positive quality outcomes and patient satisfaction. This relationship is built upon several factors:

- Improved Health and Recovery
- Reduction of Medical Errors
- Enhanced Patient ExperienceMethods.

Research Methods

Aims

This study aims to clarify the relationships between healthcare demand and the adequacy of care, as well as their effects on patient satisfaction and quality outcomes.

Research design

This study employed a quantitative approach to conduct correlational cross-sectional research,

specifically utilizing a cross-sectional survey approach. The researchers employed an online questionnaire as a means of gathering data pertaining to the variables under investigation.

Population and Sample Size

The study sample comprises 211 participants who have utilized medical services in Jordan. The determination of the sample size was conducted in accordance with the recommendations provided by Hair et al. (Hair et al., 2016). These recommendations stipulate that in order to achieve model saturation using the structural equation modelling (SEM) technique, a minimum of five responses is required for each questionnaire item. The questionnaire that was distributed consisted of a total of 40 items. As a result, a minimum of 200 replies is deemed to be an acceptable sample size.

Sampling Technique

The study sample comprised a representative subset of individuals from Jordanian society who possessed prior experience as consumers within the medical sector, encompassing both public and private domains. The study sample encompassed several regions of Jordan, including the eastern and western areas, as well as the northern, southern, and central regions. The distribution technique for this non-probability sample was the utilization of convenience sampling. Table 1 demonstrates the research's respondents' profiles. Out of 211 participants, 134 (63.5%) were from northern Jordan, and 133 (63%) had government insurance.

Table 1: Study Demographic data

		Frequency (N)	**Percentage %**
Gender	Male	71	33.6
	Female	140	66.4
Age (years)	18-35	162	76.8
	36-44	24	11.4
	45-58	22	10.4
	59-70	3	1.4
Marital Status	Single	142	67.3
	Married	68	32.2
	Divorce	1	0.5
Education level	Primary stage (1-5 years of education)	1	0.5
	Secondary stage (6-11 years of education)	14	6.6
	University level (12-16 years of education)	134	63.5
	16 years and more	62	29.4
Geographical area	Northern Jordan	134	63.5
	Central Jordan	58	27.5
	East Jordan	9	4.3
	Southern Jordan	10	4.7
Nationality	Jordanian	207	98.1
	Non-Jordanian	4	1.9

Insurance type	Government or military medical insurance	133	63
	Private medical insurance	36	17.1
	No medical insurance	42	19.9

Research Instrument

The survey instrument started with collecting demographic data. The second section included details about the independent variable, specifically pertaining to healthcare demand (derived from the reference provided (Chong et al., 2021)) and adequacy of healthcare (The scale was derived from the European Patient Forum (Forum, 2016)). The third section of the study included details pertaining to the dependent variable, namely patient satisfaction (derived from the reference provided(Marshall and Hays, 1994)) and quality outcomes (derived from the reference provided (Swain and Singh, 2021)). The implementation and authorization of the questionnaire were carried out after conducting a thorough study of relevant literature. Additionally, the validity and reliability of the questionnaire were assessed by expert validation testing and piloting.

Data Analysis Technique

A variety of statistical analytic methodologies were employed. The initial step was doing a fundamental calculation of descriptive statistical metrics, specifically the mean and the standard deviation. Afterward, the Pearson's correlation coefficient was computed. Confirmatory factor analysis (CFA), a widely used statistical technique, was employed to establish the presence of valid components within the study questionnaire, tested with the AMOS 26 software package. The study utilized two measures, namely composite reliability (CR) and average variance extracted (AVE), to assess the validity and reliability of the research instruments. This article also employs a structural equation modelling (SEM) methodology, which is a well acknowledged technique for thoroughly investigating the interconnectedness among different variables (constructs)(Preacher and Hayes, 2004; Al-Oraini et al., 2024).The analysis in this study was performed using SPSS version 26.0 software. The programme was used to conduct several statistical analyses, including descriptive statistics, exploratory factor analysis, calculation of Cronbach's alphas, and examination of correlations between variables. The measurement and structural models were tested using a two-step process (Anderson and Gerbing, 1988). Initially, the maximum likelihood estimate technique was employed.

The researchers have used several guidelines proposed by Podsakoff et al. (Podsakoff et al., 2003) in an effort to mitigate the possible influence of common method bias (CMB). In the initial phase, scales that had undergone prior design, verification, and publication were utilized. Furthermore, the questions went through a review and pretesting process in order to mitigate any potential issues related to respondent misunderstanding and the use of ambiguous vocabulary.

Data Analysis and Results

Data Analysis

Validity and Reliability (Measurement model)

Following the execution and evaluation of the measurement model, the researchers chose to exclude each item with a loading value below 0.5 in order to enhance the fit of the model. The decision was contingent upon the suggestion put out by Hair et al. (Hair et al., 2016), so the

researchers dropped the following items from the patient satisfaction component (items 4, 7, 9, 12, 13, 14, 16, and 17) and the following items from the healthcare demand component (items 1, 3, 4, and 9). From the adequacy of healthcare, no items were dropped. Table 2 displays the calculated values of average variance extracted (AVE) and composite reliability (CR) for the study components of the remaining items. The AVE values were above 0.5, while the CR values exceeded 0.7. These results indicate the presence of convergent validity among the constructs (Fornell and Larcker, 1981). The values of the AVEs and CRs were as follows: 0.4273192 and 0.879788622 for patient satisfaction, 0.4152132 and 0.776145995 for healthcare demand, 0.579475 and 0.87046984 for healthcare adequacy, and 0.762969667 and 0.906067724 for the quality outcomes. Both the variables of patient satisfaction and healthcare demand exhibit an AVE that falls below the required threshold. However, this may still be regarded acceptable based on the recommendations provided by Fornell and Larcker (Fornell and Larcker, 1981), which specify that an AVE below 0.5 can be tolerated if the CR exceeds the acceptable value of 0.6. Furthermore, the results of the CFA conducted on our proposed measurement model indicate that our data align well with the model [chi square = 322.9, degree of freedom (DF) = 165, comparative fit index (CFI) = 0.916, Tucker Lewis index (TLI) = 0.903, root mean square error of approximation (RMSEA) = 0.068]. The findings demonstrate a satisfactory level of fit, as seen by CFI and TLI values exceeding 0.90. Additionally, RMSEA was below 0.08, as recommended by Hair et al. (Hair et al., 2016). The Cronbach's alpha values are displayed in Table 3. All values are deemed appropriate and indicate that items are internally consistent.

Table 2 – Loadings, AVEs and CRs

	Item	**Loading**	**AVE**	**CR**
Patient Satisfaction	Doctors are good about explaining the reason for medical tests.	.702	0.427	0.87
	I think my doctor's office has everything needed to provide complete medical care.	.762		
	The medical care I have receiving is just about perfect.	.789		
	I feel confident that I can get medical care I need without being set back financially.	.593		
	When I go for medical care, they are careful to check everything when training an examining.	.737		
	I have easy access to the medical specialist I need.	.641		
	Doctors act too businesslike and impersonal toward me.	.529		
	My doctors treat me in very friendly and courteous manner.	.533		
	Doctors usually spend plenty of time with me.	.563		
	I am able to get medical care whenever I need it.	.625		
Healthcare Demand	You are satisfied with your health status.	.502	0.415	0.77
	I do a regular dental check up	.597		
	Every time when I need dental care, easy I received it.	.775		
	You are satisfied if the respondent only has to answer for one individual cared for.	.722		

	There is a specific time a week to take care of my health	.588		
Adequacy of Healthcare	I'm adequately informed by healthcare providers about my treatment options	.741	0.579	0.87
	I'm involved in decisions regarding my care by my healthcare providers	.760		
	My healthcare providers give me the information I need about the safety of my treatment	.887		
	My healthcare provider adapts my care according to my changing needs	.834		
	My healthcare providers are capturing my feedback on quality of care provided (through satisfaction survey or other means)	.537		
Quality Outcomes	I receive good quality care according to the standard/ guidelines or best practices available for my condition	.874	0.762	0.90
	I'm satisfied with the safety of care provided to me	.908		
	I'm satisfied with continuity in my care over time	.837		

Standardized Regression Weights: (Group number 1 – Default model)

Table 3 – Cronbach's Alphas Values

	Cronbach's Alpha
Patient satisfaction	0.850
Health demand	0.729
Health adequacy	0.853
Healthcare quality outcome	0.904

Results

Table 4 presents the mean values, standard deviations (SD), and correlation coefficients indicating the strength of the relationships among the variables under investigation. Positive correlations were noted between the adequacy of healthcare and quality outcomes (r = 0.808****, *P* = 0.000), health demand and quality outcomes (r = 0.520***, *P* = 0.000), as well as between healthcare demand and healthcare adequacy (r = 0.481**, *P* = 0.000). Furthermore, significant positive correlations were found between patient satisfaction and the three variables of healthcare demand, adequacy of healthcare, and quality outcomes (r = 0.586**, 0.530**, 0.595**, *P* = 0.000). The findings indicate that the observed correlations were not substantial, suggesting that the presence of multi-collinearity is not a concern within the scope of this research (Gujarati and Porter, 2008).

Table 4 – Pearson's correlation, mean, and standard deviation (SD)

Correlations												
Mean / SD		Gender	Age	Education	Marital status	Geog Area	Nationality	Insurance Type	PatSatisfaction	Healthcare Demand	HeaAdequacy	Outcomes Quality
Gender	1.66 /0.474	1										
Age	1.79 /1.094	-.286**	1									
Education	4.22 /0.577	.008	.029	1								
Marital status	1.33/0 .482	-.134	.785**	.030	1							
Geographical Area	1.50/ 0.789	-.093	-.019	-.127	.010	1						
Nationality	1.02/ 0.137	.025	-.068	-.053	-.096	.088	1					
Insurance Type	1.57/ 0.804	-.058	-.089	-.063	-.035	.103	.248**	1				
Patient Satisfaction	30/ 7.6	.099	-.164*	.096	-.120	.060	-.005	-.038	1			
Healthcare Demand	13.7/ 4.2	.111	-.236**	.147*	-.165*	.036	-.057	-.050	.586**	1		
Healthcare Adequacy	14.4/ 4.44	.187**	-.282**	.060	-.207**	.112	.048	-.016	.530**	.481**	1	
Outcomes Quality	8.7/ 3.1	.230**	-.240**	.059	-.150*	.094	.013	-.050	.595**	.520**	.808**	1
**. Correlation is significant at the 0.01 level (2-tailed).												

*. Correlation is significant at the 0.05 level (2-tailed).

Hypotheses Testing

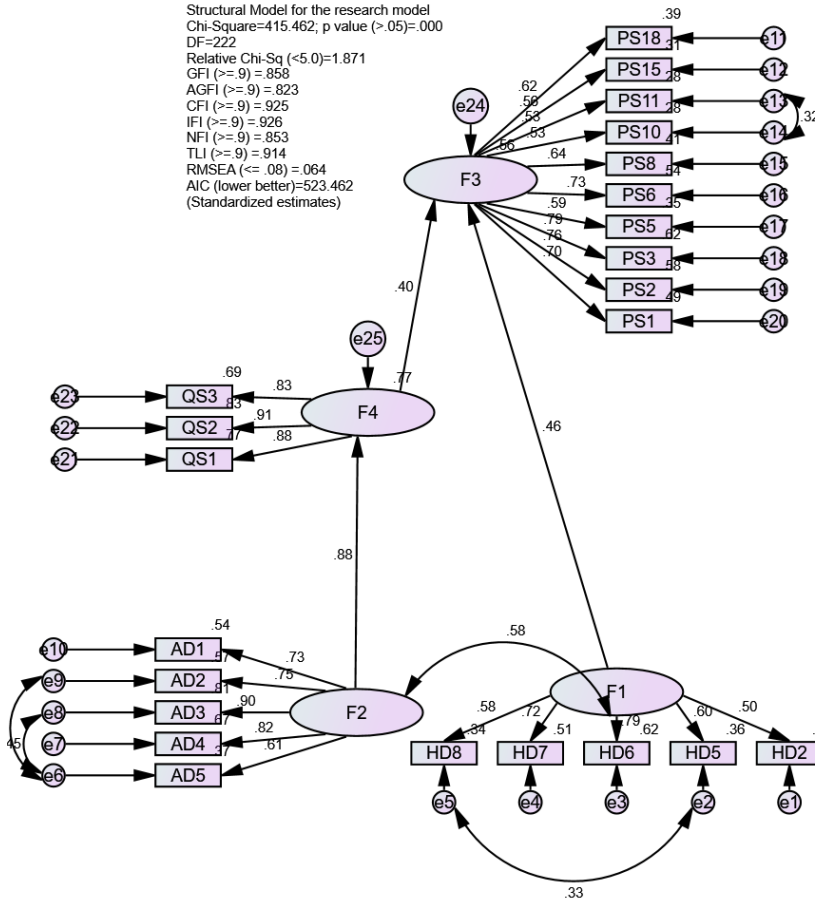
In order to evaluate our hypotheses, we constructed a structural equation model (SEM) depicted in Figure 2. This model encompasses healthcare demand, healthcare adequacy, quality outcomes, and patient satisfaction. The SEM fit indices indicate a satisfactory match for the proposed model (chi square = 415.462, DF = 222, CFI = 0.925, TLI = 0.914, RMSEA = 0.064, and p-value = 0.000). The findings indicate that healthcare demand is positively correlated with the adequacy of healthcare (b = 0.58; $P< 0.000$). Healthcare demand has a significant impact on patient satisfaction (b = 0.46; $P< 0.000$), the adequacy of healthcare has a significant impact on quality outcomes (b = 0.88; $P< 0.000$), and quality outcomes have a positive impact on patient satisfaction (b = 0.40; $P< 0.000$). The findings provide evidence in favour of hypotheses H1, H2, H3, and H4. In relation to the mediating influence of quality outcomes, the results indicate that the indirect impact of healthcare adequacy on patient satisfaction (b = 0.352, $P = 0.000$) is statistically significant when mediated by quality outcomes. The findings provide support for hypothesis 5, which posits that the quality of healthcare outcomes mediates the relationship between the adequacy of healthcare services and patient satisfaction. It is important to highlight that the quality outcomes had a partially moderating effect on the relationship between adequacy

of healthcare and patient satisfaction (Hair et al., 2016).

Discussion of Findings

This research contributes to the existing body of knowledge by introducing new hypotheses in the area of healthcare demand. Our study reveals a positive correlation between healthcare demand and healthcare adequacy, which is consistent with other research findings. Krist et al. (Krist et al., 2017) say that patients who receive adequate medical care and are more informed of their treatment are more inclined to express a greater need for preventative treatments. Active participation in the course of treatment fosters a sense of accountability among patients towards their own well-being, therefore, increases healthcare services demand(Krist et al., 2017). Additional sources have also demonstrated that the implementation of adequate care standards has a positive impact on the compliance of chronic patients with their treatment regimen and overall lifestyle improvement. This improvement is characterized by a higher demand of healthcare services (Fletcher et al., 2016).

Previous studies have indicated that when patients actively participate in their treatment, they exhibit a higher propensity to demand preventive treatments (Marzban et al., 2022, Krist et al., 2017). Demanding preventive services can subsequently foster a sense of gratitude in patients as



they recognize the extent to which such interventions have alleviated their suffering. Consequently, this enhanced appreciation for the benefits of preventative care may contribute to greater satisfaction with the overall quality of their healthcare experience. The findings of the third hypothesis indicate that following adequate care standards has a notable influence on the quality of results. This matter was examined by Marzban et al. (Marzban et al., 2022; Chen et al., 2024), who discovered that patients experience enhanced quality when they are adequately engaged and well-informed about their medical decisions and information.

The findings of the study suggest that there Is a notable positive correlation between quality outcomes and patient satisfaction. This finding is consistent with other research papers from different countries, which have posited that patients' perceptions of quality significantly influence their level of satisfaction (Al-Damen, 2017, Kalaja and Krasniqi, 2022; Ekanayake et al., 2024). We studied the factors of quality outcomes and patient satisfaction further through the last hypothesis, which examined the mediating effect of quality outcomes between healthcare adequacy and patient satisfaction. The results of the study indicate a significant indirect relationship between adequate healthcare and patient satisfaction, with quality outcomes serving as a mediator. Currently, there is a lack of research investigating the potential mediating effect of quality outcomes. However, it is stated that increased patient engagement, which is congruent with adequate care practices, may facilitate positive behavioural changes related to treatment adherence. This, in turn, has the potential to enhance the quality of healthcare outcomes and subsequently elevate patient satisfaction levels (Krist et al., 2017; Galdolage et al., 2024). The presence of an indirect effect underscores the necessity for more research aimed at identifying other factors that impact patient satisfaction following the provision of healthcare services in accordance with adequate standards.

This study holds significance as it provides insights into two underutilized aspects that possess the potential to enhance health outcomes. This study shows the value of providing adequate care that can eventually influence patients' decisions regarding their health, increase their responsibility towards it and increasing their demand for it. By providing guidance and training to healthcare practitioners on the importance of including patients in decision-making processes, patients' health literacy may be enhanced (Protheroe et al., 2009), allowing them to make more informed and effective choices regarding their health. And since healthcare delivery is becoming more complex with time, studying these variables clarifies their position and importance and allows for further exploration in the field.

Conclusion and Recommendations

The positive relationship between demand for healthcare, patient satisfaction, and quality of outcomes is a key factor in improving health systems. As demand for healthcare services increases, healthcare institutions seek to improve the efficiency of care delivery, which positively impacts patient experience. This improvement increases patient confidence in their providers, which contributes to higher overall satisfaction. Increased interaction between patients and healthcare providers also provides greater opportunities to improve the quality of care by receiving feedback and working to develop the services provided.

Structural equation modeling (SEM) can be used to understand the dynamic relationships between these factors, as this approach allows for the analysis of the direct and indirect effects of demand for healthcare on both patient satisfaction and quality of outcomes. By analyzing data and identifying influential variables, decision makers can develop effective strategies to improve the quality of services and reduce gaps in healthcare. Accordingly, incorporating this approach

into health performance assessment contributes to achieving a more efficient and effective health system that better meets patient needs and achieves improved treatment outcomes.

Limitations and Future Research

The present study encountered certain limitations, including the possibility of unmeasured variables and the notable concentration of respondents from the central and northern regions of Jordan, hence raising concerns over the representativeness of the sample, in addition to the small size of the sample. A larger sample size can mitigate all of these concerns. As a consequence of the online nature of the questionnaire, a significant proportion of the participants were comprised of individuals belonging to the younger demographic, encompassing both males and females. Furthermore, there was a lack of scholarly material pertaining specifically to healthcare demand and healthcare adequacy as measured and tested variables.

Theoretical and Practical Implications

This study contributes to the scientific literature of the field of healthcare demand and healthcare adequacy and removes the ambiguity about their relationship and interaction with the factors of quality outcomes and patient satisfaction by statistically proving their implications and significance in the healthcare system.In practical application, it furthermore offers direction to decision-makers concerning the allocation of resources within the Ministry of Health. This serves to enhance efforts aimed at raising health practitioners' understanding of the significance of patient engagement in the treatment procedure, and how it could increase their demand for healthcare services and subsequently improve their healthcare experience.

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Declaration of Interest Statement

No known conflict of interests.

Data Availability Statement

The data underlying this article is available in the article and as supplementary material.

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