

A Study on Factors Affecting Assessment of Service Quality for Online Medical Consultation Applications in Gujarat

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Abstract- This study seeks to investigate and analyze the multiple factors that influence consumers' perceptions of service quality in the context of virtual healthcare. This study, based on a thorough literature analysis and empirical research, looks into the important characteristics that influence service quality assessment in online medical consultations. The parameters under consideration include both technological features, such as platform usability, reliability, and security, and interpersonal elements, such as healthcare professional communication skills, empathy, and responsiveness.

This study will provide useful insights into the intricate dynamics that influence users' perceptions of online medical consultation services. The findings will help to improve virtual healthcare platforms by identifying areas for improvement and stressing factors that increase user pleasure and trust. This research is critical for healthcare professionals, legislators, and platform developers who want to improve online medical consultation services, resulting in a more effective and patient-centered virtual healthcare experience.

Keywords- Online medical consultation, Service quality assessment, Patient satisfaction, User experience, Trust, Communication effectiveness, Technology adoption

INTRODUCTION

The healthcare business has undergone significant transition as a result of rapid technological innovation and increased popularity of online platforms. Applications for online medical consultations have gained in popularity and use as a method of providing healthcare, allowing consumers to communicate with doctors from a distance. In Gujarat, India, online medical consultation programs have risen in popularity and now offer a variety of healthcare services to the public.

It is critical to assess the service quality provided by

virtual medical consultation apps. The term "service quality assessment" refers to the examination of several characteristics, such as dependability, responsiveness, empathy, assurance, and tangibles, that contribute to the overall quality of service given by these platforms. Gujarati healthcare providers should improve their web platforms and the client experience by understanding the elements that influence service quality evaluation.

The elements influencing service quality evaluation in the context of online medical consultation apps in Gujarat are likely distinct due to the region's cultural, sociological, and technological aspects. As a result, it is critical to undertake a thorough study into these components in order to identify problem areas and improve the quality of healthcare services supplied.

LITERATURE REVIEW

Shounak Pal, Baidyanath Biswas, Rohit Gupta, Ajay Kumar, Shivam Gupta (2023) Findings from the study suggests that time and money, convenience, responsiveness, and availability emerge as significant predictors for delivering a positive user experience on health platforms. Next, we identified substantial moderating effects of review polarity on the predictors related to brand association and hedonic motivation, such as online booking and video consultation. Further, we also identified the top predictors for successful user experience across these platforms. Liu, X., Wang, Z., Yang, J., & Liu, J. (2017). Looking into how user happiness in mobile health apps is affected by service quality. *Development of Information*, 33(4), 373-384. The impact of service quality on user satisfaction in mobile health applications—such as online medical

consultations—is investigated in this study. It finds that important predictors of user satisfaction include elements like system quality, information quality, interaction quality, and outcome quality. Chen Wang and Huiying Qi (2021) The adoption and utilization of mobile health applications, also known as Apps, will contribute to better user behavior. This paper presents a systematic review of the influencing factors from the perspectives of the individual, society, and application (app or App) design. It summarizes the relevant research results regarding the influencing factors of the acceptance and use behavior of users of mobile health applications. Regarding the individual dimension, the services' quality and meet patients' needs to optimize patients' experience, particularly during a health crisis, resulting in better health outcomes and end-user satisfaction. motivations and demographic traits of users have an impact on their behaviour. Nazanin Jannati, Nouzar Nakhaee, Vahid Yazdi-Feyzabadi, Dian Tjondronegoro (2021) This study aimed to evaluate the patients' satisfaction with using store-and-forward voice and text messaging teleconsultation service to provide primary health care to patients during the COVID- 19 pandemic. More than half of patients from the study did not have a good experience with teleconsultation. Swagato Chatterjee, Divesh Goyal, Atul Prakash, Jiwan Sharma (2021) This study contributes towards the healthcare/health-product marketing and services literature in suggesting an automated and machine-learning-based methodology for insight generation. It also helps healthcare/health-product e-commerce managers in better e-commerce service design and delivery. With 186,057 reviews on 619 e-commerce firms from 29 subcategories of healthcare/health-product industry posted in a review-website between 2008 and 2018, they used text-mining, machine-learning and econometric techniques to find which core and augmented service aspects and which emotions are more important in which service contexts in terms of reflecting and predicting customer satisfaction. Mohammad Zahedul Alam, Wang Hu, Md Abdul Kaium, Md Rakibul Hoque, Mirza Mohammad Didarul Alam (2020) This study aims to examine the factors influencing behavioral intention and actual usage behavior of health apps among technology prone young generation. This study contributes to

the growing literature on the use of health apps in trying to elevate the quality of patients' lives. The new methodology and findings from this study will significantly contribute to the extant literature of technology adoption and health apps adoption intention. Therefore, for practitioners concerned with fostering mHealth apps adoption, the findings stress the importance of adopting an integrated approach centred on key findings of this study. Li et al. (2020) The elements impacting the assessment of service quality in telemedicine platforms were investigated by Li et al. (2020). The results showed that user satisfaction and perceived service quality were highly influenced by elements including system quality, information quality, interpersonal communication, and service convenience.

OBJECTIVES OF THE STUDY

- To identify the primary criteria influencing service quality assessment in online medical consultation applications.
- To determine how demographic characteristics influence the evaluation of service quality for online medical consultation applications.
- To determine how the user experience influences the assessment of service quality for online medical consultation applications.
- To understand the role of technology in online medical consultation application.

RESEARCH HYPOTHESIS

H0₁- There is no significant relationship between demographic variables and factors affecting assessment of service quality for online medical consultation applications in Gujarat.

H1₁- There is significant relationship between demographic variables and factors affecting assessment of service quality for online medical consultation applications in Gujarat.

H0₂- There is no significant impact of user experience on assessment of service quality for online medical consultation applications in Gujarat.

H1₂- There is significant impact of user experience on assessment of service quality for online medical consultation applications in Gujarat.

H0₃. The users are not satisfied from the technological aspect of online medical consultation.

H1₃- The users are satisfied from the technological aspect of online medical consultation.

RESEARCH METHODOLOGY

This study used a qualitative research approach. This type of research is typically undertaken to identify the motivational elements underlying human behavior, i.e., why people act or think in a certain manner. This research can help us understand the factors that influence people's behavior or their preferences for one thing over another. Since the purpose of this study is to determine people's perceptions of online health consultation, qualitative research would be an appropriate approach.

- **Research Design:** The research design for studying the factors affecting assessment of service quality for online medical consultation applications in Gujarat will be descriptive and inferential.
- **Sources of data:** The data being collected will be quantitative. Quantitative data is gathered by a survey using a questionnaire.
- **Data Collection Method:** Quantitative data will be acquired through a poll of users of online medical consultation applications. The survey will be created to gather information on the following variables:
 - Demographic information (age, gender, education level, income, etc.)
 - Experience with online medical consultation applications
 - Key elements for determining app quality
 - Satisfaction with service quality of Gujarat-based apps
- **Data Collection Tool:** Since the information gathered is quantitative, a questionnaire is utilized to gather quantitative data. Through this questionnaire, demographic data, users' experience, and opinions of various individuals regarding online medical consultation applications are collected.
- **Sampling Method:** The sampling method used in this study are-
 - Stratified sampling- The population is divided

into strata based on relevant variables such as age, income and geographical location.

- **Simple random sampling-** Simple random sampling is a type of probability sampling in which the researcher randomly selects a subset of participants from a population. Each member of the population has an equal chance of being selected. Within each stratum, Random sampling method is used to select participants.

Data Interpretation

According to the data in the table above, the majority of respondents seek medical consultation online. The majority of responders (58%) are males between the ages of 18 and 24, who are either students or employees.

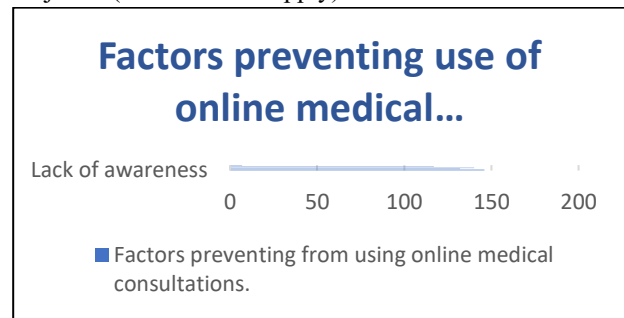
Table 2: Have you ever used an online medical consultation application in Gujarat?

Have you ever used an online medical consultation application in Gujarat?	Frequency	Percentage
Yes	140	70
No	60	30
Total	200	

Data Interpretation

Out of 200 respondents, 70% of the respondents uses online medical consultation in Gujarat which means that majority of population are engaged in consuming online healthcare services.

Table 3: If no, what factors have prevented you from using online medical consultation applications in Gujarat? (Select all that apply)



Data Interpretation

Respondents who avoid using online medical consultation tools cite a lack of awareness, limited access to technology, and a preference for in-person consultations.

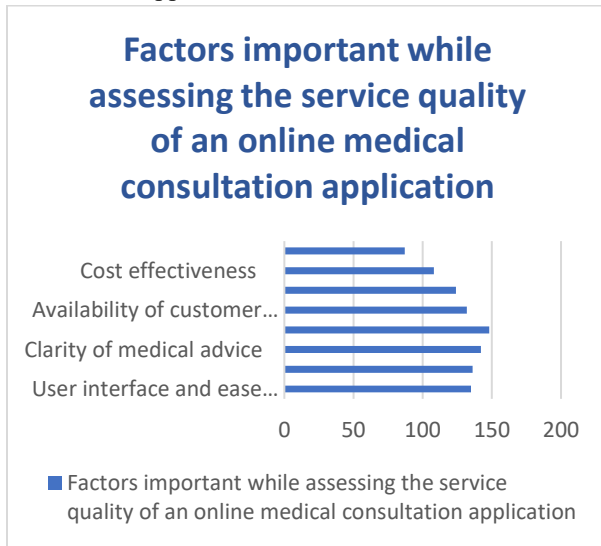
Table 4: On a scale of 1 to 5, how satisfied are you with the service quality of the online medical consultation applications you have used in Gujarat?



Data interpretation

Out of 200 respondents, 131 are satisfied with their use of online medical consultation applications.

Table 5: What factors are most important to you when assessing the service quality of an online medical consultation application?



Data Interpretation

According to the graph above, the clarity of medical advice provided, communication and interactivity, and response time of healthcare specialists are all key variables to consider when analyzing the service quality of online medical consultation apps.

Table 6: On a scale of 1 to 5, with 1 being strongly disagree and 5 being strongly agree, please rate the following

On a scale of 1 to 5, with 1 being strongly disagree and 5 being strongly agree, please rate the following

Challenges	Frequency				
	1	2	3	4	5
User interface and ease of use	21	16	48	94	21
Communication and Interactivity	5	37	33	37	88
Clarity of medical advice provided	12	24	41	62	61
Response time of healthcare professionals	12	32	33	46	77
Availability of customer support	15	26	32	53	74
Data privacy and security	8	32	43	46	71
Cost-effectiveness	14	20	44	53	69
Technical Aspects	12	25	42	52	69

Data Interpretation

The information gathered indicates that the majority of respondents agrees that the above mentioned challenges are faced by the users.

Table 7: How would you rate the level of transparency in the information provided by these applications regarding healthcare providers, services, and fees?

How would you rate the level of transparency in the information provided by these applications regarding healthcare providers, services, and fees?	Frequency
Very Transparent	59
Somewhat Transparent	53
Neutral	66
Somewhat non-transparent	19
Not Transparent at all	3
Total	200

Data Interpretation

Out of 200 respondents, 102 agree that online medical consultation apps provide clear information about healthcare providers, services, and pricing.

Table 8: How would you rate the video quality during your online medical consultation?

How would you rate the video quality during your online medical consultation?	Frequency
Excellent	95
Good	44
Average	42
Poor	16
Very Poor	3
Total	200

Data Interpretation

Out of 200 respondents, 139 believe that the video quality in the online medical consultation application is satisfactory.

Table 9: How would you rate the audio quality during your online medical consultation?

How would you rate the audio quality during your online medical consultation?	Frequency
Excellent	93
Good	48
Average	34
Poor	20
Very Poor	5
Total	200

Data Interpretation

Out of 200 respondents, 141 believe that the audio quality in the online medical consultation application is satisfactory.

Table 10: How often did you experience interruptions or disconnections during your online medical consultation?

How often did you experience interruptions or disconnections during your online medical consultation?	Frequency
Never	59
Rarely	61
Occasionally	50
Frequently	19
Always	11
Total	200

Data Interpretation

According to the data obtained, the majority of respondents do not face disruptions during their online medical consultations.

Table 11: Did you encounter any difficulties in accessing the online medical consultation platform?

Did you encounter any difficulties in accessing the online medical consultation platform?	Frequency
No Difficulties	87
Minor difficulties	55
Some Difficulties	39
Major Difficulties	13

Unable to access	6
Total	200

Data Interpretation

Based on the data gathered, we can conclude that 87 respondents had no problems utilizing the online medical consultation application, whereas 107 respondents do.

Table 12: How would you rate the login and authentication process of the platform?

How would you rate the login and authentication process of the platform?	Frequency
Very Easy	92
Easy	45
Neutral	37
Difficult	18
Very Difficult	8
Total	200

Data Interpretation

Out of 200 respondents, 26 think the login and authentication process is difficult, while 137 think it is easy.

Hypothesis Testing

Testing of Significance

For testing the significance relationship and impact of different factors affecting the assessment of service quality for online medical consultation applications in Gujarat, the following null hypothesis are framed and tested by using ANOVA at 5% level of significance.

H01- There is no significant relationship between demographic variables and factors affecting assessment of service quality for online medical consultation applications in Gujarat.

H12- There is significant relationship between demographic variables and factors affecting assessment of service quality for online medical consultation applications in Gujarat.

ACCEPT NULL HYPOTHESIS

Because the "p" value for Age, Gender, Occupation, and Educational Qualification is greater than 0.05, we can infer from the above table that there is no significant relationship between these factors and the assessment of service quality for online medical consultation applications in Gujarat. We shall

therefore "Accept the Null Hypothesis."

H02- There is no significant impact of user experience on assessment of service quality for online medical consultation applications in Gujarat.

H12- There is significant impact of user experience on assessment of service quality for online medical consultation applications in Gujarat.

REJECT NULL HYPOTHESIS

The above table indicates that, as the "p"-value is less than 0.05, there is a substantial impact of user experience on the evaluation of service quality for online medical consultation applications in Gujarat. Thus, we shall grant the alternative theory. The degree of support for H1 increases with decreasing p-value.

H0₃. The users are not satisfied from the technological aspect of online medical consultation.

H1₃- The users are satisfied from the technological aspect of online medical consultation.

Result: -

REJECT NULL HYPOTHESIS

The above table indicates that, as the "p"-value is less than 0.05, the respondents are satisfied from the technological aspect of online medical consultation applications in Gujarat. Thus, we shall grant the alternative theory. Hence, we will reject the null hypothesis.

RESULTS AND FINDINGS

- First, user experience emerged as a critical determinant, comprising ease of navigation, platform responsiveness, and overall interface pleasure.
- Second, the competency and professionalism of medical experts conducting consultations were critical, with users placing a high value on expertise, communication skills, and the ability to effectively address their problems.
- Additionally, convenience criteria such as appointment scheduling flexibility, wait times, and medical record accessibility had a substantial impact on users' views of service quality.

- Furthermore, the dependability and correctness of diagnosis and treatment suggestions were important factors, with users underlining the value of trustworthy medical advice.
- Furthermore, cost and value for money considerations emerged as important, with customers wanting transparent pricing schemes and fair costs for the services offered.
- The reputation and reliability of the online platform and its linked healthcare providers also had an impact on users' perceptions, with favorable reviews and endorsements increasing trust and confidence.
- Users expect rapid assistance in case of technical faults or inquiries, which contributes to their overall sense of service quality.
- The most common reasons respondents avoid using online medical consultation tools are a lack of information, limited access to technology, and a preference for in-person consultations.
- The majority of respondents reported being satisfied with their use of online medical consultation programs.
- The voice and video quality, reaction time of healthcare specialists, availability of customer assistance, clarity of medical advice, and user interface were all rated positively by the populace.
- The study found no significant association between demographic characteristics and factors impacting the evaluation of service quality in online medical consultation applications.
- The study found that user experience has a significant impact on the assessment of service quality for online medical consultation applications.
- Furthermore, the study found that respondents are satisfied with the technological aspects of online medical consultation applications in Gujarat.

CONCLUSION

In conclusion, our study looked into the various aspects that influence the assessment of service quality in online medical consultation applications. A thorough examination of user views and experiences revealed numerous major variables. First and foremost, the accessibility and convenience provided by these platforms have a significant impact on user

satisfaction and perceived quality. Users place a high importance on aspects such as ease of use, availability of healthcare professionals, and rapid response to concerns.

Secondly, trust and credibility are fundamental pillars underpinning user confidence in online medical consultation applications. Factors such as the reputation of the platform, qualifications of healthcare providers, and data security measures significantly impact user trust and willingness to engage with the service. Moreover, the quality of interaction and communication between users and healthcare professionals emerged as a key determinant of service quality. Factors such as the clarity of information provided, empathy, and professionalism of medical practitioners greatly influence user satisfaction and perceived value. Furthermore, technological factors such as the reliability of the platform, technical support, and the integration of advanced features like telemedicine tools also contribute significantly to the overall assessment of service quality.

Overall, our findings underscore the complex interplay of various factors in shaping user perceptions of service quality in online medical consultation applications. To enhance user satisfaction and engagement, platform developers and healthcare providers must prioritize aspects such as accessibility, trustworthiness, quality of interaction, and technological robustness. By addressing these factors effectively, online medical consultation applications can fulfill their potential in providing accessible, convenient, and high-quality healthcare services to users."

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