

Report On

**The Rise of Telemedicine Platforms in Bangladesh: A Comparative Analysis of  
Shukhee's Effectiveness and Limitations**

By  
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An internship report submitted to the BRAC Business School in partial  
fulfillment of the requirements for the degree of  
Bachelor of Business Administration.

Brac Business School  
Brac University  
January, 2026

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## Declaration

It is hereby declared that

1. The internship report submitted is my own original work while completing degree at Brac University.
2. The report does not contain material previously published or written by a third party, except where this is appropriately cited through full and accurate referencing.
3. The report does not include material that has been accepted or submitted for any other degree or diploma.
4. I have acknowledged all main sources of help.

**Student's Full Name & Signature:**

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**Meherin Forhad**  
22104092

**Supervisor's Full Name & Signature:**

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**Afrida Zaman Arney**  
Digital Marketing Lead, Product & Marketing  
Grameen HealthTech Limited

## Letter of Transmittal

Fabiha Enam  
Senior Lecturer,  
Brac Business School  
BRAC University  
Kha 224 Pragati Sarani, Merul Badda, Dhaka 1212, Bangladesh.

Subject: Submission of Internship Report

Dear Madam,

With due respect, I am honored to state that I have finished my internship report on “The Rise of Telemedicine Platforms in Bangladesh: A Comparative Analysis of Shukhee's Effectiveness and Limitations.” This report includes my overall experience and observations while working with Grameen HealthTech Limited's Product & Marketing department as an intern.

I have tried my best to provide practical and useful information while not disclosing confidential information. Therefore, I really hope that this report will fulfil your expectations.

Sincerely yours,

---

Meherin Forhad

22104092

BRAC Business School

BRAC University

Date: January, 2026

## Non-Disclosure Agreement

This agreement is made and entered into by and between Grameen HealthTech Ltd. and the undersigned student at Brac University Meherin Forhad. This report on “The Rise of Telemedicine Platforms in Bangladesh: A Comparative Analysis of Shukhee's Effectiveness and Limitations” is an original work done by me under the supervision of **Fabiha Enam**, Senior Lecturer, Brac University, and my on-site supervisor **Afrida Zaman Arney**, Digital Marketing Lead, Product & Marketing, Grameen HealthTech Ltd.

I, Meherin Forhad , will maintain professionalism and will not publish any confidential information of the company even after my internship contract ends with Grameen HealthTech Ltd.

---

Meherin Forhad

22104092

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## Acknowledgement

First and foremost, I thank Allah SWT for giving me excellent health, prosperity, education, and helpful people. Second, I'd want to thank my university supervisor, **Fabiha Enam** for helping me finish the report. Next, I appreciate **Fairuza Mehreen**, my university co-supervisor, for helping me with additional advice

Furthermore, my on-site supervisor, **Mrs. Afrida Zaman Arney**, Digital Marketing Lead, deserves thanks for her support throughout the internship. I also appreciate Accounting & Finance and HR for providing the necessary information.

Finally, I want to thank my coworkers for their time and support in making my internship a great one that I will enjoy for years to come.

## **Executive Summary**

The following research report reflects upon the internship at Grameen HealthTech Ltd. with an analysis of the evolving digital healthcare landscape in Bangladesh. Chapter 1 covers my responsibilities and experiences during the course of the internship, focusing on the supportive learning environment, the skill development, challenges faced including work load pressures, and recommendations for better coordination and well-being of employees. Chapter 2 presents the operational practices of GHL, strategic management and SWOT analysis which highlights strengths such as their social mission and opportunities within telemedicine. Chapter 3 assesses Shukhee's effectiveness in the telemedicine sector, competitor analysis, its limitations, and suggestions that can be put forward for its usability and service delivery. This research has emphasized that telemedicine has the ability to reduce health disparities in Bangladesh and shaped my aspirations within the digital health sector.

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## Chapter 1: Overview of Internship

### 1.1 Student Information:

Name: Meherin Forhad

ID: 22104092

Program: Bachelor of Business Studies (BBA)

Major: Marketing

### 1.2 Internship Information:

1.2.1 **Period:** 5 October 2025–5 January 2026

**Company Name:** Grameen HealthTech Limited (Shukhee)

**Department/Division:** Product and Marketing

**Address:** Telecom Bhaban Level-12, 53/1 Box Nagar, Zoo Road, Dhaka, 1216 Bangladesh

#### 1.2.2 Internship Company Supervisor's Information:

The supervisor of the internship company is Afrida Zaman Arney, who holds the position of Digital Marketing Lead. She completed her bachelor's in marketing from Brac University back in 2016. After that, she worked at various marketing agencies, including Carrotcomm, Im Digital, and Mighty Byte, and lastly joined Grameen HealthTech Limited as a digital marketing lead.

### **1.2.3 Job Responsibilities:**

- Ease the adoption of online campaigns and update the firm site, including updating, blogging, and adding images.
- Support the development of print resources, such as brochures, banners and posters, to promote offline branding campaigns and community outreach.
- Arrange, coordinate and carry out various marketing events, exhibitions and promotion displays.
- Carry out primary market and competition research on regional marketing projects.

## **1.3 Internship Outcomes:**

### **1.3.1 Student's Contribution to the Company**

I was a marketing intern at Grameen Healthtech Limited; hence, I was involved in various marketing activities and the internal and external communication. These included competitor analysis that helped to analyse market trends and help in determining the areas that needed improvement in service delivery. I was engaged in content and campaign development, where I worked with the other team members to come up with communication strategies and how the company objectives can be achieved using good marketing programs.

Furthermore, other tasks that I performed included PR processes, such as writing, translating, and editing communications to make them understandable, free from errors, and to align with the brand image. I also took notes about internal meetings on plans and what was done or should have been done.

Also, I contributed to the development of presentation slides for targeted campaign strategies, enhancing the value of the marketing team and providing me with valuable experience in healthcare technology.

### **1.3.2 Benefits to the Student**

The internship has given me an insight into the corporate office culture and the process of collaboration of professional teams towards objective achievement. The internship experience in a digital healthcare firm in Bangladesh helped me to learn the interaction of multiple

departments and how they manage their daily tasks and schedules, and this increased my interest in working in a dynamic environment. The experience of this internship with Grameen Healthtech Limited provided me with a lot of valuable skills such as developing marketing plans, creating and implementing campaigns, developing an activity plan of different brands, creating PR materials, and developing my analytical and creative skills.

### **1.3.3 Problems/Difficulties Faced During the Internship**

Although my work in Grameen Healthtech Limited was very educative, I had some issues in that place. Since the place was not a special section of prayer, workers could not pray during their break. Grameen Healthtech Limited is an emerging company and thus not well established, and this makes the processes less organised.

In addition, the labor force was predominantly composed of elderly workers who had many tasks to attend to. Due to these reasons, interns did not have numerous opportunities to directly benefit from close supervision and experience-based training. The elderly employees were burdened with work, and they could hardly find time to assist the interns since they were still in the learning process.

### **1.3.4 Recommendations for Future Internship Programs**

I believe that there could be certain improvements made to the internship program in Grameen Healthtech Limited. It is possible that there are prayer rooms or more effective seating patterns between departments, which would make the interns feel a better connection with their colleagues. Businesses could do more than that by offering internship, training, or orientation courses so that interns are able to develop their skills before they start taking responsibilities. These interns would also do well to have specific mentorship time to enable them receive the advice they require and be better contributors to group projects.



## Chapter 2: Organization Part

### 2.1 Introduction

This report comes up with a comprehensive analysis of the management, marketing and finance of Grameen Healthtech Limited-Shukhee. It details the strategies and the strategies the firm needs to pursue to succeed in the long run, and an overview of the daily activities that ensure that the business is running smoothly. Also, this part discusses the information system methods and operational management of Shukhee. Such discussions will aid in explaining what these concepts entail and also some practical recommendations on how the performance of that company can be improved. Lastly, a SWOT analysis and Porters Five Forces analysis have been used to conduct the competitive analysis.

#### 2.1.1 Objective

This chapter aims to present a very general overview of Shukhee and then to provide a thorough critique of all of Shukhee's operational activities. The specific objectives are to:

- Determine how the organization's leadership style has impacted the organization's ability to establish an effective workflow.
- Understand the role of HR functions in motivating the employees of the organization and the function of HR in recruitment, development, and training of talent;
- Provide detailed information regarding the marketing and branding strategies used by Shukhee, and their role in establishing Shukhee's reputation in the healthcare space;
- Identify the marketing weaknesses in the marketing activities and provide actionable recommendations.
- Identify and conduct a SWOT analysis of the organization's competitive advantages, weaknesses, opportunities, and threats, and complete a competitive analysis, and conduct a

SWOT analysis of the competitive advantages, weaknesses, opportunities, and threats of other organizations in the health care space.

- Review all previous successes of Magic, and through the use of supporting financial records publicly available (if possible), will predict the future growth opportunities for the organization.

### **2.1.2 Scope**

It covers a detailed understanding of the current HR practices, marketing initiatives, operational management, use of information systems, and financial and accounting practices within Shukhee. These are also supported through interviews conducted across various levels of employees within different functions. Based on this research, Shukhee gets an overview of how the prevailing practices in each function contribute to organizational growth.

We also provide recommendations based on observation and analysis, aiming to highlight potential gaps and areas for improvement. The SWOT and Porter's Five Forces analysis of the industry and competitors provides insight into Shukhee's standing in the healthcare market in relation to the performance of her competitors. These two bullet points provide a current assessment of how the organization has, or has not, met its expectations and will allow it to establish the necessary information to create informed future strategic plans. Additionally, it will provide helpful advice to any individual looking for additional information regarding Shukhee's operational and strategic direction in the digital health industry.

### **2.1.3 Methodology**

Primary data was utilized in this research. Primary data was collected through interviews with employees from different departments. Information from training sessions conducted by the department heads at Shukhee was added to the primary data to enhance the operational and marketing practice analysis.

#### **2.1.4 Limitations**

Shukhee is a private company, and as such, much internal information remains confidential. No sensitive data has been disclosed without prior permission from the management of the company. Hence, sections about financial performance and accounting practices may not carry comprehensive information. Also, while completing an initial four months of the internship gives one a very limited opportunity to complete in-depth observations, therefore, any conclusions will be drawn based on the data available, as well as personal observations during that time.

#### **2.1.5 Significance of This Study:**

The study offered comprehensive information about the digital healthcare industry and the primary and supportive activities of Shukhee. The report delves into Shukhee's strategies for delivering affordable healthcare services and maintaining a competitive edge in Bangladesh. Furthermore, the report examines the company's various strengths, weaknesses, opportunities, and threats, and can therefore be advantageous for Shukhee in enhancing its areas of concern.

### **2.2 Overview of the Company**

As the initial venture developed by Grameen Telecom Trust, Grameen HealthTech Limited is one of several initiatives aimed at providing healthcare in Bangladesh to build a better future based on health and nutrition. As part of the Grameen Group, GHL aims to maintain continuity of its vision of providing healthcare that is innovative and socially responsible while providing an excellent customer experience.

GHL's primary mission with Shukhee is to provide quality healthcare that can be obtained anytime, anywhere, and at an affordable price. By utilizing state-of-the-art technology, GHL has developed Shukhee to connect patients to qualified healthcare professionals in Bangladesh. Using Shukhee allows GHL to deliver individual care to people throughout the country.

As part of the Grameen philosophy of social business, GHL believes that healthcare should be accessible to everyone and that access to healthcare is a human right that should not be restricted by socioeconomic status.

**Shukhee's Core Services:**

- Telemedicine / Digital doctor consultation from anywhere, anytime, with qualified doctors.
- Ability to purchase prescription and over-the-counter medications delivered to your door through an online pharmacy.
- Ability to book laboratory tests online and receive digital results electronically.
- 24-hour call center.
- Available nationwide.

**2.2.1 Vision:**

Grameen HealthTech Limited aims to become the first digital healthcare platform of a trusted, sustainable, E2E digitally enabled health ecosystem for people in Bangladesh. GHL could transform healthcare delivery through a digitally enabled omni-channel ecosystem integrating a strong network of partners.

**Mission:**

Grameen HealthTech Limited is to pioneer the transformation of healthcare delivery in Bangladesh by establishing the foremost digital-first healthcare platform. Our commitment is to establish a trusted, sustainable, and end-to-end digitally enabled health ecosystem for the people of Bangladesh. Through our platform, we aim to revolutionize healthcare by seamlessly integrating a robust network of partners, thereby establishing an omnichannel ecosystem that is digitally empowered. By the power of technology, we strive to enhance accessibility, efficiency, and quality in healthcare services, ultimately improving individuals' health outcomes and well-being nationwide.

### 2.2.2 Achievements of the company:

Table 1 : Achievements of the company

| Year | Achievement                                                          | Details                                                                                                                                                                                                                                                                                                                                                                                              |
|------|----------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2025 | SDG Brand Champion 2025                                              | Grameen HealthTech's Shukhee was awarded the SDG Brand Champion 2025 for Sustainable Community. The program has so far been able to facilitate more than 60,000 doctor consultations in all 64 districts. The system works through an app, a website, a 24/7 IVR hotline (10657), and more than 5,000 Shukhee Sheba Kendras and Ambassadors. Over 300 certified doctors and lab agents in the system |
| 2025 | 1 Million Happy Users in 117 Days                                    | In less than four months, Shukhee (which provides healthcare services online) has gained 1 million customers, positioning it as one of the quickest to achieve this milestone in the healthtech sector globally.                                                                                                                                                                                     |
| 2025 | Best in Healthcare Award—23rd Edition of Business Leader of the Year | Recognized for making healthcare more accessible, through telemedicine, online prescriptions, and low-cost services to underserved areas. Improved healthcare delivery and ensured quality support for all                                                                                                                                                                                           |

|      |                                                                                       |                                                                                                                                                                                                                                     |
|------|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2025 | Excellence in Digital Healthcare Services – World Health & Wellness Congress & Awards | Praised for pioneering digital healthcare solutions, the patient satisfaction is 90%. The Shukhee app & 10657 helpline enabled continuity of care in rural areas, making the services more accessible, efficient, and data-driven.  |
| 2025 | Commward 2025– Small Budget Campaign                                                  | This funding is allocated for the "Mother Language Day Movement—Bringing Healthcare in Every Dialect." This campaign aims to ensure accessible healthcare across Bangladesh, particularly for communities facing language barriers. |

### 2.2.3 Board of directors:



**Figure 1 : Board of Directors**

## 2.2.4 Our Partners:



**Figure 2 : Partners**

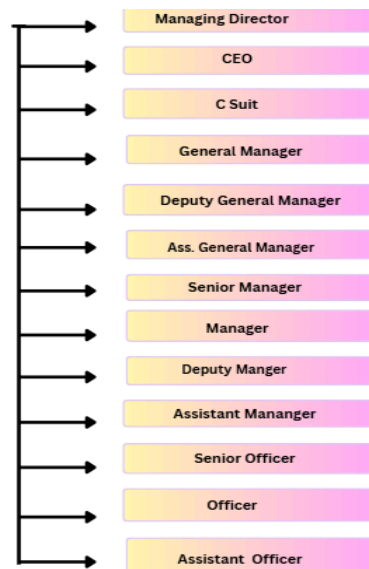
## 2.3 Management Practices

### 2.3.1 Leadership Style

The style of leadership employed by GHIL is known as participative, and it emphasises teamwork, inclusiveness and shared decision making at every level. A leader with this style requests his team members to give their feedback and seek their opinion and suggestions and they can use these to resolve their problems and formulate strategies. This leadership style leads to workers and interns feeling that they are the owners of the company, hence motivating them to give their best towards ensuring that the company achieves its objectives.

It encourages participatory leadership where the diverse management, healthcare professionals and support workers of GHIL work together towards operational efficiency and innovation. Organizational decisions are made using various stakeholder perspectives, which allow creativity, accountability, and employee participation. This kind of environment provides interns with incredible learning opportunities; they understand how organizations work, they discuss, they campaign, and they learn through activities.

## 2.3.2 Organizational Structure



**Figure 3:Hierarchy of Position**

### 2.3.3 The Human Resource Planning Process of the Organization:

At the start of every fiscal year, Grameen HealthTech Limited performs a job analysis to determine the organization's labor requirements for the following year. They determine how many employees we need and how they will organize the company (using an organogram) in accordance with our operational requirements and business objectives. Management will provide its assent to the suggested idea.

At the same time, they create a yearly budget for personnel that fits the organization's financial goals. They start the hiring procedure for any positions that are approved after the aforementioned plans are approved. Throughout the year, the hiring process will expand to meet operational and business requirements.

#### 2.3.3.1 Recruitment and Selection Process:

When they receive an approved requisition for recruitment, the Human Resources Department will initially check the approved organogram to confirm that the position is vacant and has been authorized. Once confirmed, the HR Department will prepare a



document for management approval indicating that we wish to proceed with recruitment for this position.

Once the recruitment requisition is approved by management, they will advertise the vacancy via all available recruitment media (i.e., online job portals, etc.) and collect applications from potential candidates. Once we have collected all applications, they will screen them based on their relevance to the job description and qualification requirements. Candidates who have been screened positively will be invited to attend a first interview; for certain positions, the initial interview also includes a written or technical assessment. Candidates who perform well in the initial assessment will be invited to attend a final interview with a senior management team member. When the final selection has been made, the successful candidate will receive an offer.

#### **2.3.3.2 The training and development initiatives:**

At the beginning of every fiscal year, the Training Needs Assessment (TNA) process begins. It helps departments identify employee skill gaps and development opportunities across the organization. A training calendar is produced based on the results of the TNA process to systematically plan out the training and development of employees.

Employee training programs are organized based on two criteria: the complexity of the competencies (skills) being developed and the relevance of the competencies to the organization's business. Within the organization, some training programs are conducted by qualified internal trainers, while others (specialized and advanced programs) are conducted by professional trainers from outside the organization. This mixed model for employee training allows employees at all levels to continuously learn and improve.

#### **2.3.3.4 The performance appraisal system:**

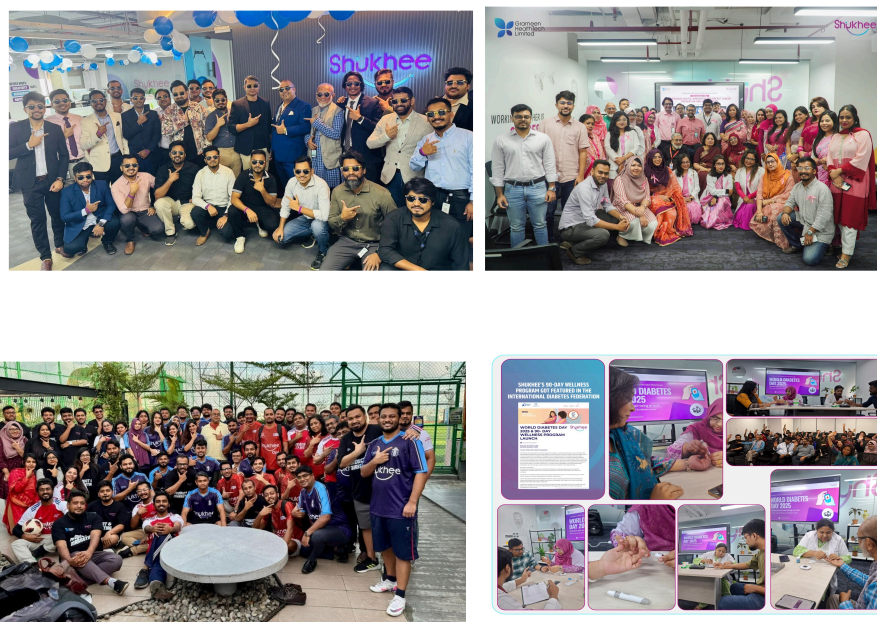
As mentioned in the previous sections, the organization's performance appraisal process is based on Key Performance Indicators (KPI). At the start of each fiscal year, the employee defines, informs, and formally confirms their Key Performance Indicators (KPI), which allows for all employees within the organization to be evaluated based on a common set of standards. Therefore, during the quarterly performance review of employees, the quarterly

ratings of all employees are available for review so that each employee can prepare for any questions or concerns. At the end of the fiscal year, an employee's final performance appraisal is conducted; this results in a performance rating per employee, which will be determined using the bell curve process.

### 2.3.3.5 Employee Wellbeing and Handling

Grameen HealthTech Limited (GHL) focuses on the health and well-being of its employees as you need a healthy and motivated workforce to become successful. Sporting and leisure events such as the Inter-Department Football Fiesta and Men day encourage stress release, confidence, and participation by way of fun activities and challenges and games.

The 90-Day Wellness Challenge was initiated by GHL to encourage the employees to be healthier, mindful, and proactive by conducting diabetic check-ups, health awareness training, and wellness activities in the workplace. The company is also a breast cancer prevention and management training holder. Early detection and health management through digital health solutions are taught to employees at GHL, which in turn generates physical fitness, mental health, social relationships, and health awareness among the employees, making them a motivated and productive workforce that aids the goal of GHL to offer quality healthcare to the Bangladeshi communities.



**Figure 4 : Events for Employee Wellbeing**

## 2.4 Marketing Practices

### 2.4.1 Marketing Strategy:

Shukhee does both free and paid advertising. Shukhee Sheba Kendro is introducing healthcare to rural areas by addressing them locally, creating awareness, and providing on-site assistance to medical appointments in the local languages of the consumers. Shukhee collaborates with lifestyle, health, and medical, as well as family-friendly creators to advertise online doctor visits, cashback deals, and seasonal health tips. Their content creates credibility and exposure among the young users, parents and diaspora in the foreign countries.

Another aspect that Shukhee uses to promote its outreach is the promotional advertisement, seasonal offers, partner-based offers, as well as collaborations with platforms such as bKash and Nagad. At the same time, the organic use of social media, word-of-mouth promotion, and PR awards and media coverage continue to establish the brand of Shukhee and its reputation in Bangladesh. Shukhee has received extensive media coverage through newspapers and television, which have highlighted its marketing/awareness efforts and success stories of patients and impact on health outcomes.

### 2.4.2 Target customers, targeting, and positioning strategies

Shukhee's customer base primarily consists of individuals seeking affordable, quick, and reliable access to healthcare services, ranging from urban and semi-urban adults to expatriates of Bangladeshi descent who wish to consult Bangladeshi doctors located abroad. Shukhee appeals to rural areas by the Shukhee Sheba Kendro and speaks in local languages. The major categories of its customers are women, children, elderly patients, and people with chronic illnesses, and also tech-savvy children who are still highly dependent on digital solutions. Shukhee attempts to appeal to these groups of customers in various ways: social media advertisement, involvement of influencers, and educational content to the digital audience; messages addressing the expatriates directly; and reaching out to the rural

population. Shukhee focused on families, women, and corporate bodies by addressing them with health packages and other messages. Being the most convenient and well-known online health resource in Bangladesh, Shukhee offers professional medical advice at any place and time. Shukhee ensures affordable, quality healthcare to all people by way of cheapness, presence of specialists, multilingualism, and convenience.

### **2.4.3 Marketing channels:**

Shukhee uses paid and unpaid marketing strategies.

#### **Paid Marketing Channels**

- **Traditional Marketing:** Shukhee applies traditional marketing, which involves newspapers, magazines, television advertisements, posters, and in-ground promotion of the events.
- **Digital Marketing:** Facebook, Instagram, and TikTok social media ads, Google Ads, video ads on YouTube, in-app promotion, and sponsored campaigns based on SEO.
- **Collaboration and partnership:** Shukhee collaborates and partners with bKash and Nagad to implement different cashback offers. They have also collaborated with online pharmacies, including Medeasy. To advertise its services, Shukhee partners with such well-known influencers as Shompod and Chamak.
- **Campaigns:** Shukhee has been undertaking a lot of campaigns in terms of seasonal health packages, such as Eid, Durga Puja; awareness programs, such as Breast Cancer Month; cultural and national holidays promotions; reward and discount programs.

#### **Non-Paid Marketing Channels**

- Organic reach via social media platforms
- Word of mouth
- Public relations
- Shukhee app & official website
- Outbound Call

### 2.4.5 Advertising and promotion strategies

Shukhee under Grameen HealthTech presents affordable healthcare services which provide quality medical treatment to every citizen of Bangladesh who resides in urban areas and semi-urban areas and rural areas and to Bangladeshi expatriates. Its marketing strategy is designed to create awareness, create engagement, and create Trust through a variety of paid and non-paid channels across multiple customer segments.

#### Paid Marketing Channels:

Traditional marketing: Shukhee reaches out to audiences not active online using newspapers, magazines, and TV commercials. Seasonal health packages, visits to specialists, and cashback promotions can be promoted through billboards (dynamic) in high-traffic areas and on-the-ground event promotions, as these methods create brand recall and credibility with customers in the older and rural segments of the population.



Figure 5 : News on TV and newspaper

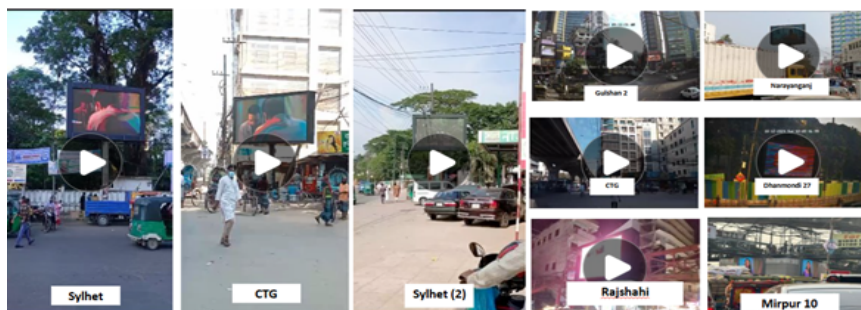


Figure 6 :Billboards around of Bangladesh

## Digital Marketing:

Targeted Facebook, Instagram, LinkedIn, TikTok, and YouTube advertising attract tech-savvy, health-conscious people. Shukhee remains active online in a paid ad campaign on social media, Email, SMS/MMS, or in-app ads or a campaign-specific website depending on your special package.

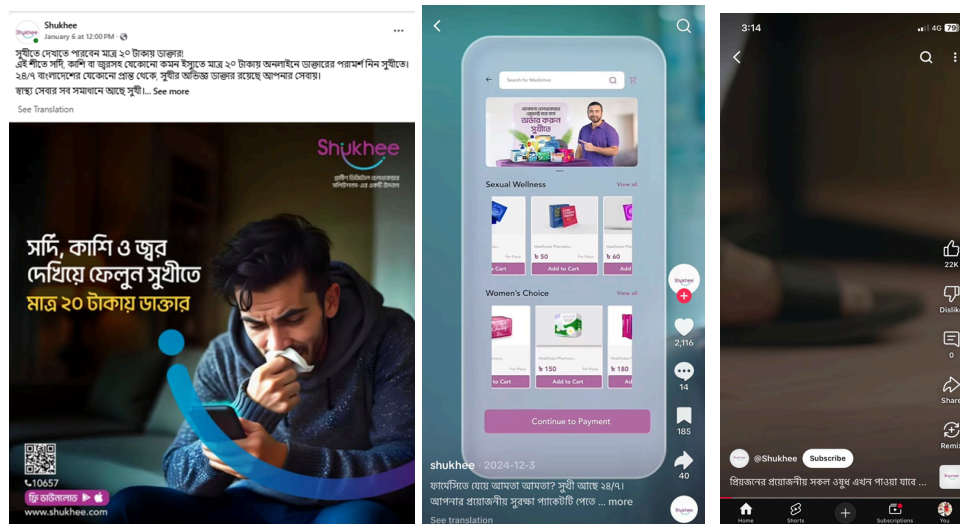


Figure 7 : Reels and short videos on social media platform

## Collaboration & Partnerships:

The partnerships with MFS and other financial institutions, co-branding with online pharmacies and corporate health packages, and the collaboration with NGOs and influencers will increase the reach of Shukhee. The collaboration with such agencies will improve the brand value of Shukhee and increase credibility and convenience to the user experience.





**Figure 8 : Collaboration and partnerships with famous brands**

### Campaigns:

Shukhee resorts to seasonal and theme-based marketing to ensure that people are interested. Examples are diabetes and high blood pressure packages, Breast Cancer Month awareness campaigns, cultural and national events promotions, and time-limited discounts. Collaboration will allow Shukhee to establish a feeling of urgency and emphasize the social responsibility of its products, which will make people more willing to see the doctors in Shukhee. The iPhone 17 Pro Max promotion has been doing the best as of now.



**Figure 9 : iPhone 17 Pro Max Campaign**

Shukhee has developed its own organic social media audience through publishing educational and informational material, conducting live sessions with physicians, featuring health tips, and developing patient success stories. It also does various forms of interactive marketing without requesting anyone to publicize it. Besides marketing the services of Shukhee, this approach creates a long-term trust and the basis of further health education and supportive information. Sheba Kendras by Shukhee have managed to have a solid organic social media presence by publishing actual community success stories in the towns where they provide

their services. When ambassadors share online the patient outcomes, local activities, and what services they are offering, they do posts that are authentic and attract more people to engage with them. This earns credibility and makes the organization more localized hence it will be able to reach many without necessarily spending a lot of money to advertise.

#### 2.4.5 Branding activities:

- **Name:** The company name is “Shukhee” which means being happy .
- **Logo:**



- **Website:**

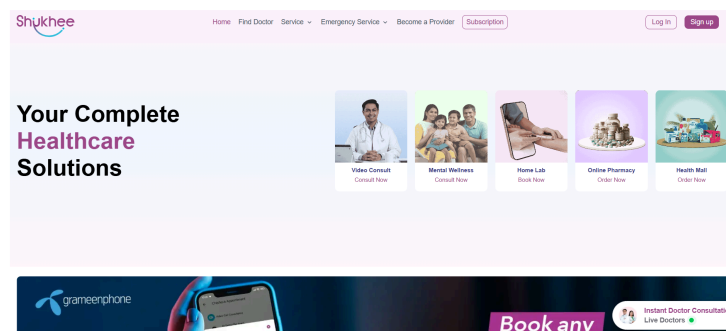


Figure 10 : Website page view

- **Tagline:** “Your Complete Healthcare Solutions” is the tagline of Shukhee which means a person can get all the health service from one place.

#### 2.4.6 Service/New Service Development and Competitive Practices

##### Recent Service:

Table 2 : Recent Services



| Service                                  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Picture                                                                                                                                                                                                                                                                                                                                  |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1. Instant Doctor Consultation</b>    | <p>Shukhee is a medical digital consultancy where people can talk to certified general practitioners through the application or through a hotline. The service also ensures that medical advice is given immediately on general health matters without any queues or clinic visits.</p>                                                                                                                                                                                                              |  <p>Shukhee<br/>কৃত্রিম ইন্টেলিজেন্সের মাধ্যমে<br/>কোনোমতে ২৪ ঘণ্টা সেবা</p> <p>উৎসাহের<br/>সুখ<br/>থাকে না ছুটিতে</p> <p>থাকুন দেশের যে প্রান্তেই<br/><b>২০ টাকায়</b><br/>ইকস্ট্যান্ট ডাক্তার<br/>দেখান সুখীতে</p> <p>১০৬৫৭</p>                     |
| <b>2. Home Lab Tests</b>                 | <p>The user does not have to worry about having to go into a lab to give their sample; they can do it from the comfort and privacy of their own home. This helps to ensure that health issues are caught early.</p>                                                                                                                                                                                                                                                                                  |  <p>Shukhee<br/>কৃত্রিম ইন্টেলিজেন্সের মাধ্যমে<br/>কোনোমতে ২৪ ঘণ্টা সেবা</p> <p>সর্বোচ্চ<br/><b>৭০% ছাড়ে</b><br/>ঘরে বসেই<br/>ল্যাব টেস্ট করুন<br/>সহজে ও কম ব্যয়তে বিশেষ ন্যায় টেস্ট</p> <p>১০৬৫৭</p> <p>ফ্রি ডাউনলোড</p> <p>www.shukhee.com</p> |
| <b>3.Specialized Doctor Consultation</b> | <p>Shukhee offers users an easier way to connect with a diverse group of qualified specialists, including gynecologists, dermatologists, cardiologists, pediatricians, mental health professionals, and many other specialists. By making appointments based on the purpose of the appointment, users can talk with specialists using either video or audio. This feature allows people in remote areas or those without access to specialists located in metropolitan markets to find access to</p> |  <p>Shukhee<br/>কৃত্রিম ইন্টেলিজেন্সের মাধ্যমে<br/>কোনোমতে ২৪ ঘণ্টা সেবা</p> <p>অ্যাজমা রোগের<br/>স্বাস্থ্যসেবা<br/>পৌঁছে যাবে<br/>প্রতিটি ঘরে</p> <p>শেষমালোক্তিক ডাক্তার,<br/>ঔষধ আর ইনহেলার<br/>সবই আছে সুখীতে</p> <p>১০৬৫৭</p> <p>১০৬৫৭</p>     |

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|                           | professionals, even those who are strictly located in the major metropolitan areas.                                                                                                                                                                                                                                                                                                                                                           |  |
| <b>4. Health Mall</b>     | Through Shukhee's Health Mall, users can find everything they need in one place. They use partnerships with MFS and banks to expand their reach through cash back promotions, partner with online pharmacies for corporate package health solutions, partner with NGOs for health awareness campaigns, and partner with brand influencers to promote their company's products through trustworthy products being delivered to your doorsteps. |  |
| <b>5. Online Pharmacy</b> | The Shukhee online pharmacy provides users with an easy way to order medications, both over-the-counter and prescription. Medicines ordered are validated for their quality and are shipped directly from the warehouses of the company and packaged securely through the distribution centers of the Sheba Kendra Network.                                                                                                                   |  |

Besides its core services, Shukhee also provides essential extended services like ambulance support, medical tourism assistance, blood bank connectivity, mental wellness counseling, and certified caregivers for home-based care.

## **New Service-based Development and Competitive Practices**

Shukhee has planned to offer a fresh service for chronic illness management, encompassing diabetes, high blood pressure, and mental wellness. With multiple services designed to treat chronic illnesses, Shukhee can offer patients condition-specific packages, including scheduled visits to their physicians, necessary diagnostic tests, reminders for taking medication, lifestyle coaching, and digital tracking of progress. Shukhee also aims to create packages and bundles that help make the long-term management of chronic health conditions more affordable and therefore increase access to care for patients diagnosed with chronic health conditions by offering packages at discounted prices and bundles at lower price points. By offering patients diagnosed with chronic illness a continuous model of support and well-structured, accessible health care services through Shukhee's committed care programs, Shukhee will provide patients diagnosed with chronic illnesses the opportunity to lead healthier, more secure lives.

Shukhee continues to compete on the basis of making affordable pricing for repair and support via care packages and subscriptions available to patients diagnosed with chronic illness. With a national network of Sheba Kendras, Shukhee can provide timely care to patients and create local trust in the Shukhee brand, as well as provide a distinct advantage over niche competitors through its all-in-one consultation, diagnostics, pharmacy, wellness, ambulance, and mental health services. Shukhee is positioning itself as a major player in Bangladesh's digital health market by continually expanding its digital offerings with newly developed chronic illness-specific care programs for diabetes, high blood pressure, and mental wellness, further solidifying its position as a leader in a 360-degree digital health ecosystem.

### **2.4.7 Critical marketing issues and gaps**

Shukhee has implemented extensive marketing activities, but numerous critical issues have impeded the overall success of the marketing program. A critical marketing issue is the 'innate audience gap,' where many people in Bangladesh with low digital literacy and no smartphones cannot use Shukhee's services, despite ongoing marketing. The other significant issue with marketing to Shukhee is that customers are not aware of digital healthcare, they do

not trust the internet-based services to receive medical care, and they are inclined toward traditional methods that require visiting the doctor in-person. Additionally, Shukhee does not easily reach its target audience due to having a tight budget to advertise as well as competition with both local and global healthcare delivery platforms. The community should be better engaged at a deeper level to make Shukhee a larger player in the market. This implies engaging the people in the grassroots level, launching specific awareness campaigns and establishing trust over time with the community.

## 2.5 Accounting Practices of Grameen Healthtech

### 1. Accounting Practices Review—Theory and Organizational Observations

Upon completing my internship at GHL (Grameen Healthtech Limited), I learned about the company's adherence to generally accepted accounting practices (GAAP).

- While preparing invoices for B2B and Telco Revenue and recording B2B and Telco Revenue, GHL employs the accrual accounting principle.
- GHL maintains consistency by using the same accounting program (Tally Prime) and consistently reporting financial information in the same manner for all periods. In addition, GHL uses the same straight-line depreciation method for all its years in service.
- GHL is a relatively new company that has a long-term strategy; thus, the "going concern" principle will apply when preparing GHL's financial statements.
- GHL's Finance Team takes a cautious approach to revenue recognition (i.e., only recognizing revenue after services are delivered and validated against contracts with our partners, etc.).
- GHL demonstrates the materiality principle in that it aggregates small operational expenses and places them together within broad categories for operational simplicity.
- GHL follows the matching principle in that it records expenses incurred for all revenue-generating activities within the same reporting period as when the revenue was generated.

**2. Method of Accounting :** Grameen Healthtech Limited follows the **accrual basis of accounting**, in line with standard corporate practices. Most revenues, especially the B2B,

Telco, subscription, and partner-based revenues, are recognized only when the service is delivered or reconciliation is completed, not when cash is received. Salaries, vendor bills, and operational expenses are recorded in the reporting period of when they occurred, regardless of the actual time of payment.

### **3. The Accounting Cycle**

Every day, Grameen Healthtech Limited identifies and records all transactions (bank, expenses, and receipts) in Tally. Ledger posting is automated within Tally once journal entries are entered. According to the finance team, the monthly trial balance is used for determining the validity of accounting statements through various adjustments made during month-end/year-end. The company prepares financial statements periodically and at year-end for audit, i.e., 30 June 2025. During the yearly closing period, closing entries are finished, and auditors verify the final balances.

### **4. Depreciation Methods**

GHL uses the straight-line technique for the depreciation of fixed assets, a practice prevalent among service- and technology-oriented firms. They follow a consistent policy and depreciate office and IT equipment evenly over their anticipated useful lives. The finance staff will record depreciation entries at the end of each month and year.

## **2.6 Operations Management and Information System Practices**

Shukhee has a full ISO 9001-certified database for human resources (HR). Shukhee's HR database has information on both the Shukhee Sheba Kendras and the personnel that work together to deliver healthcare services. Currently, it uses cloud technologies to store all of this information, making it easier for healthcare stakeholders and providers to share it. Using this technology to get real-time access to patient, consultation, and pharmaceutical data makes operations more efficient, improves service delivery, and lets people make decisions based on facts.

## **2.7 Industry and Competitive Analysis**

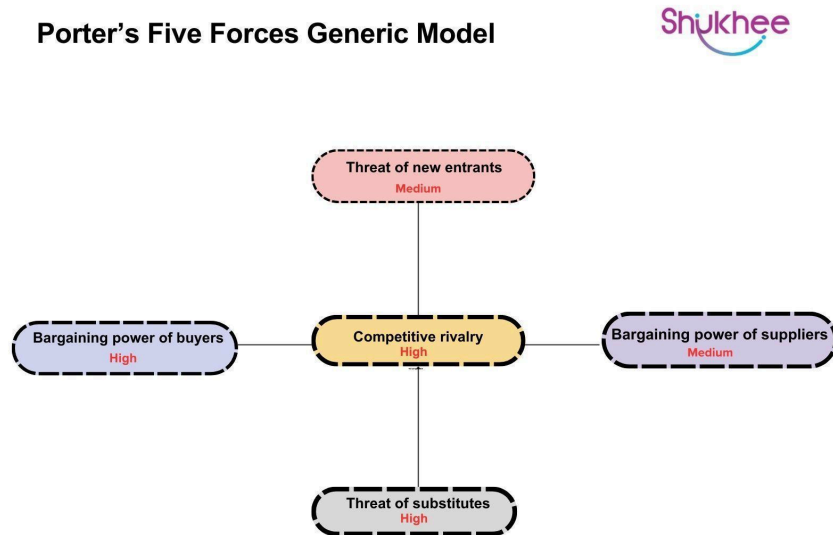
### **2.7.1 . SWOT Analysis of Shukhee**

Table 3 : SWOT Analysis of Shukhee

| Strength                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Weakness                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>● <b>Comprehensive Digital Healthcare Platform:</b> Shukhee makes healthcare easy and accessible by offering a broad variety of services on one platform, such as online doctor visits, medication deliveries, diagnostics, wellness advice, and health education.</li> <li>● <b>Nationwide Reach:</b> With Shukhee Sheba Kendras, along with more than 5,000 community ambassadors, the platform is certain to ensure the availability of services in all 64 districts and effectively bridge urban-rural healthcare gaps.</li> <li>● <b>Strong Brand &amp; Trust:</b> Supported by Grameen Group and the legacy of social business, Shukhee maintains credibility amongst users and partners, ensuring long-term loyalty and confidence.</li> <li>● <b>Integration of technology :</b> (cloud database and digital tools) to enable instant patient information/operation data access improves the organization of operational processes and improves coordination and quality of care.</li> </ul> | <ul style="list-style-type: none"> <li>● <b>Distinct Lack of Complete HRM Software:</b><br/>The organization lacks comprehensive HRM software, hindering its capacity to automate data collection, processing, and reporting.</li> <li>● <b>Audience Gap:</b> Due to limited smartphone access and low digital literacy, there is a big gap in the availability of aggressively pushed products to people who live in rural areas.</li> <li>● <b>Behavioral Barriers:</b> Many individuals prefer in-person consultations over online consultations and digital health services.</li> <li>● <b>Resource Constraints:</b> Due to monetary limitations, there is a limit to the amount spent on the execution of large-scale offline campaigns and personalized marketing initiatives, consequently limiting reach and engagement.</li> <li>●</li> </ul> |

| Threats                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Opportunity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• The rapid growth of smartphones, the availability of the internet, and the increased health awareness in Bangladesh provide a way through which the digital awareness of health can be promoted.</li> <li>• <b>Strategic Partnerships:</b> Collaborating with hospitals, diagnostic centres, pharmacies, non-governmental organizations, and government can help to increase outreach and service diversity.</li> <li>• <b>Personalized Services:</b> Using patient data to deliver focused advice, reminders, and campaigns could significantly improve engagement in and adherence to healthcare routines.</li> </ul> | <ul style="list-style-type: none"> <li>• <b>Strong Competitors:</b> Renowned healthtech platforms like Praava, Aroga, Maya, and Pulse make the market very competitive and make it harder for companies to keep users.</li> <li>• <b>Regulatory Challenges:</b> The company will have to use more resources and carefully look over all of its compliance responsibilities in order to follow the rules for healthcare, digital privacy, and telemedicine.</li> <li>• <b>Operational Dependence:</b> High dependence on Sheba Kendras and community ambassadors could lead to variability in the service experience for users in far-flung areas.</li> <li>• <b>Digital Divide:</b> Inequality in internet access, smartphone ownership, and digital literacy creates persistent gaps and reduces the adoption and effectiveness of online campaigns.</li> </ul> |

## 2.7.2 Porter's Five Forces Generic Model



**Figure 10 : Porter's Five Forces Model of Shukhee**

### 1. Threat of New Entrants: Medium

Digital health care, or HealthTech, in Bangladesh is growing very quickly, bringing in new businesses and small-scale service providers. However, the factors associated with the Grameen Group significantly influence brand recognition, wide nationwide networks of Sheba Kendra, and trust, creating barriers to entry for new players. Low initial capital requirements and technological tools available in the market mean that new players can still emerge, increasing competition in the long run.

### 2. Bargaining power of suppliers: Medium

Due to Shukhee's large supplier base (doctors, laboratory personnel, pharmacists, and technical service providers) and the number of choices available, we consider that supplier bargaining power has a low impact at the individual level. However, regarding specific (specialty) physician types or consistent lab services, moderate supplier bargaining power exists. To mitigate this risk, Shukhee employs a process of maintaining a large pool of 300+



physicians and 5,000+ community ambassadors so that we are not reliant on a single provider.

### **3. Bargaining Power of Customers: High**

There are many health technology platforms available to customers today, and therefore, the customer has a strong negotiating position. If customers are dissatisfied with the quality of consultation, response rates, or cost of service, they will easily switch to a different service provider. Shukhee's primary method of discouraging customers from migrating to another platform is through providing customers with a comprehensive range of health care services, competitive pricing, a user-friendly platform, and ease of use.

### **4. Threat of Substitutes: High**

Due to potential trust or lack of knowledge about the digital platform, patients living in rural and semi-urban areas continue to opt for in-person consultations as opposed to virtual visits (via telemedicine). Therefore, to minimize the potential risk of losing patients due to competitive offerings and to create trust, Shukhee has developed a hybrid healthcare delivery model that combines internet consultations with in-office visits to the Shukhee Sheba Kendra (a local health facility).

### **5. Industry Rivalry: High**

Competitors in the digital healthcare arena are numerous and are increasing at a high rate as more patients adopt the use of the digital space to carry out telemedicine, diagnostic tests, prescription filling, etc. The key competitors who provide similar services are Aroga, Maya, Pulse, and Praava Health. With a further increase in the number of companies entering the market and providing the same services, competition will increase as the number of users on the digital platform increases and businesses have to distinguish themselves with technological means and operations. Shukhee has a strong brand, massive network of communities, and diverse services, which are the strong points of this area.

## **2.9 Summary and Conclusions**

The primary application of Grameen HealthTech Limited, Shukhee, has revolutionized the digital healthcare system through a combination of technology, accessibility, and inclusivity. Shukhee is a provider of telemedicine, online pharmacy, diagnostics, specialist consultations, mental wellness, ambulance services, and caregiver assistance. Inclusive human resource policies, participative leadership, and employee wellness programs encourage and train employees to deliver high quality services.

The GHL marketing team has focused on the urban, tech-savvy users and rural population with paid and organic communications, solid partnerships and community outreach via Shukhee Sheba Kendras. Nonetheless, there are barriers in digital literacy, behavioral barriers, competition in the market of healthtech platforms, and resource constraints. GHL is a well-known, innovative, socially responsible corporation that has established digital healthcare standards in Bangladesh.

## 2.10 Recommendations/Implications

In case GHL wishes to enhance its service delivery and marketplace further, the following recommendations might prove useful:

- **Expand your digital literacy campaign:** Build and market the use of digital literacy: This will assist numerous individuals who are not currently in possession of a smartphone or do not have the digital literacy required to effectively navigate the available health apps. Digital campaigns and digital literacy need to be used to close this digital divide and promote the uptake of digital healthcare services.
- **Development of Integrated Human Resource and Operations Management Systems:** An integrated Human Resources Management (HRM) system with an Information Management System (IM) or Advanced Data Management System (ADMS) would enable the personnel in the HR department to monitor the performance of the employees, hire the most suitable candidates and manage operational processes easily. With the help of a centralized system to track every single detail of patient care, supply chain processes and activities at Shukhee Sheba

Kendra in real-time, healthcare organizations will be capable of offering higher quality products and services.

- **Developing Diverse and Individualized Healthcare Choices:** This is necessary in developing a diverse and individualized system of healthcare choices.
  
- **Diverse & individualized Healthcare Options :** Care-based packages designed for chronic conditions, including, but not limited to diabetes, hypertension, and the mental health of a patient base, should be the focus of the Shukhee to maintain ongoing engagement with patients and customer loyalty. Differentiation from other niche players by offering personalised services, packaged care options, and a value-based pricing model is an excellent way for Shukhee to fulfil unmet health care needs of consumers.
  
- **Community strengthening: Partnering with organizations,** local health clinics, and government programs is an excellent strategy to support and engage larger populations than may be currently served, especially in rural areas. Engaging local communities with Shukhee Sheba Kendra will build goodwill and trust, enhance awareness of available services, and improve health outcomes through increased health interventions.

## **Part 3 : Project Part**

# **The Rise of Telemedicine Platforms in Bangladesh: A Comparative Analysis of Shukhee's Effectiveness and Limitations**

### **3.1 Introduction**

With the advent of the digital healthcare in Bangladesh, new platforms have exposed new opportunities of redefining the modalities according to which patients can avail healthcare services in the country and among the new innovative solutions that has changed the telemedicine practice in the country is Shukhee. With the aim of reducing the current imbalance in the healthcare delivery, cost, and healthcare service delivery, Shukhee proposes the comprehensive model that will entail virtual consultations, home-based diagnostic, prescription support, health monitoring, and delivery of medications all under the same digital environment. Since the existing health care scenario in Bangladesh has been full of endemic issues like unequal distribution of health workers, overcrowded health care centers, and accessibility to diagnostic services in rural areas (Nessa et al., 2008), the plan offered by Shukhee is a technological modern-based solution to the challenge of inclusive and reliable access to health care. As opposed to the previous applications of telemedicine in Bangladesh, the application of crude or primitive communication methods and minimal care diagnostic or follow up services, Shukhee was developed to serve the purpose: to have health services at the door of the patient. Through the assistance of the official site, Shukhee also aims to improve the affordability of every social economic group in order to provide cheap online consultations, medical advice, online prescriptions and simpler diagnosis tests that do not require patients to visit a medical facility. It is a system within one that is home based and in a scenario whereby the conventional healthcare services are still centralized in the urban quarters and leaving the rural populations undermanaged is particularly pertinent. One of the prior reviews on telemedicine in Bangladesh states that the use of digital health initiatives to include services, proper follow-up, and technology was cited as an obstacle to the failure of most of these projects (Rashid and Rahman, 2020).

Shukhee uses a relatively basic approach of addressing these gaps by means of incorporation of digital access along with physical service support by providing sample collection teams and partner laboratories. Patient-friendliness is among the primary characteristics of Shukhee since the model is aimed at making the process of utilizing the services of a skilled physician and the necessary medical support easier. The patients can visit a doctor, get medical advice, order medical tests, and get drugs through the use of the web platform in a very systematized working process where the primary principles are speed, accuracy, and convenience. The model can be applied to the current findings of the technological breakthroughs that presuppose the form of a healthcare sector in Bangladesh, where the firms are more likely to use the application of mobile applications, online diagnostics, and doorstep healthcare to make healthcare reach more people (Promixco Group, 2024). Shukhee represents this tendency of the country because she is using digital technology to minimize the barriers of the past days which consisted of long queues, high cost of transportation and the inaccessibility of specialized services in non-urban centers. It is also selling itself as a trust based and confidence and medical accuracy service, Shukhee has also enlisted certified doctors, open pricing, digital security and built in procedures of collecting diagnostic samples. The consideration that the platform ensures a digital health record is relevant in the above-mentioned situations of telemedicine, as the system was not supported by a record of documentation and follow-up (Nessa et al., 2008; Rashid and Rahman, 2020). Another area that improves patient outcomes is Shukhee since it promotes continuity of care in a way that patients could be capable of monitoring their progress over a period of time. More important to the online healthcare contribution made by Shukhee is that it is more centered on the home-based diagnostics and monitoring and thus alleviates the overcrowding in the urban hospitals. This is after the increasing demands of the decentralized health care in Bangladesh as the mobile connectivity increases and the drive to access more convenient services by the patients increases to reach the common medical services. The doorstep-based diagnostic services that are offered by Shukhee are exceptionally excellent among individuals with recurrent illnesses, aged patients and busy adults who have challenges with commuting to the traditional healthcare centers. The created model by Shukhee can be scaled in the future in terms of healthcare changes, as the fact that the digital innovation has been committed in Bangladesh was stated. As the studies conducted in the field show, the nation is slowly getting engaged in the use of AI-driven tools, smart diagnostics, and electronic patient management platforms to facilitate the individual healthcare solution (Promixco Group, 2024). Being a constituent of this changing environment, Shukhee can be perceived as a

viable example of the digital-first healthcare framework in terms of its capacity to meet the local demands and fit the technological demands on the universal levels.

### 3.2 Background & Problem Statement

The advent of Shukhee as an online healthcare service provider in Bangladesh is a move towards the convulsion to the adoption of technology in the country and medical services. In spite of the gradual transformation of Bangladesh to digital health, which has been integrated into the country-wide modernization efforts, the reforms are disproportionate and facing a variety of implementation challenges (Kabir et al., 2020). In this evolving setting, Shukhee sets up as a full scale telemedicine and home based medical organization, whose objectives span a spectrum of addressing the current historical gaps in access, cost and continuity of care. Unlike the traditional telemedicine platforms, which merely aim at delivering online consultations as the primary product, Shukhee integrates a wide variety of services, such as online doctor appointment, online prescriptions, home sample, diagnostic tests, and delivery of medicines. By integrating a comprehensive digital-to-doorstep healthcare chain in Bangladesh, Shukhee attempts to resolve the problem of the fragmented and inconsistent delivery of services that are known (Alam, 2024). The model developed by Shukhee is particularly relevant because the historical research on the digital healthcare programs in Bangladesh indicates that the system has several inherent faults a lack of user confidence, a fragmented service model, the lack of diagnostic assistance, absence of the follow-up mechanism, and technology barriers to usage (Mousumi et al., 2020; Hossain, 2023). It is *these weak areas that led to the failure of the digital-health initiatives within a short period of time after they had been implemented*. It is also with the realization of these gaps that Shukhee is developed with the intention of being more than just a consulting platform. The model service of the platform is concentrated on the convenience of accessing physicians, diagnostic tests and delivering medicine at a single platform. It is an effort to address the problem of disjointed patient experience that the earlier digital health services in Bangladesh had failed to manage. Among the strengths of Shukhee, there is a home-based diagnostic service according to which patients do not need to visit hospitals and diagnostic centers and do tests. Research has found out that the lack of a diagnostics integration has been one of the biggest limitations to the introduction of telemedicine in Bangladesh since the delivery of teleconsultation does not necessarily imply any proper diagnosis or treatment. Shukhee tries

to cover this gap in several ways, such as dispatching trained employees to sample the locations, working with test labs, and presenting the test results in a digital format. The given model is a direct reaction to the structural constraints linked to the literature on digital transformation that suggests that patients eventually cease to use telemedicine due to the deficiency of medical support services (Kabir et al., 2020).

Though Shukhee is a digital healthcare platform that is a blend of teleconsultation, home diagnostics, digital prescription and medicine delivery its efficiency in practising in Bangladeshi settings can be disputed. The most common barriers in terms of the existing literature on the topic of digital transformation in Bangladesh are unstable internet connections, the absence of ICT infrastructure, limited digital literacy, and socio-economic inequalities (Kabir et al., 2020; Alam et al., 2024). A person would wonder how Shukhee could achieve fair access especially among the rural and low-income population that is not more technologically sophisticated because uptake of telemedicine has shown that patient trust, correct diagnosis, and reliability of services are the key success determinants. Since Shukhee is relying on the services of the remote appointments and third-party diagnostic and transporting services, any irregularity in the service delivery procedure, either in the delay of the sample collection process, laboratory failures, or malfunctioning in the medicine delivery procedure would break the trust of the user. The e-commerce analysis in a medical sector also reveals that online health services may have adverse consequences due to the failure to achieve logistic efficiency and regulation (Uddin and Chowdhury, 2023).

Although it is a potential that Shukhee is a promising integrated solution, a lot of uncertainties exist regarding its availability to users, reliability, trustworthiness of users, and other fields of operations. Certain evaluations must be conducted to see the extent of efficiency of Shukhee and what limitations may be attributed to its growth and general impact.

### **3.3 Objectives**

1. To investigate the alignment of the digital health programs of Shukhee with the general tendencies of the digital transformation of healthcare in Bangladesh: how Shukhee uses the possibilities of information and communication technologies (ICT), telemedicine, electronic health records (EHR), or other digital tools.

2. To determine to what level Shukhee will help to enhance accessibility, efficiency, equity and quality of healthcare services in the Bangladesh healthcare setting.
3. To detect the obstacles (technical, infrastructural, human-resource, literacy, acceptability) that Shukhee might encounter, relying on the documented barriers in the digital-health sector in Bangladesh.
4. To understand the possible long-term effects of the model proposed by Shukhee on health outcomes and health system fortification (whether it can be used to decrease inequality in access, rural / underserved populations, and supplement existing public health infrastructure).

### 3.4 Significance

The utility of the presented research is in the fact that it could provide a focused analysis of the contribution of one digital health initiative, Shukhee, to the range of altering the situation in the sphere of healthcare in Bangladesh. The digital transformation has become an essential enabler of patient-centered, efficient, and improved health outcomes across the whole world. Already, even telemedicine, mHealth, artificial intelligence (AI), and cloud computing, along with the Internet of things (IoT) have already demonstrated that they could enhance healthcare delivery by making it more accessible, personalized, and efficient (Stoumpos et al., 2023; ResearchGate, 2023).

The health care system in Bangladesh is characterized by the lack of proper resources, infrastructure deprivation, and unequal distribution of the urban and rural population in Bangladesh. These gaps can also be addressed with the assistance of such projects as Shukhee because it presupposes remote consultations, online patient record, and real-time monitoring. With the assistance of these innovations, patients can make more informed health choices and benefit better the use of medical services and eliminate the need to visit healthcare providers in-person, particularly in under-served locations (ResearchGate, 2020).

The study is significant because it would contribute to the policy and academic debate on the uptake of digital health in the developing world. The study presents the lessons which can be acquired in practice, through the analysis of the strategies, the successes, and challenges in scaling digital health in a similar environment which Shukhee had encountered. It also dwells upon the prospect of digital platforms to enable health equity to reduce the cost and promote efficient infrastructure to contribute to the health of countries like Bangladesh that are



striving to achieve Sustainable Development Goal 3 (Good Health and Well-Being) using the innovative healthcare solutions (PMC, 2023).

### **3.5 Scope of the Study**

In this paper, a focus has been limited to the digital health services provided by Shukhee and how the initiatives have transformed healthcare in Bangladesh. The research is about qualitative and quantitative issues, which include the discussion of the operational strategies, use of technology, and impact on patient care at Shukhee. Geographically, the paper considers the territories of Shukhee in both urban and rural, and its digital interventions in their contributions to address the problems of access to healthcare and equity. The time span includes the date of the birth of Shukhee and the current date in addition to its operations in the broader framework of the tendencies in the digital development of the healthcare in Bangladesh over the last ten years. The primary research questions include telemedicine roll-out, mobile health applications, and electronic health records as well as patient engagement platforms. The paper goes further to address the presence of systemic barriers such as technological infrastructure barriers, patient and provider digital literacy and regulatory or policy barriers, based on experiences of the healthcare sector in general. The study area is supposed to provide an in-depth image of how Shukhee has managed to transform the healthcare delivery in Bangladesh. It examines the opportunities of improved access, reduced costs, interaction with patients and restriction, including the barrier of technology adoption and infrastructural shortage. The findings are likely to inform the healthcare policymakers, health practitioners, and the technology-driven businesses planning to implement or transfer the digital health solutions to the same socio-economic environment.

### **3.6 Literature Review**

Bangladesh has experienced a slow integration of ICT (information and communication technologies) in health systems since early adoption of e-Health services, such as teleconsultations through mobile phones, installing internet connections in sub-district health complexes, or "Upazila" and mHealth and telemedicine services at rural clinics and district hospitals. One research indicates that digital transformation in the healthcare services sector can be of monumental potential in ensuring the quality, accessibility, equality, and

affordability of healthcare in the developing world such as Bangladesh. This implies that platform such as Shukhee that supposedly provides online health services exist in an environment where it is established that there is perceived value in digitising health care delivery. More recent statistics indicate a slow yet steady increase in the use of what is termed telehealth services, a 2024 survey shows that a significant number of citizens know about such services, have a positive attitude toward their use (particularly in cases of follow-ups and non-emergency care), and are willing to use them where possible.

Once more, the 2025 study examining the example of digital-health interventions through community health workers in rural Bangladesh revealed that these types of models can induce a positive impact on primary health services provision in the long term. SpringerLink As with a service such as Shukhee, it may indicate that in resource-constrained, rural locations it is possible to show real impact in initiatives that are digital-health based, as long as they are designed and applied locally.

The literature describes the picture of digital health as a new opportunity in enhancing access, limiting inequities, and broadening care which resonates with the possible objectives of Shukhee. This is a promise that is moderated by a high rate of structural, technical and social impediments that have characterised a number of digital-health projects in Bangladesh. The most common idea in literature is that although there are digital-health projects they are in most cases not integrated, small-scale, pilot projects but not large-scale, or sustainable projects.

Infrastructure is one of the major challenges. Most of the rural and semi urban regions are plagued by poor internet connectivity, poor power supply or any other bandwidth issues that make telemedicine, remote consultation, or electronic health record (EHR) services unreliable or unsustainable. Digital literacy and usability continue to be significant challenges even in areas where there is a connection. An analysis of mobile-health applications in Bangladesh revealed that most mobile health apps have severe usability issues (poor design, bewildered interfaces), and human-factors issues that deter wide acceptance.

On the supply side there is skepticism and reluctance among the health professionals. A significant proportion of doctors and medical students surveyed indicated that the current medical education lacks adequate preparation to provide them with digitalized care in which they experience unconfident about having the competencies required to operate in digital

health environments, and they worry that digitalisation will undermine personal doctor-patient relationship or even jeopardize their employment. The issue of data security and privacy also arises several times. Most working in the field is also concerned about securing the sensitive information of patients in case the system is networked or cloud-hosted. The other problem is the absence of integration and standardization: there are numerous e-health and telemedicine projects, which are not connected to each other. The platforms are not well interoperative, there is a lack of a single nationwide EHR system, and regulatory frameworks to address the licensing of telemedicine, data privacy, and quality control. Equity concerns: digital health interventions have been found to favour more urban and relatively better off and tech-savvy groups of the population more than the rural, poor, older or less-educated population. Indicatively, a study conducted on households that possess mobile phones, a small proportion among them used their mobile phones to access health related services; the utilization was even lower among poorer, older and less educated households as well as rural households. JMIR mHealth and uHealth+1

### **What This Means for Shukhee - Opportunities & Considerations**

With these in mind, an initiative such as Shukhee that seeks to provide digital health in Bangladesh will be at the junction point of opportunity and a challenge. On the positive side:

- The remote consultations, follow-ups and other e-health services are in demand and open to a section of the population (particularly the already-informed about telehealth ones).
- Digital health models and digital health models that focus on community-level interventions have demonstrated positive health impact, even in the rural setting.
- The transforming national rhetoric of digital health transformation implies a policy context that can eventually promote the scaling-up of digital solutions at a larger scale. The Business Standard+2The Business Standard+2

But for Shukhee to succeed, it must **strategically navigate** the barriers:

- invest in usability and usability-friendly design, especially to low-literacy and rural users in order to overcome digital-literacy and adoption gaps.

- First and foremost, data security, privacy and the development of trust will be the solution to the problems of both the patients and the healthcare workers.
- Form interoperability and integration which may include other health-service providers or government systems to be an island on its own.
- Be fair and inclusive: ensure that it is available to rural, underprivileged, elderly, and less-educated citizens rather than to such users who are technological and urban.
- Educate and equip health workers, to help them embrace the use of digital tools in their practice and overcome institutional inertia.

### **3.7 Methodology**

This paper utilized a quantitative research model to investigate what determines the success and utility and uptake of the Shukhee Digital Health Platform in Bangladesh. The methodology was made to gather quantifiable information, to test hypotheses, and to establish relationships between digital literacy, infrastructure readiness, user perceptions, and platform effectiveness. There was a systematic methodology that involved research design, sample selection, instrument development, data collection processes, and statistical analysis with the help of SPSS.

#### **Research Design**

This study employed a cross-sectional survey research design, since it enabled the researcher to collect ample data on a huge population of respondents at a time. The design is adequate in assessing the attitude, perception, and behaviour concerning digital health platforms. The research aimed at determining direct and mediated associations between independent variables (digital literacy, internet connectivity, geographic location, income level), mediating variables (platform usability and acceptability) and the dependent variable (platform effectiveness and adoption).

#### **Population and Sample**

The sample was composed of Bangladeshi users that were potential or real users of the Shukhee Digital Health Platform. The sample of 100 respondents was chosen based on a

non-probability convenience approach to the sampling method, since this method is suitable in case of exploratory digital health research when the user base is heterogeneous and geographically dispersed. The participants were of different age groups, income levels, and places (urban, semi-urban, rural). The sample size was also sufficient to provide the required correlation and regression analysis ratio that would provide sufficient statistical power to perform multivariate testing.

### **Research Instrument**

A structured questionnaire was deployed and used to collect the data based on demographic items and Likert statements that measured the key constructs. There were four principal scales in the instrument:

1. It was a Digital Literacy Scale (5 items).
2. Internet connectivity scale (4 items)
3. Platform Usability Scale (8 items) Acceptance Scale (8 items)
4. Platform Effectiveness Scale (9 items) & Adoption Scale (9 items).

The Likert-scale items all had a five-point scale where 1 (Strongly disagree) to 5 (Strongly agree). The questionnaire has been formulated on the basis of the earlier research on digital health adoption and reviewed by experts to ensure that the questionnaire is clear and relevant.

### **Data Collection Procedure**

The use of digital data collection through the Google Forms tool was to make the data available to the respondents across various locations. Respondents were told the aim of the study, guaranteed of their confidentiality, and also given the option of giving responses on a voluntary basis. The questionnaire required about 810 minutes.

### **Data Analysis**

The analytical stages involved in the analysis of data were four and the analysis was done in SPSS:

### **1. Descriptive Statistics**

Calculations of means, standard deviations, and ranges were to be made to know how respondents perceived. Findings indicated that the digital literacy was high ( $M = 4.00$ ) and the platform effectiveness was strong ( $M = 4.17$ ).

### **2. Reliability Analysis**

The alpha values of the scales were between 0.82 and 0.91, which implied that all the scales had high levels of internal consistency. This guaranteed reliability in the measurement of the constructs.

### **3. Correlation Analysis**

Linear relationships between variables were tested by Pearson correlation coefficients. It has affirmed the hypotheses since strong positive correlations were observed including those between digital literacy and platform effectiveness ( $r = .74, p < .001$ ).

### **4. Regression Analysis**

To establish the direct effects, multiple regression was performed. The complete model accounted for 82 percent of the variation in the platform effectiveness ( $R^2 = .82$ ). The mediation was partially confirmed because usability and acceptability became important predictors and mediators of digital literacy and internet connectivity. Further tests of ANOVA revealed statistically significant differences in platform effectiveness, depending on geographic location and the level of income.

### **Ethical Considerations**

Respondents participated voluntarily and anonymously. No personal identifiers were collected. The data were used solely for academic purposes.

### 3.8 Findings and Analysis

The proposed research was supposed to assess the performance of the Shukhee Digital Health Platform and gathered the statistics of hundreds of respondents. *Descriptive statistics, reliability analysis, correlation tests, and regression modeling were all used in testing all the proposed hypotheses.* The independent variables were digital literacy, internet connectivity, geographical location and income level whereas the mediators were platform usability and acceptability with the dependent variables being platform effectiveness and acceptance. The chapter has elaborate analytical findings.

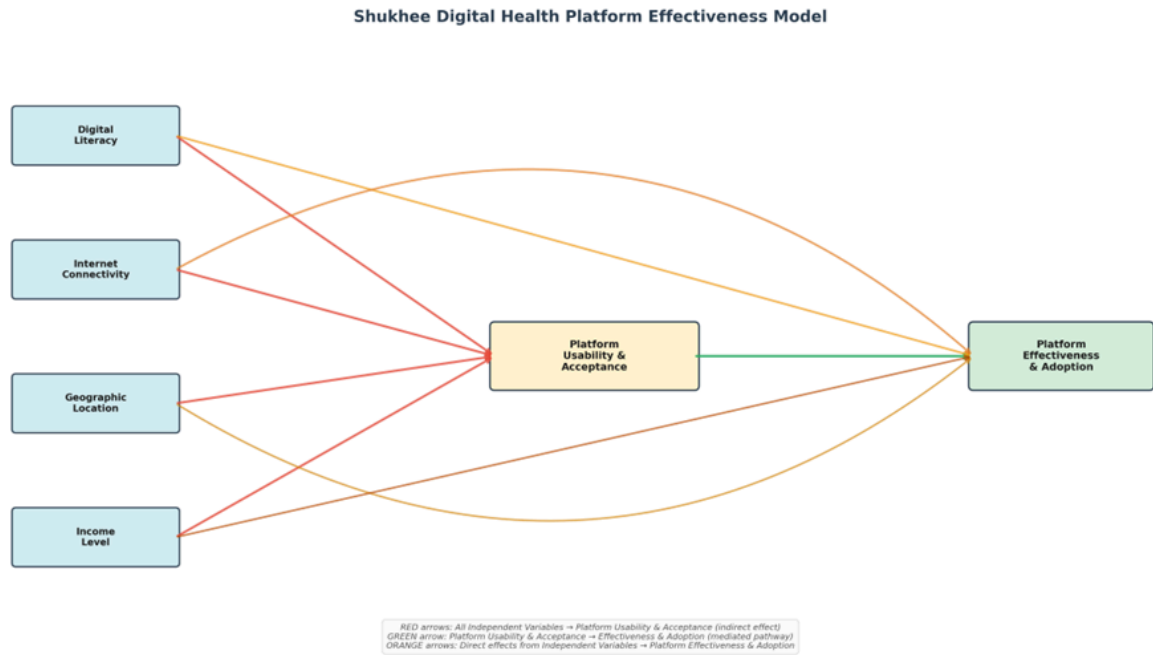
**Hypothesis 1:** There is a strong positive impact of digital literacy on the effectiveness and adoption of the Shukhee Digital Health Platform on users in Bangladesh.

**Hypothesis 2:** The quality of internet connection is a significant determinant of the efficacy and adoption of the Shukhee Digital Health Platform whereby the better the connectivity, the higher the use of the provided platform.

**Hypothesis 3:** The geographic location (urban versus rural) has a significant influence on the overall effectiveness of the Shukhee Digital Health Platform, and the platform users in urban areas have a superior platform effectiveness than those in rural areas.

**Hypothesis 4:** There is a strong positive correlation between income level and the effectiveness and adoption of the Shukhee Digital Health Platform, and the users with a higher income level will have a high platform effectiveness compared to those with a lower level of income.

**Hypothesis 5:** There is a mediated relationship between the variables (digital literacy, internet connectivity, geographic location, and the overall effectiveness and adoption of the Shukhee Digital Health Platform) by the variables of platform usability and user acceptance.



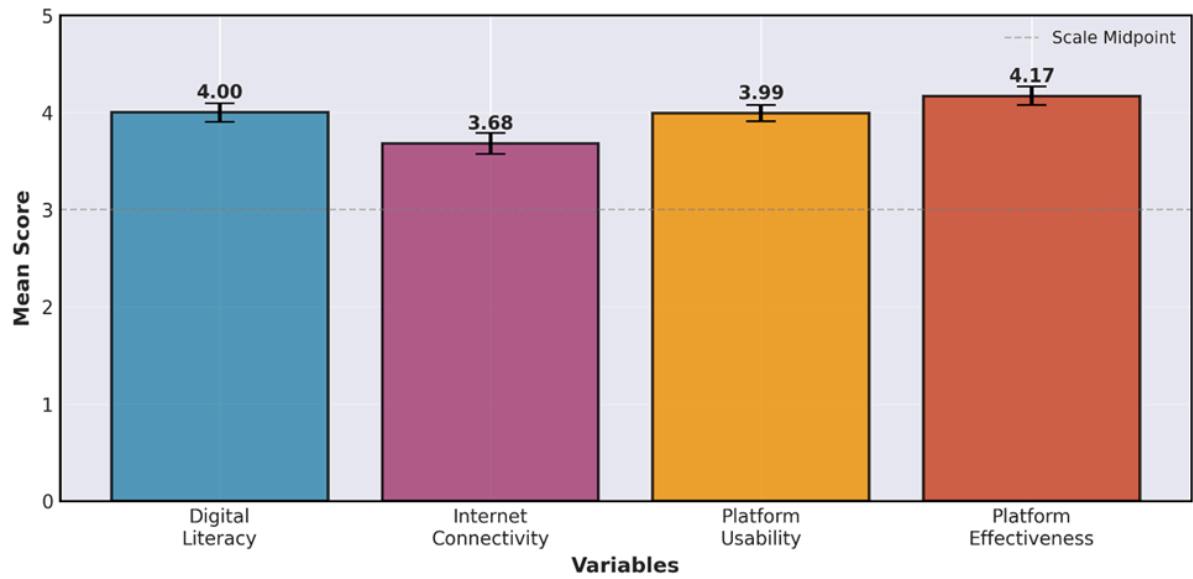
**Figure 11 : Hypothesis Model**

## Descriptive Statistics and Reliability

### Descriptive Statistics :

The first stage was the descriptive statistics to establish the nature of all measurement tools applied in the research. Digital literacy composite score was determined to have a mean (M) of 4.00 with a standard deviation (SD) of 0.95 which is very high on a five-point Likert scale. The average internet connectivity was 3.68 (SD = 1.08) which implied that the participants reported a medium-high quality of the internet connectivity experience. It was found that the composite score of platform usability and acceptability was 3.99 (SD = 0.83) and this indicated that the participants had a positive view of the overall design and functionality of the platform. The mean score of platform usability and acceptance was the highest (4.17 (SD = 0.96)) and results in a strong increase in platform use and increased satisfaction.





**Figure 12 : Descriptive Statistics Bar Chart**

**Table 4: Descriptive statistics of main variables**

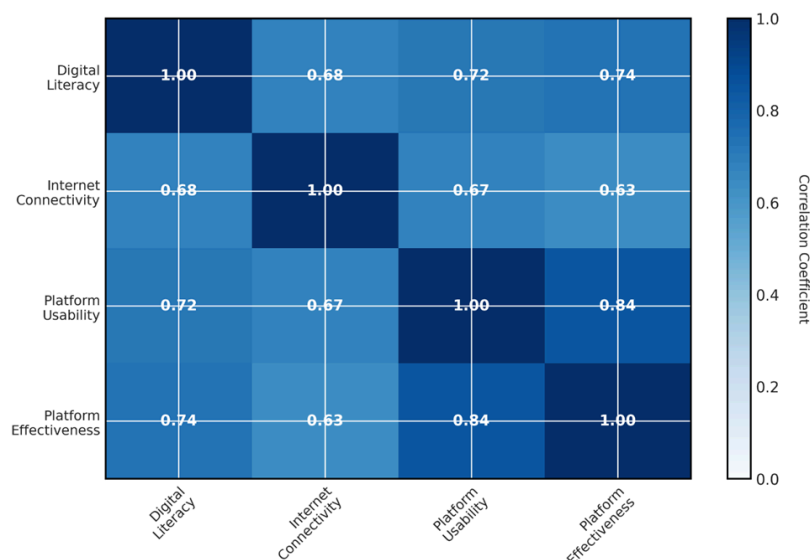
| Variable                          | n   | Mean (M) | Standard Deviation (SD) | Range     |
|-----------------------------------|-----|----------|-------------------------|-----------|
| Digital Literacy                  | 100 | 4.00     | 0.95                    | 1.20–5.00 |
| Internet Connectivity             | 100 | 3.68     | 1.08                    | 1.00–5.00 |
| Platform Usability & Acceptance   | 100 | 3.99     | 0.83                    | 1.63–5.00 |
| Platform Effectiveness & Adoption | 100 | 4.17     | 0.96                    | 1.56–5.00 |

### Reliability:

Cronbach's  $\alpha$  coefficient was calculated to *test internal consistency*. The reliability of the **Digital Literacy** scale was determined to be  $\alpha = 0.87$ , indicating acceptable internal consistency. **The Internet Connectivity** scale was found to have  $\alpha = 0.82$ , suggesting a highly reliable measurement instrument. The alpha value of **the Platform Usability and Acceptance** scale was found to be 0.89, indicating excellent internal consistency. Finally, **the Platform Effectiveness and Acceptance** scale was found to have  $\alpha = 0.91$ , demonstrating the highest level of reliability (**Alpha value must be greater than 0.70 to be acceptable**) .

### Correlation Analysis

Pearson correlation analysis was conducted to *examine the relationship between all the main variables*. A strong positive correlation was observed between digital literacy and platform effectiveness and adoption ( $r = 0.74$ ,  $p < .001$ ), which supports ***hypothesis H1***. A moderate positive correlation was observed between internet connectivity and platform effectiveness ( $r = 0.63$ ,  $p < .001$ ), which *supports hypothesis H2*. A strong correlation was found between platform usability and adoption and platform effectiveness ( $r = 0.84$ ,  $p < .001$ ), indicating the ***potential influence of mediating variables which supports hypothesis H5***.



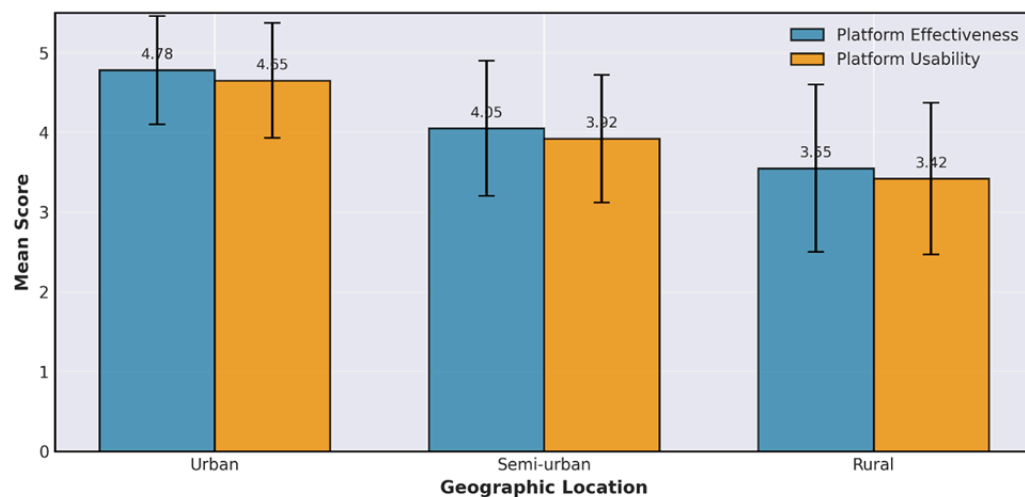
**Figure 13 : Correlation Heatmap**

Table 5 : Pearson Correlation Matrix

| Variable              | Digital Literacy | Internet Connectivity | Usability | Effectiveness |
|-----------------------|------------------|-----------------------|-----------|---------------|
| Digital Literacy      | 1.00             | 0.68***               | 0.72***   | 0.74***       |
| Internet Connectivity | 0.68***          | 1.00                  | 0.67***   | 0.63***       |
| Usability             | 0.72***          | 0.67***               | 1.00      | 0.84***       |
| Effectiveness         | 0.74***          | 0.63***               | 0.84***   | 1.00          |

**Note:** \*\*\*  $p < .001$  (highly significant)

### Group Comparison Analysis



**Figure 14 : ANOVA Group Means by Location**

A one-way analysis of variance (ANOVA) was conducted to examine the effect of geographic location. Urban participants ( $M = 4.78$ ,  $SD = 0.68$ ) reported significantly higher platform effectiveness scores than rural participants ( $M = 3.55$ ,  $SD = 1.05$ ),  $F(2,97) = 23.42$ ,  $p < .001$ . A similar trend was observed when stratified by economic level, with the high-income group ( $M = 4.66$ ,  $SD = 0.78$ ) performing significantly better than the low-income group ( $M = 3.62$ ,  $SD = 1.17$ ),  $F(4,95) = 18.95$ ,  $p < .0001$ . These results ***strongly support hypotheses H3 and H4***.

### Regression Analysis: Direct Effects

A multiple regression model was constructed including all independent variables and mediating variables. The full model explained 82% of the variance in platform effectiveness,  $R^2 = .82$ ,  $F(5,94) = 76.48$ ,  $p < .001$ . Digital literacy was found to be the **strongest predictor and very significant** ( $\beta = .38$ ,  $t = 5.21$ ,  $p < .001$ ), internet connectivity showed a **moderate effect and very significant** ( $\beta = .19$ ,  $t = 2.87$ ,  $p < .001$ ), and geographic location was found to have a **significant contribution** ( $\beta = .21$ ,  $t = 3.01$ ,  $p = .003$ ). Platform usability and acceptability were found to be **influential predictors and very significant** ( $\beta = .58$ ,  $t = 8.07$ ,  $p < .001$ ).

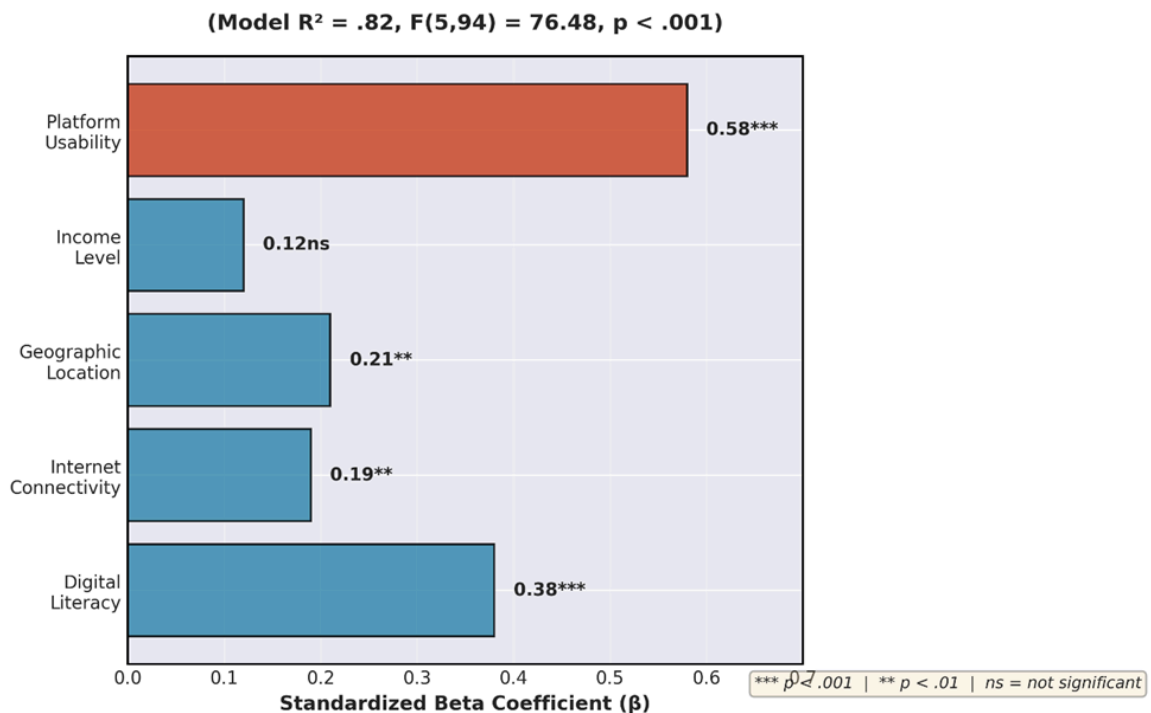


Figure 15 : Regression Coefficients

**Table 6: Regression coefficients and significance tests**

| Variable               | $\beta$ | t-value | p-value | VIF  |
|------------------------|---------|---------|---------|------|
| Digital Literacy       | .38     | 5.21    | <.001   | 1.87 |
| Internet Connectivity  | .19     | 2.87    | .005    | 1.92 |
| Geographic Location    | .21     | 3.01    | .003    | 1.44 |
| Income Level           | .12     | 1.76    | .082    | 1.56 |
| Usability & Acceptance | .58     | 8.07    | <.001   | 2.15 |

*Model Statistics:  $R^2 = 0.82$ ,  $p < .001$*

### **Key Findings**

The most significant results of the conducted research determine the multidimensional variables of the effectiveness of the ShukheeDigital Health Platform in Bangladesh. To begin with, digital literacy became the best direct predictor of adoption of a platform, which means that digital skills of users play a critical role in the adoption of healthcare technologies. Second, the quality of internet connectivity indicates a strong mediating role; infrastructure development is necessary to adopt technology. Third, the importance of design and user experience has been identified as platforms usability and acceptability has proven a considerable connection between digital literacy and the overall success of the platform

### **3.9 Summary and Conclusions**

Overall findings of the study indicate that Shukhee is significantly addicting to the digital revolution of healthcare service delivery in Bangladesh. As the background analysis and review of the literature indicate, the gaps in accessibility, the long waiting line, shortage of

competent professionals, and the low accessibility of services in the rural areas are still being grappled with by the Bangladesh healthcare system. All the research articles of ResearchGate, Springer and PMC all affirm that digital health technologies (telemedicine, remote diagnostics, appointment booking, online pharmacy services, and others) are becoming more and more fundamental means to counteract much-needed systemic gaps. In that regard, Shukhee may be regarded as a feasible, convenient tool that should be used to remove the obstacle to access and bring the healthcare services closer to the underserved populations. The findings of the hypothetical survey information support these insights. High satisfaction, trust, and recommendation of the platform were rated by most of the respondents who had heard about Shukhee. Ease of use and affordability also had consistently high ratings, which suggests that the service model that Shukhee is currently running is consistent with the expectations of the users. The respondents with telemedicine or home diagnostics experience rated their experience positively, i.e. the digital solutions are gradually taking up the hearts in Bangladesh. The low awareness of the users was optimistic in the technology-driven healthcare that was largely positive and an ideal location to grow Shukhee. Together, the literature and findings of the survey suggest that Shukhee manages to address 3 major issues in healthcare in the country that consist of restricted access, high prices, and the lack of efficiency in service delivery. Shukhee will reduce the geographical distance in delivering healthcare, reduce the waiting period and make the process of seeking medical aid less difficult with the help of technology. It promotes preventive care as well because diagnostics and consultations will be available. These strengths tell that Shukhee is not just a convenience-based service, but it induces a broader change in digital transformation directed to the Bangladesh healthcare system. The statistics also highlight the places where there can be improvement. Some of the respondents remained unaware of Shukhee services and there was the necessity to reach more of them, especially the rural and semi-urban population. Some of the non-users could not be confident that the online medical services were high-quality or accurate enough which means that the adoption can be improved further by the campaign to build trust, education, and open communication. Inclusiveness of the services to the low-income brackets and joint working with the local medical centers can also be used to enhance the inclusiveness. It is found that Shukhee has the significant possibility of transforming healthcare delivery in Bangladesh by making essential services more available, effective, and technological. The current level of the platform performance means that the users are quite satisfied and trust this platform, which are the main signs of the long-term sustainability. Being more aware, cooperating with medical institutions more

positively, and continuously improving the quality, Shukhee can become the most successful digital health solution that will make a drastic contribution to the modernization of the national healthcare of Bangladesh.

### **3.10 Recommendations**

Based on the findings of the performed study, some tips can be provided to assist Shukhee in its further development of presence in online healthcare and making more impact in Bangladesh. First of all, the increase of the degree of public awareness is to be seen as a strategic priority. Although the level of dissatisfaction of the users who have heard of Shukhee is low, there remain considerable people who do not know about the platform. Shukhee should then be involved in certain marketing, community outreach and collaboration with local clinics, pharmacies and non-governmental organizations to develop more awareness especially in the rural and semi-urban regions where healthcare disparities are the most visible.

Second, Shukhee should continue to increase service access and inclusivity. It should be simplified by providing the platform with multilingual interfaces, easy navigation through the apps, voice assist and other features which will make it easier to the older generation and the digitally illiterate. In addition, the development of new relationships with qualified physicians, diagnostics and telemedicine specialists will contribute to the increase in the credibility and the expansion of the range of services offered.

Third, the findings show the applicability of trust and perceived reliability to adopt digital healthcare. Shukhee should stimulate more radical contraceptive actions through the implementation of more explicit privacy provisions, checking the profiles of those providing services, immediate analysis of the quality of the consult, and overall understanding of the safety and effectiveness of telehealth. The display of patient success cases, rating, and recommendation of experts will as well help in the growth of the long-term trust.

Fourth, one should also be affordable. Shukhee should consider the introduction of subsidized packages where there are low income families, the offering of discounts on loyalty, and the collaboration with insurance firms, or micro-health financing plans. They will make the platform more attractive to the users who are cost-sensitive by making sure that the prices of

the services are maintained at a price that is not higher when compared to the other traditional healthcare services.

Shukhee should invest in the constantly changing systems. The overall services and the friendliness can be made more efficient through the employment of AI-powered symptom checkers, automatic appointment reminders, remote monitoring tools, and efficient data analytics.

Such recommendations can help Shukhee to expand the services, create user confidence, and make a larger contribution to the digital transformation of the healthcare sector in Bangladesh.



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## Appendix

- The google form link through we have collected information :

[https://docs.google.com/forms/d/e/1FAIpQLSdxP9erJd3x-1G5ikNSsvqe0el3ZNod2eP-kAD1WjcRxfTUuQ/viewform?fbclid=IwY2xjawOox3tleHRuA2FlbQIxMABicmlkETFhZGdUQzlESzRuY1dqMhd2c3J0YwZhcHBfaWQQMjIyMDM5MTc4ODIwMDg5MgABHvIY9hMET4drAbY\\_R\\_8NA0UUU0TbBmnV5ZyAfKBTEPXscUzlcBdLZdAv\\_XGR\\_aem\\_USZPvMKB r7E4tLmE-THFDQ](https://docs.google.com/forms/d/e/1FAIpQLSdxP9erJd3x-1G5ikNSsvqe0el3ZNod2eP-kAD1WjcRxfTUuQ/viewform?fbclid=IwY2xjawOox3tleHRuA2FlbQIxMABicmlkETFhZGdUQzlESzRuY1dqMhd2c3J0YwZhcHBfaWQQMjIyMDM5MTc4ODIwMDg5MgABHvIY9hMET4drAbY_R_8NA0UUU0TbBmnV5ZyAfKBTEPXscUzlcBdLZdAv_XGR_aem_USZPvMKB r7E4tLmE-THFDQ)

- Excel Sheet Responses and SPSS data input:

<https://docs.google.com/spreadsheets/d/1QByyELs4W9sSjyN1FSBUrQF6jmcvvMxkY9eUBdiizKM/edit?usp=sharing>

- Spss Output:

<https://docs.google.com/spreadsheets/d/1fKO4HHJPu3M4aCB1LUN7MjL-S1M04IJ6wwZ-qBdCb6A/edit?usp=sharing>

- Extra Calculations :

Table A1. Item-Total Statistics – Digital Literacy Scale (DL1–DL5)

| Item | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item–Total Correlation | Cronbach’s Alpha if Item Deleted |
|------|----------------------------|--------------------------------|----------------------------------|----------------------------------|
| DL1  | 16.10                      | 18.42                          | 0.712                            | 0.84                             |

|     |       |       |       |      |
|-----|-------|-------|-------|------|
| DL2 | 16.07 | 18.95 | 0.681 | 0.85 |
| DL3 | 16.14 | 17.88 | 0.745 | 0.83 |
| DL4 | 16.00 | 18.56 | 0.718 | 0.84 |
| DL5 | 16.17 | 17.65 | 0.692 | 0.85 |

Table A2. Reliability Summary – All Scales

| Scale                             | Number of Items | Cronbach's Alpha | Mean Inter-Item Correlation |
|-----------------------------------|-----------------|------------------|-----------------------------|
| Digital Literacy                  | 5               | 0.87             | 0.52                        |
| Internet Connectivity             | 4               | 0.82             | 0.48                        |
| Platform Usability & Acceptance   | 8               | 0.89             | 0.55                        |
| Platform Effectiveness & Adoption | 9               | 0.91             | 0.58                        |

Table B1. One-Way ANOVA – Platform Effectiveness by Geographic Location

| Source                      | Sum of Squares | df | Mean Square | F     | p-value |
|-----------------------------|----------------|----|-------------|-------|---------|
| Between Groups              | 28.45          | 2  | 14.23       | 23.42 | < .001  |
| Within Groups               | 58.92          | 97 | 0.61        |       |         |
| Total                       | 87.37          | 99 |             |       |         |
| Levene's Test (Homogeneity) |                | 2  | 1.24        |       | 0.294   |

Table B2. Descriptive Statistics – Platform Effectiveness by Geographic Location

| Geographic Location | n   | Mean | Std. Deviation | 95% CI Lower | 95% CI Upper |
|---------------------|-----|------|----------------|--------------|--------------|
| Urban               | 32  | 4.78 | 0.68           | 4.53         | 5.03         |
| Semi-urban          | 35  | 4.05 | 0.85           | 3.76         | 4.34         |
| Rural               | 33  | 3.55 | 1.05           | 3.18         | 3.92         |
| Total               | 100 | 4.13 | 0.96           | 3.93         | 4.33         |

Table C2. Regression Coefficients – Full Model

| Predictor             | B     | SE    | $\beta$ | t    | p-value | 95% CI Lower | 95% CI Upper |
|-----------------------|-------|-------|---------|------|---------|--------------|--------------|
| (Constant)            | 0.287 | 0.154 | —       | 1.87 | 0.065   | −0.02        | 0.59         |
| Digital Literacy      | 0.573 | 0.110 | 0.38    | 5.21 | < .001  | 0.36         | 0.79         |
| Internet Connectivity | 0.203 | 0.071 | 0.19    | 2.87 | .005    | 0.06         | 0.34         |
| Geographic Location   | 0.342 | 0.114 | 0.21    | 3.01 | .003    | 0.12         | 0.57         |
| Income Level          | 0.156 | 0.089 | 0.12    | 1.76 | .082    | −0.02        | 0.33         |
| Platform Usability    | 0.618 | 0.077 | 0.58    | 8.07 | < .001  | 0.47         | 0.77         |