

Exploring social media adoption for marketing purpose among healthcare professionals in Gondar town, central Gondar zone: A facility-based cross-sectional survey

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Abstract

Background: Social media has become an integral platform for global information exchange and business interactions, emerging as a crucial tool for promoting products and services in the digital age. Despite its worldwide significance, local businesses, especially in Ethiopia, lag behind in leveraging social media for healthcare marketing. The scarcity of studies on social media adoption among healthcare providers in Ethiopia highlights the imperative for comprehensive research.

Objective: This study, conducted in Gondar Town, focused on private healthcare professionals, aiming to identify the determinants of their behavioral intention and usage behavior in adopting social media marketing.

Method: A facility-based cross-sectional survey involving 238 health professionals from private healthcare facilities in Gondar Town was conducted between March and June 2023. The study analyzed data using SPSS Version 26 and AMOS Structural Equation Modeling Version 23.

Results: All participants reported using social media platforms, with Facebook, Telegram, and YouTube being popular choices. Performance expectancy, social influence, facilitation condition, and behavioral intention significantly influenced healthcare professionals' adoption of social media marketing. Performance expectancy and social influence exhibited the strongest impact on behavioral intention, acting as mediators influencing usage behavior. However, effort expectancy did not significantly influence behavioral intention. Age, gender, experience, and voluntariness showed no significant moderating effects.

Conclusion: This study contributes valuable insights into social media marketing adoption in the healthcare sector, emphasizing the critical role of various factors in shaping behavioral intention and usage behavior. The findings offer practical implications for private healthcare providers, policymakers, and marketers, guiding strategies to enhance patient communication and engagement through social media in Gondar Town.

Keywords

social media marketing, healthcare professionals, adoption, the unified theory of acceptance and use of technology, Gondar town, Ethiopia

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Introduction

Background

Social media use has seen a significant rise globally, with 57.6% of the world population engaging in social media in 2021.¹ As the world is becoming more digitally oriented, the health care industry is increasingly visualizing social

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media (SM) as an important channel for health care promotion, employment, recruiting new patients, marketing for health care providers (HCPs), building a better brand name, etc. HCPs are bound to ethical principles toward their colleagues, patients, and the public in the digital world as much as in the real world.² The practice of utilizing social media platforms and websites to promote products or services is called Social media marketing (SMM).³ SMM serves as a tool for businesses to enhance their brand experience and expand customer reach. Marketers leverage social media to communicate with existing customers, attract new ones, and monitor campaign effectiveness through data analytics tools.^{4,5} Social media plays a significant role in marketing, with a high proportion of businesses utilizing platforms like Facebook and Instagram for promotion.^{6,7} Research indicates that 97% of marketers employ social media to reach their target audiences, highlighting its widespread adoption.⁸ Factors influencing this trend include the need for customer information, opinions, brand awareness, and satisfaction, all quickly obtained through social media interactions. As technology advances, marketers are adapting to ensure brand messages effectively reach consumers through social media platforms, emphasizing the platform's importance in modern marketing practices.⁹

For many businesses, the use of social media as a promotional tool created a new way to reach their customers and market their products and services. Social media in health is a crucial element to effective marketing and if healthcare organization wish to stay competitive then they will need to join the fray.¹⁰ Effective use of social media will attract new patients and maintain old ones. Managing a social media account for many organizations, however, seems a daunting task that all but the largest of organizations seem to handle with ease.¹¹ The benefit of using social media as a marketing tool is the low cost and wide reach and engagement. Healthcare organizations, especially smaller ones with a much smaller promotional budget, should take advantage of Facebook and Twitter to gauge the public's opinion and interest in their services.¹² Social media can affect the way healthcare providers deliver their services. As low-cost tools, their use by small- and medium-sized enterprises (SMEs) in the healthcare sector could deliver competitive advantages. Several studies have shown that these tools are still underutilized by companies in this segment.¹³ Globally studies show social media platform is used in marketing for marketing their products or services by healthcare providers. However, limited study has been done to reveal factors that influence them in adopting social media global¹³⁻¹⁵ and in Africa¹⁶ in particular.

Studies on social media usage in health and related contexts in Ethiopia highlight the diverse roles and impacts of social media in the country. Ethiopian clinicians engage in social networking but underutilize medically-focused

virtual communities for knowledge sharing, indicating a need for formal guidelines.¹⁷ Among university students, social media serves as a cost-effective platform for communication and collaboration, promoting an inclusive learning environment. However, secondary school students primarily use social media for recreational purposes, necessitating awareness-raising efforts to balance usage with academic responsibilities.¹⁸ Social media influences COVID-19 preventive behaviors, emphasizing its role in disseminating accurate information during health crises.¹⁹ Health science students' intention to use e-learning is influenced by factors like ease of use and enjoyment, suggesting the importance of user-friendly platforms for education.²⁰ Lastly, while social media enhances workplace collaboration, excessive usage may hamper productivity, highlighting the need for organizational policies.²¹ Overall, addressing challenges and harnessing the benefits of social media can positively impact health, education, and productivity outcomes in Ethiopia.

Regardless of its popularity, there is still very limited usage of social media platforms by companies to promote their products and services to create brand awareness especially in health care business in Ethiopia. In Ethiopian large business companies apply SMM where as limited in small scale business organizations in general and health care organization in particular i.e., it is an infancy stage in health care business. Thus, this study seeks to fill in the gaps and find out those factors. Therefore, objectives of this study are to investigate the factors that influences the adoption of social media marketing among the healthcare providers in Gondar Town, Central Gondar Zone.

Theoretical framework and research hypothesis

Social media is realized as a part of information technology (IT). There are numerous theoretical frameworks that may be applicable to the study and understanding of social media adoption. Among the most prominent are the Diffusion of Innovation (DOI) theory (Rogers et al., 2003), the Technology Acceptance Model (TAM)²² and the Unified Theory of Acceptance and Use of Technology (UTAUT).²³ Previous pieces of research concerning social media adoptions can be separated into two levels: individual and organizational levels. Numerous theories explain the adoption of technologies at both individual and organizational levels. Individually, theories are the theory of planned behavior, the theory of reasoned action, the technology acceptance model (TAM), and the unified theory of acceptance and use of technology (UTAUT) organizationally, theories consist of the technology-organization-environment framework and the tri-core model.²⁴ Numerous factors are influencing the use and adoption of technology.²⁵

UTAUT is one of the comprehensive models that can help effectively anticipate an adoption intention of

technology-based applications and systems. UTAUT is one of the most extensively used models, proved to excel over other prevalent models.²⁴ In UTAUT model it shows four key factors influencing intentions to adopt and use social media; namely, performance expectancy, effort expectancy, social conditions, and facilitating conditions.²⁴ The UTAUT model integrates eight previously developed models and theories that relate to technology acceptance and use.

The study adapted UTAUT model developed by Venkatesh and his colleagues²⁶ to investigate the factors that influence private healthcare providers in adopting social media. The UTAUT model consists of three indirect determinants of behavioral intention, and two direct determinants of use behavior. The three core constructs in the UTAUT model that declare to impact behavioral intention (BI) directly are (1) performance expectancy, (2) effort expectancy, and (3) social influence. Intention to use and facilitating conditions (FC) are declared to impact indirectly on use behavior. UTAUT includes four moderators (i.e., age, gender, experience and voluntariness of use), which contribute to a better understanding of the complexity of technology acceptance by individuals. The proposed conceptual framework of this study is illustrated in Figure 1 below.

The expectancy of performance denotes the extent to which people think a system will assist them to achieve their jobs. Effort expectancy represents the extent of system usage-related ease. Social influence denotes how vital others believe the new system is in terms of the benefits of using it. Facilitating conditions denote the extent to which one affirms that technical and organizational infrastructure is present to support the system usage.

Additionally, the UTAUT model suggests the following: (1) gender and age moderate the relationship between performance expectancy and behavioral intention, (2) gender, age, and experience moderate the relationship between effort expectancy and behavioral intention, (3) gender, age, experience and voluntariness are suggested to moderate the relationship between social influence and behavioral intention, and (4) age and experience are declared to moderate the relationship between facilitating conditions and behavior intention. Based on studies in the area of social media marketing adoption using UTAUT model the following general hypothesis were formulated for analysis.

- **H1.** Performance Expectancy (PE) significantly influences healthcare provider's behavioral intention (BI) towards the adoption of social media marketing.
- **H2.** Effort Expectancy (EE) significantly influences healthcare provider's behavioral intention (BI) towards the adoption of social media marketing.

- **H3.** Social Influence (SI) significantly influences healthcare provider's behavioral intention (BI) towards the adoption of social media marketing.
- **H4.** Facilitating Conditions (FC) significantly influences healthcare provider's Use Behavior (UB) towards the adoption of social media marketing.
- **H5.** Behavioral Intention (BI) has a significantly positive effect on Use Behavior (UB) towards the adoption of social media marketing.
- **H6.** Behavioral Intention mediates the relationship between Performance Expectancy (PE) and Use Behavior (UB) in adoption of social media marketing among of health professionals working in private healthcare facilities in Gondar Town.
- **H7.** Behavioral Intention mediates the relationship between Effort Expectancy (EE) and Use Behavior (UB) in adoption of social media marketing among of health professionals working in private healthcare facilities in Gondar Town.
- **H8.** Behavioral Intention mediates the relationship between Social Influence (SI) and Use Behavior (UB) in adoption of social media marketing among of health professionals working in private healthcare facilities in Gondar Town.
- **H9.** Sociodemographic variables, Experience and voluntariness have significant influences as moderating effect towards the Use Behavior (UB) in adoption of social media marketing among of health professionals working in private healthcare facilities in Gondar Town.

Methods

Study design and setting

A facility-based explanatory cross-sectional survey using structured questionnaires was conducted between March 2023 and June 2023. The study applied a quantitative research design, incorporating literature review insights on social media adoption, innovation adoption, and business development. The research was conducted in Gondar Town, Ethiopia, situated 750 kilometers from the capital, Addis Ababa. Gondar is a densely populated ancient town with various private healthcare facilities, including 2 hospitals, 60 clinics, 40 pharmacy shops, and 42 drug stores. The study focused on private healthcare providers, including physicians, dental doctors, pharmacists, nurses, midwives, and laboratory technologists.

Study population and sampling

The source population comprised healthcare providers and facility owners, CEOs, or managers in private healthcare settings in Gondar. Inclusion criteria covered all health professionals and management personnel working in the

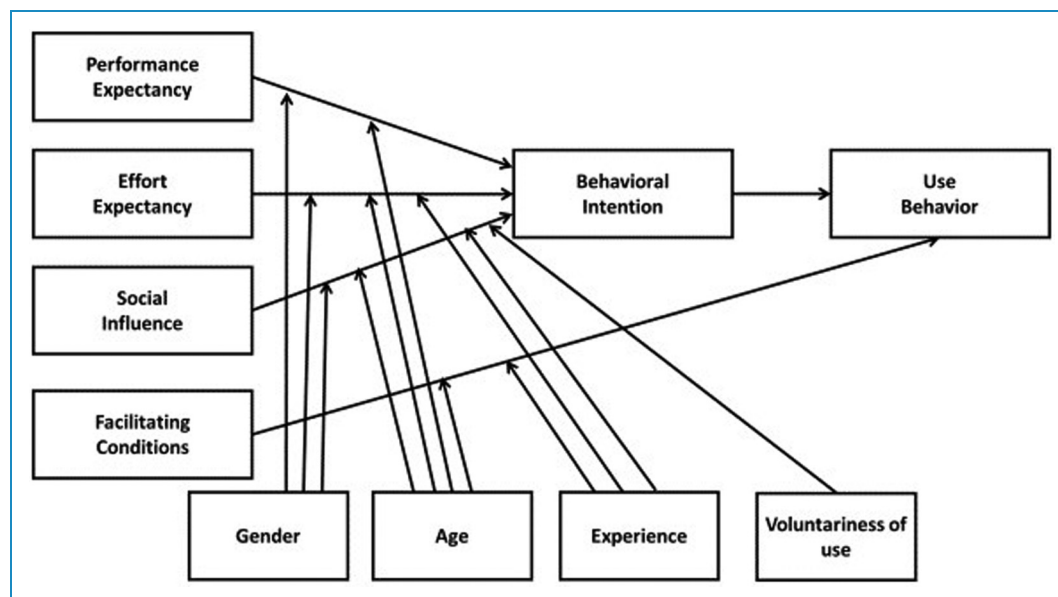


Figure 1. Conceptual framework of the study based on UTAUT's constructs.

private healthcare facilities in Gondar Town. Health professionals not working in the private health facilities were excluded. The sample size (423) was determined using the single population proportion formula with a 95% uncertainty interval, a margin of error of 5%, and a 10% non-response rate. The researcher adjusted the sample size considering the small study population, recommending a minimum of 210 participants for advanced statistical analyses. Ultimately, 238 questionnaires were collected with a 95% response rate.

Data collection

Data was collected through pretested structured questionnaires distributed using a purposeful sampling method. The questionnaire comprised two parts: the first capturing demographic and behavioral information, and the second containing measurement items aligned with the UTAUT model. A Likert scale ranging from strongly disagree (1) to strongly agree (5) was employed. The questionnaire's first section focused on gathering demographic and behavioral information of respondents, while the second section addressed measurement items according to the proposed model. To ensure the content validity of the questionnaire scale, survey questions were adapted for each investigated factor from prior researches.²⁷ The measurement items in this study were taken and modified from previous studies,^{23,26,28} and were assessed using a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5).

In the proposed model, independent variables consisted of four constructs: performance expectancy (PE, 4 items),

effort expectancy (EE, 4 items), social influence (SI, 4 items), and facilitating conditions (FC, 4 items). Dependent variables comprised two constructs: behavioral intention (BI, 4 items) and use behavior (UB, 4 items). In total, there were 24 to 29 measurement items, with details of each construct available in the supplement. In addition to questions regarding the factors, the questionnaire included demographic questions about the usage of social media marketing, age, gender, and usage period of social media marketing tools to gain a better understanding of the respondents and facilitate deeper insights from the obtained data and findings. A pretest was conducted among healthcare providers in public healthcare facilities in Gondar to ensure the tool's face validity. Data collectors and supervisors underwent training, and ethical clearance was obtained from the ethics committee of the University of Gondar.

Statistical analysis

Data was analyzed using SPSS version 26 and SPSS Amos Version 23. Descriptive statistics, structural equation modeling (SEM), and confirmatory factor analysis (CFA) were applied to examine factors influencing social media adoption. Mean with standard deviation (SD) and frequency were calculated. Structural equation modeling (SEM) was utilized to validate the proposed hypotheses and verify suggested conceptual framework. The evaluation of the measurement model is based on the assessment of internal consistency (CR), indicator reliability (Cronbach's alpha), convergent validity (AVE) and discriminant validity. The values of composite reliability and AVE to test the

Table 1. Descriptive statistics demographic information of the sample (n = 238)

Item	Description	Frequency (n)	Percent (%)
Gender	Female	93	39.1
	Male	145	60.9
Age (in years)	< 25	35	14.7
	25–35	138	58.0
	35–45	52	21.8
	≥ 45	13	5.5
Highest education completed	Diploma	54	22.7
	Bachelor Degree	140	58.8
	Master's Degree	26	10.9
	Medical Specialty	18	7.6
Field of Study	Medicine	39	16.4
	Pharmacy	98	41.2
	Nursing	65	27.3
	Laboratory	5	2.1
	Midwifery	15	6.3
	Dental Medicine	16	6.7
Type Private Healthcare facility	Hospital	44	18.5
Working	Clinic	105	44.1
	Dental Clinic	12	5.0
	Community Pharmacy	44	18.5
	Drug Store	33	13.9
Your Role in the Health care Facility	CEO or Manager	22	9.2
	Owner	31	13.0
	Employee	185	77.7
Monthly income (Birr per month)*	Below 5000 Birr	92	38.7
	5000–10,000 Birr	87	36.6
	10,000–15,000 Birr	29	12.2
	Above 15,000 Birr	30	12.6

* Currency in Ethiopian Birr with Average exchange rate in May 2023: \$1 USD = Br54.372.

reliability and validity of the constructs. For the hypothesis testing a model of measurement was first tested via CFA. In structural equation modelling, standardized loadings for each factor model should be greater than 0.5, with an acceptance level of AVE of 0.5 or higher. The composite reliability (CR) of each construct was also measured with values greater than 0.60 as considered suitable.²⁹ Construct validity mean how accurate a set of observed variables truly represent the latent variables to be measured theoretically. Convergent and discriminant validities were examined.³⁰ The reliability of items was tested by using Cronbach's Alpha test. SPSS Amos was employed to examine each moderate variable with all constructs in the model to test the effect of moderation of all demographic and behavior variables, on the levels of four exogenous (PE, EE, SI, and FC) and two endogenous variables (BI and UB). Multivariable regression analysis was conducted and 95% CI to describe the strength of association, and a $p < 0.05$ to ascertain the statistical significance to describe the association between exposure variables with the outcome variable.

Ethics approvals

The study was conducted according to the guidelines of the Declaration of Helsinki and ethical approval was obtained from the research and ethics review committee of the Department of Marketing Management, College of Business and Economics, University of Gondar, Ethiopia; with a reference number MMGT/277/1910/2023. The study participants were well informed about the purpose of the study and verbal consent, in which the process was approved by the ethical committee, was obtained before the commencement of the data collection. All the study participants had provided the verbal consent themselves, as approved by the ethics committee and the Information provided by each respondent was kept confidential.

Results

Basic characteristics of participants

Table 1 provides a detailed overview of the demographic characteristics of a sample consisting of 238 individuals. The analysis encompasses gender distribution, age range, educational background, field of study, type of private healthcare facility, role in the healthcare facility, and monthly income. The data indicates a slight male majority in the sample, with 60.9% (145 individuals) being male and 39.1% (93 individuals) female. The majority of participants fall within the 25–35 age range, constituting 58.0% (138 individuals), highlighting a concentration of individuals in their prime working years. Educational diversity is evident, with 58.8% (140 individuals) holding a

Bachelor's degree, while fields such as Pharmacy (41.2%) and Nursing (27.3%) dominate the participants' areas of study.

In terms of employment, the participants are engaged in various types of private healthcare facilities, with clinics being the most common at 44.1% (105 individuals), followed by community pharmacies (18.5%), hospitals (18.5%), drug stores (13.9%), and dental clinics (5.0%). The majority of participants (77.7%, 185 individuals) hold employee roles, with 13.0% (31 individuals) being owners and 9.2% (22 individuals) serving as CEOs or Managers. The income distribution within the sample is diverse, with 38.7% (92 individuals) earning below 5000 Birr, 36.6% (87 individuals) earning between 5000 and 10,000 Birr, 12.2% (29 individuals) earning between 10,000 and 15,000 Birr, and 12.6% (30 individuals) earning above 15,000 Birr. This highlights a varied income landscape, with a significant portion of the sample earning lower incomes.

Social Media usage pattern of respondents

This session provides insights into social media usage and preferences as shown in Table 2. The data reveals information about the duration of social media usage, purposes for using social media, social media as a marketing tool, favorite time of day for social media usage, frequency of content updates, and social media platform preferences. Additionally, it includes ratings for the usefulness of various social networking applications for business purposes. All participants in the study indicated their usage of a social media platform and possessing at least one social media account. The findings revealed that Facebook (205, 89.5%) was the most popular social media account among health professionals employed in private healthcare facilities, followed by Telegram (199, 86.9%) and YouTube (91, 39.7%).

Based on the data, the majority of respondents (46.2%) have used social media for less than 3 years, followed by 42.0% using it for 3 to 5 years, and 11.8% using it for more than 5 years. This indicates that a significant proportion of individuals have relatively recent experience with social media platforms.

The data shows that the primary purpose of using social media for the respondents is to keep connected with friends and family (95.0%), followed by connecting with customers (51.7%), increasing brand awareness (27.3%), and boosting leads and sales (34.9%). This indicates that social media is primarily used for personal connections, but it also plays a significant role in business-related activities. A majority of the respondents (68.9%) use social media as a marketing tool, while 31.1% do not. This demonstrates that a significant number of individuals recognize the value of social

Table 2. Social Media usage pattern of respondents (n = 238).

Questions	Responses	
	Frequency (n)	Percent (%)
Length of years Using social media		
< 3 years	110	46.2
3 to 5 years	100	42.0
≥ 5 years	28	11.8
Purpose of Social Media Usage	Yes n (%)	No n (%)
To keep connect with friends and families	226(95.0)	12 (5.0)
To keep connect with your customers	123 (51.7)	115 (48.3)
To increase awareness of your brand	65 (27.3)	164 (72.7)
To boost leads and sales	83 (34.9)	155 (65.1)
Using Social Media as Marketing tool	164 (68.9)	74 (31.1)
Most favorite time to use social media within a day	Frequency (n)	Percent (%)
Night	26	11.4
Evening	162	70.7
Afternoon	34	14.8
Morning	7	3.1
Frequency of Social Media Content Update	Frequency (n)	Percent (%)
Quarterly of a year	57	24.9
Monthly	38	16.6
Weekly	55	24.0
Daily	61	26.6
Hourly	18	7.9
Possession of social media platforms account	Yes n (%)	No n (%)
Facebook	213 (89.5)	25 (10.5)

(continued)

Table 2. Continued.

Questions	Responses	
	Frequency (n)	Percent (%)
Length of years Using social media		
Telegram	207 (87.0)	31 (13.0)
YouTube	91 (38.2)	147(61.8)
Google+	77 (32.4)	161(67.6)
Instagram	54 (22.7)	184 (77.3)
LinkedIn	48 (20.2)	190 (79.8)
Twitter	45 (18.9)	193 (81.1)
Viber	30 (12.6)	208 (87.4)
Pinterest	2 (0.8)	236 (99.2)
Most frequently used device for social media*	Mean	SD
Smartphone/Mobile	3.70	1.331
Laptop/Notebook	2.37	1.063
Desktop/PC	2.05	.802
Others such as Tablets	1.92	.786
Rating of Social Media Networking applications for business purpose*	Mean	SD
Facebook	3.20	1.267
YouTube	3.16	1.238
Twitter	2.73	1.119
Telegram	3.88	1.168
Instagram	2.64	1.160
Pinterest	2.14	.960
Viber	2.26	1.023
LinkedIn	2.21	1.022
Google+	2.93	1.368

* A Likert scale from 1 to 5 was used to rate their response.

media for marketing purposes. The data indicates that the most favorite time for social media usage is in the evening (70.7%), followed by the afternoon (14.8%), night (11.4%), and morning (3.1%). This suggests that individuals tend to use social media during their leisure time and outside of working hours. Respondents update their social media content with varying frequencies. The majority update their content daily (26.6%) or weekly (24.0%), followed by quarterly (24.9%), monthly (16.6%), and hourly (7.9%). This highlights the dynamic nature of social media platforms and the regularity with which individuals engage with them.

Among the listed social media platforms, Facebook has the highest adoption rate (89.5%), followed by Telegram (87.0%). YouTube, Google+, Instagram, LinkedIn, and Twitter also have notable adoption rates, ranging from 22.7% to 38.2%. Pinterest and Viber have relatively lower adoption rates. This indicates that respondents have diverse preferences for different social media platforms. The data provides insights into the frequency of social media usage through different devices. Respondents reported the highest average usage frequency on smartphones/mobile devices (mean = 3.70), followed by laptops/notebooks (mean = 2.37), desktops/PCs (mean = 2.05), and other devices such as tablets (mean = 1.92). This suggests that smartphones are the preferred device for accessing social media, followed by laptops and desktop computers.

Respondents provided ratings for the usefulness of various social networking applications for business purposes. Telegram received the highest rating (mean = 3.88), followed by Facebook (mean = 3.20), YouTube (mean = 3.16), Google + (mean = 2.93), and Twitter (mean = 2.73). Other platforms, such as Instagram, LinkedIn, Pinterest, and Viber, received relatively lower ratings. This suggests that Telegram, Facebook, and YouTube are perceived as the most important social networking applications for business purposes.

Descriptive findings UTAUT constructs

Table 3 presents the mean scores and overall means for each construct of the UTAUT model, offering insights into respondents' perceptions. Notably, participants express the highest levels of agreement with Performance Expectancy (PE) and Effort Expectancy (EE), with means of 3.90 (SD .702) and 3.93 (SD .526) respectively. Conversely, the lowest agreement levels are observed for User Behavior (UB) (Mean 3.38, SD .793) and Facilitating Conditions (FC) (Mean 3.53, SD .625). The decline in FC agreement is attributed to respondents' lower endorsement of statements such as "Guidance is available to me to use online social media effectively" and "A specific person (or group) is available for assistance with system difficulties."

The data suggests a prevailing perception among respondents that engaging with social media for marketing purposes is a voluntary choice, as indicated by a moderate mean score of 3.82 and a standard deviation of 1.01. Furthermore, the consistently positive mean scores for Performance Expectancy and Effort Expectancy, coupled with low standard deviations, reflect a unanimous belief in the practical benefits and ease of using online social media for professional tasks. While respondents exhibit a moderate degree of influence from external factors in Social Influence (SI), the ratings suggest a nuanced perspective on the impact of influential individuals, peers, and broader business trends. Overall, the findings underline the need for attention to facilitating conditions and support structures to enhance the user experience, despite the positive inclination of respondents to continue engaging with social media in both business and daily life contexts.

Reliability and validity of constructs

For the hypothesis testing, the authors firstly tested a model of measurement via confirmatory factor analysis (CFA). Construct validity was how accurate a set of observed variables truly represent the latent variables to be measured theoretically. Convergent and discriminant validities were examined through criteria postulated by Hair and his colleagues.³⁰ The outcomes confirmed a total of 20 items which include PE (four items), EE (two items), SI (three items), FC (three items), BI (four items), and UB (four items). Cronbach's outcome for the instrument ranged between 0.701–0.842. The measurement model is assessed for conformity to validity and reliability standards using the Kaiser-Meyer-Olkin measure and the Bartlett Test of Sphericity. Construct reliability and validity are examined through Cronbach's alpha values. Results indicate satisfactory model fit and reliability across constructs. Reliability coefficients for various scales, are presented in Table 4. These coefficients demonstrate acceptable internal consistency and reliability.

For this study, convergent validity was initially assessed by calculating each construct's item loadings, composite reliability, and the Average Extraction Variance (AVE) as shown in Figure 2 and Table 5.

As demonstrated in Table 5, majorities of item loadings, AVE and composite reliability surpass acceptable thresholds, 0.5 (AVE) to BI, PE and UB and 0.70 (CR) to BI, PE, EE and UB, showing a high proportion of commonality among model constructs, confirming convergent validity.

Confirmatory Factor Analysis (CFA) was conducted using the final model (Figure 3), with low-loading items removed i.e., 2 items from EE (EE1 and EE2), and 1 time each from SI (SI2) and FC (FC4) were removed.

Table 3. Mean scores UTAUT constructs (n 238)

Construct	Items	Item Code	Item Mean (SD)	Items mean (SD)
Voluntariness (Vol)	Can you rate your opinion on “My use of social media as marketing tool is voluntarily”	Vol1	3.82(1.01)	3.82(1.01)
Performance Expectancy (PE)	I find online social media useful in setting up a business.	PE1	3.84(.870)	3.90 (.702)
	Using the online social media would enable me to accomplish tasks more quickly.	PE2	4.07(.819)	
	Using online social media increases the quality of my output at minimal effort.	PE3	3.80(.895)	
	Using online social media increases the effective use of time in managing my tasks.	PE4	3.90(.831)	
Effort Expectancy (EE)	My interaction with social media would be clear and understandable.	EE1	3.86(.670)	3.93 (.526)
	It would be easy for me to become skillful at using social media.	EE2	3.93(.708)	
	I would find social media easy to use.	EE3	3.93(.726)	
	Learning to operate social media is easy for me.	EE4	3.99(.706)	
Social Influence (SI)	People who are important to me think that I should use online social media.	SI1	3.84(.779)	3.79 (.557)
	People who influence my behavior think that I should use online social media.	SI2	3.69(.703)	
	Peers/colleague is helpful in the use of online social media.	SI3	3.73(.715)	
	The business trend encourages the use of online social media.	SI4	3.92(.853)	
Facilitating Conditions (FC)	I have the resources necessary (computer, internet connection) to use the online social media.	FC1	3.65(.941)	3.53 (.625)
	I have the knowledge necessary to use the online social media.	FC2	3.77(.887)	
	Guidance is available to me to use online social media effectively.	FC3	3.38(.937)	
	A specific person (or group) is available for assistance with system difficulties.	FC4	3.32(.861)	
Behavior Intention (BI)	I intend to continue using online social media on my business in the future.	BI1	3.90(.907)	3.74 (.730)
	I will always try to use online social media in my daily life.	BI2	3.81(.878)	
	I plan to use online social media on my business more frequently.	BI3	3.77(.861)	
	I always aim to use online social media to sell my product instead of selling in a physical store.	BI4	3.49(.984)	

(continued)

Table 3. Continued.

Construct	Items	Item Code	Item Mean (SD)	Items mean (SD)
User Behavior (UB)	You often use social media for doing your business.	UB1	3.32(.958)	3.38 (.793)
	You have been using social media regularly to communicate with stakeholders.	UB2	3.47(.931)	
	You have been using social media in your daily life for business purposes.	UB3	3.37(.949)	
	You take advantage of online social networks to do business.	UB4	3.36(1.02)	

Table 4. Reliability coefficients for the initial model.

Scale	N of Items	Cronbach's Alpha	Composite Reliability
Performance Expectancy	4	0.842	0.831
Effort Expectancy	4	0.738	0.717
Social Influence	4	0.706	0.668
Facilitating Conditions	4	0.701	0.618
Behavior Intention to Use	4	0.820	0.836
Use Behavior (UB)	4	0.840	0.843
All Items	24	0.901	

Furthermore structural equation analysis and model was developed as shown in figure 4 below.

Table 6 displays CR, AVE, and other validity measures, indicating convergent validity acceptance using the final CFA model.

Discriminant validity is assessed through Fornell and Larcker Criterion and Heterotrait-Monotrait (HTMT) Ratio. While Fornell and Larcker Criterion raise concerns for Social Influence (SI) and Facilitating Conditions (FC), HTMT ratios confirm discriminant validity across all constructs (Table 7 and Table 8).

Discriminant Validity concern on SI and FC was found i.e., the square roots of the AVE for SI and FC are less than the absolute value of the correlations with another factor. Thus, further HTMT ratio analysis was conducted. Fornell and Larcker criterion has been criticized and a new method to assess the discriminant validity that is HTMT ratio is increasingly utilized. However, when

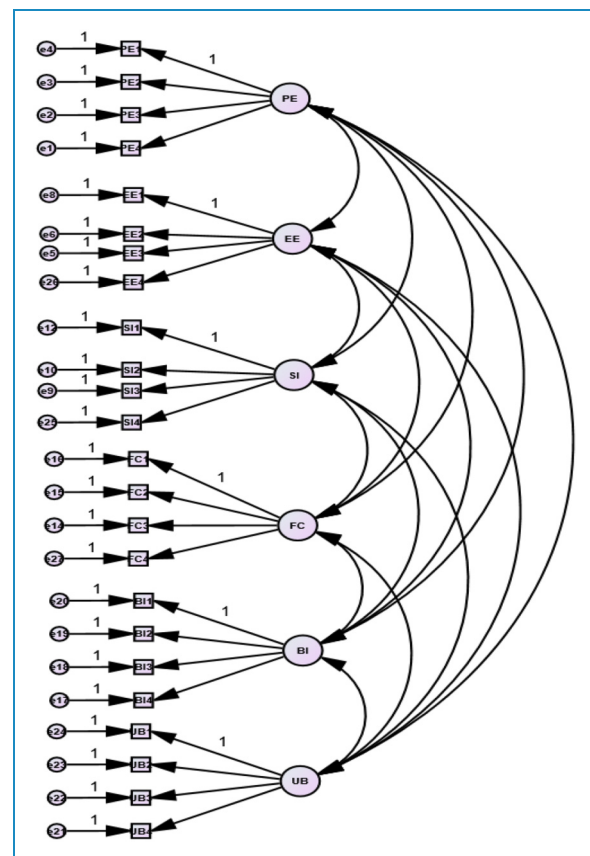


Figure 2. Initial CFA model.

assessed using HTMT ratio, all ratios were less than the required limit of .85.³¹ Hence, discriminant validity was established See Table 8.

In summary, the SEM analysis validates the measurement model, demonstrating good reliability, convergent validity, and discriminant validity for most constructs. HTMT ratio analysis supports discriminant validity for constructs initially flagged by Fornell and Larcker Criterion.

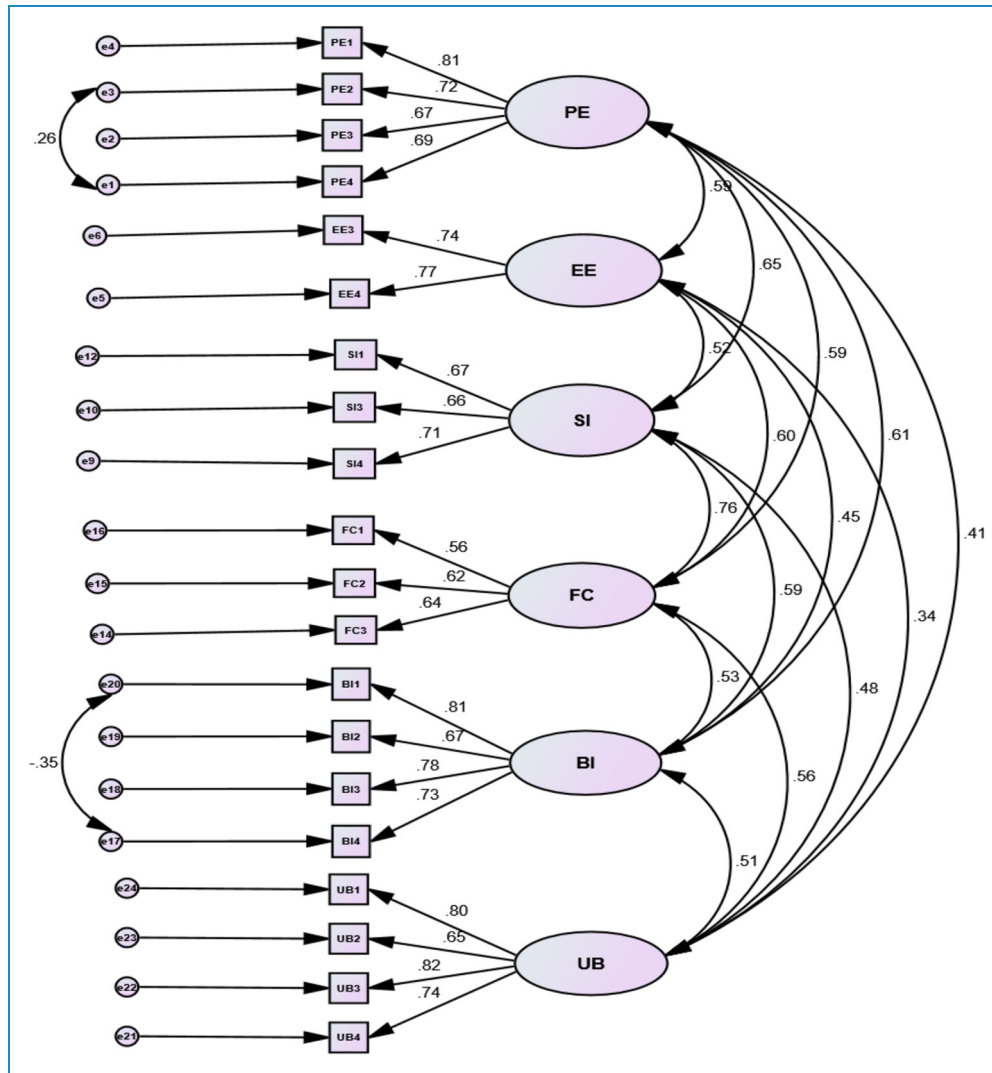


Figure 3. Final CFA model.

Structural model and hypotheses testing

Following the evaluation of the measurement model, the upcoming step was to formulate the structural model. An SEM analysis was conducted to examine the predictive relationship hypothesized. In this analysis, the predictive or independent variables were relative to performance expectancy, effort expectancy, social influence and facilitating condition. Whereas the dependent variable corresponded to behavioral intention and use behavior towards using social media marketing among health care professionals under investigation.

SPSS AMOS 23.0 was used for the path analysis of the structural equation model. According to the data before revision, the overall fitting index of the structural model was poor, so the original hypothetical model was revised accordingly.³² In order to improve the fitting degree of the structural model, the model was revised according to

Modification Indices in AMOS 23.0. The model was revised with the principle of “modification with the highest parameters at a time”.³² The path coefficients and significance levels are shown in Figure 4. The fitting indices after the model revision were all within the reference value range, so the revised model was acceptable.

A good-fitting model was accepted if the value of the CMIN/df, the goodness-of-fit (GFI) indices,³⁰ the Tucker-Lewis Coefficient (TLI)³³; the Confirmatory fit index (CFI)³⁴ is ≥ 0.90 . In addition, an adequate-fitting model was accepted if the AMOS computed value of the standardized root mean square residual (RMR) < 0.05 , and the root mean square error approximation (RMSEA) is between 0.05 and 0.08.³⁰ The findings of the hypothesized path model fit indices calculated are Chi-square = 208 with $df = 156$, CMIN/df = 1.333, the goodness-of-fit (GFI) = 0.924, NFI = .898, TLI = 0.966, CFI = 0.972, SRMR =

Table 5. AMOS output for validity for the measurement model using initial CFA model.

	CR	AVE	MSV	MaxR(H)	BI	PE	EE	SI	FC	UB
BI	0.836	0.562	0.354	0.845	0.750					
PE	0.831	0.553	0.524	0.841	0.595	0.744				
EE	0.717	0.392	0.524	0.737	0.446	0.724	0.626			
SI	0.668	0.344	0.642	0.705	0.583	0.687	0.648	0.587		
FC	0.618	0.301	0.642	0.653	0.515	0.624	0.640	0.801	0.548	
UB	0.843	0.574	0.311	0.854	0.512	0.415	0.360	0.511	0.558	0.758

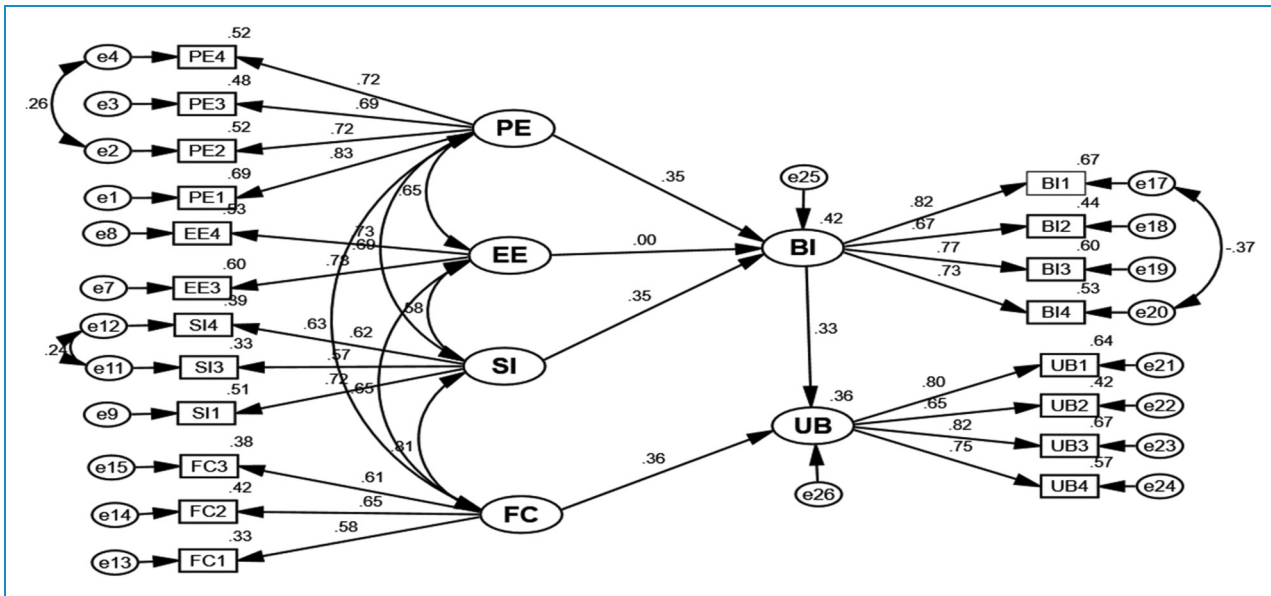


Figure 4. Structural equation modeling (SEM) result.

0.047, and RMSEA = 0.037. Thus, the fit indices for the model were found within the acceptable range.

The squared multiple correlation was 0.42 for behavioral intention and 0.36 for use behavior. It indicates that 0.42 variance in behavioral intention is accounted by Performance Expectancy, Effort Expectancy and Social Influence. In case of Use Behavior 0.36 variance accounted by Facilitating Condition and Behavioral Intention to social media marketing (see Table 9).

Hypothesis test results of H1 to H5. Table 10 presents the regression weights of a structural equation model (SEM) estimated using SPSS Amos. The model aims to examine the relationships between different variables and provides insights into the hypothesized paths. Here is a descriptive analysis of the table:

H1: PE → BI (Performance Expectancy → Behavioral Intention)

The estimate (b) for this relationship is 0.351, indicating a positive effect of Performance Expectancy of use on behavioral intention. The standard error (S.E.) associated with the estimate is 0.126. The critical ratio (C.R.) is 2.857, which exceeds the threshold of 1.96, suggesting statistical significance. The p-value is 0.004, indicating a significant relationship between Performance Expectancy of use and behavioral intention. The direction of the relationship is positive. The hypothesis is accepted.

H2: EE → BI (Effort Expectancy → Behavioral Intention)

Table 6. AMOS output for validity for the measurement model using final CFA model.

	CR	AVE	MSV	MaxR(H)	BI	PE	EE	SI	FC	UB
BI	0.836	0.562	0.354	0.845	0.750					
PE	0.831	0.553	0.479	0.842	0.595	0.743				
EE	0.725	0.568	0.441	0.727	0.438	0.653	0.754			
SI	0.673	0.409	0.656	0.685	0.593	0.692	0.585	0.640		
FC	0.640	0.372	0.656	0.642	0.510	0.636	0.664	0.810	0.610	
UB	0.843	0.574	0.296	0.854	0.512	0.414	0.354	0.485	0.544	0.758

Table 7. AMOS output for discriminant validity for the measurement model using final CFA model

	PE	EE	SI	FC	BI	UB
PE	0.743					
EE	0.653	0.754				
SI	0.692	0.585	0.640			
FC	0.636	0.664	0.810	0.610		
BI	0.595	0.438	0.593	0.510	0.750	
UB	0.414	0.354	0.485	0.544	0.512	0.758

Notes: Bold diagonal elements are the square root of Average Variance Extracted (AVE) for each construct. Off-diagonal elements are the correlations between constructs.

The estimate (b) for this relationship is 0.002, suggesting a negligible effect of effort expectancy on behavioral intention. The standard error (S.E.) associated with the estimate is 0.142. The critical ratio (C.R.) is 0.014, which is below the threshold for statistical significance (1.96). The p-value is 0.989, indicating that the relationship is not statistically significant. The direction of the relationship is positive. The hypothesis is rejected. This may suggest that healthcare professionals in private healthcare facilities already perceive social media as easy to use, reducing the influence of Effort Expectancy on their intentions.

H3: SI → BI (Social Influence → Behavioral Intention)

The estimate (b) for this relationship is 0.351, indicating a positive effect of social influence on behavioral intention. The standard error (S.E.) associated with the estimate is 0.167. The critical ratio (C.R.) is 2.791, which exceeds the threshold for statistical significance. The p-value is

Table 8. HTMT ratio correlations of indicators within constructs.

	PE	EE	SI	FC	BI	UB
PE						
EE	0.64					
SI	0.64	0.55				
FC	0.68	0.72	0.83			
BI	0.60	0.45	0.57	0.57		
UB	0.41	0.35	0.46	0.59	0.52	

0.005, suggesting a significant relationship between social influence and behavioral intention. The direction of the relationship is positive. Thus, the hypothesis is accepted.

H4: FC → UB (Facilitating Conditions → Use Behavior)

The estimate (b) for this relationship is 0.365, indicating a positive effect of facilitating conditions on use behavior. The standard error (S.E.) associated with the estimate is 0.138. The critical ratio (C.R.) is 3.730, which exceeds the threshold for statistical significance. The direction of the relationship is positive. Thus, the hypothesis is accepted.

H5: BI → UB (Behavioral Intention → Use Behavior)

The estimate (b) for this relationship is 0.326, indicating a positive effect of behavioral intention on use behavior. The standard error (S.E.) associated with the estimate is 0.088. The critical ratio (C.R.) is 3.811, which exceeds the threshold for statistical significance. The direction of the relationship is positive. Thus the hypothesis is accepted.

In summary, hypothesis testing results of UTAUT model showed four hypothesis (i.e., H1, H2, H4 and H5) were found significance and H3 was found insignificant. The correlation between performance expectancy (PE) and behavioral intention (BI) was supported which shows a significantly positive relationship (H1: $b = 0.351$, t -value = 2.857, $p < 0.05$). It means that when performance expectancy goes up by 1 standard deviation, behavioral intention goes up by 0.351 standard deviations significantly. H2 postulated that effort expectancy (EE) significantly positively impacts behavioral intention (BI), which is rejected (H2: $b = 0.002$, t -value = .014, $p = 0.989$). EE has positive impact on BI but is not significant. The R2 values indicate moderate levels of explanation for behavioral intention and use behavior.

The mediating effect of behavior intention. The mediation analysis is conducted by treating PE, EE, SI and FC as independent variables, UB as dependent variable, and BI as mediator except for FC. The mediation analysis is based on the analysis of indirect effects. We performed mediation analysis by using the direct and indirect effects based on bootstrap procedures (500 samples) and bias-corrected bootstrap confidence interval (95%). The indirect effects for Performance Expectancy, Effort Expectancy, and Social Influence towards Use Behavior are 0.118, 0.002 and 0.117 respectively (See Table 11).

Result shows that behavioral intention is partially mediating the relationship between performance expectancy and use behavior as indirect effects are statistically significant ($\beta = .118$, $P < .05$). The standardized indirect

(mediated by BI) effect of PE on UB is .118. That is, due to the indirect (mediated by BI) effect of PE on UB, when PE goes up by 1 standard deviation, UB goes up by 0.118 standard deviations. This is in addition to any direct (unmediated) effect that PE may have on UB. For one standard deviation increase of Performance Expectancy, we predict a 0.100 increase in Use Behavior via Behavior Intention and found is significantly different at $p < 0.001$.

Furthermore, behavioral intention is also partially mediating the relationship between social influence and use behavior significantly ($\beta = .117$, $P < .05$). The standardized indirect (mediated) effect of SI on UB is .117. That is, due to the indirect (mediated) effect of SI on UB, when SI goes up by 1 standard deviation, UB goes up by 0.117 standard deviations. This is in addition to any direct (unmediated) effect that SI may have on UB. Although behavioral intention has positive partial mediating the relationship between effort expectancy and use behavior as indirect effects but not significant. Based on these results, H6 and H8 accepted and H7 rejected.

As shown in the Figure 5 it is estimated that the predictors of UB explain 37.3 percent of its variance. In other words, the error variance of UB is approximately 62.7 percent of the variance of UB itself. It is estimated that the predictors of BI explain 41.8 percent of its variance. In other words, the error variance of BI is approximately 58.2 percent of the variance of BI itself.

Hypothesis testing on moderating factors. To test the effect of moderation of all demographic and behavior variables, namely gender, age, Experience of use of social media, and voluntariness of social media use on the levels of four exogenous (PE, EE, SI, and FC) and two endogenous variables (BI and UB). SPSS Amos23 was employed to examine each moderate variable with the constructs in the model found that no significant effect (See Table 12).

Table 9. R2 of the endogenous latent variables.

Constructs	R ²	Results
Behavioral Intention	0.42	Moderate
Use Behavior	0.36	Moderate

Table 10. SPSS amos regression weights of structural equation model parameter estimates.

Hypotheses	Relationship	Estimate (b)	S.E.	C.R.	p-value	Direction	Result
H1	PE → BI	.351	.126	2.857	.004	Positive	Accepted
H2	EE → BI	.002	.142	.014	.989	Positive	Rejected
H3	SI → BI	.351	.167	2.791	.005	Positive	Accepted
H4	FC → UB	.365	.138	3.730	***	Positive	Accepted
H5	BI → UB	.326	.088	3.811	***	Positive	Accepted

Notes: R2 (Behavioral intention) = 0.42; R2 (Use behavior) = 0.36. *** mean $p < 0.001$.

Table 11. Mediating analysis

H. No.	Path	Total Effects	Direct Effects	Indirect Effects	Remarks
H6	PE > BI > UB	.119	.001	.118*	Hypothesis supported since indirect effects are statistically significant
H7	EE > BI > UB	-.068	-.070	.002	Not Supported
H8	SI > BI > UB	.078	-.039	.117*	Hypothesis supported since indirect effects are statistically significant

Note: * P < .05.

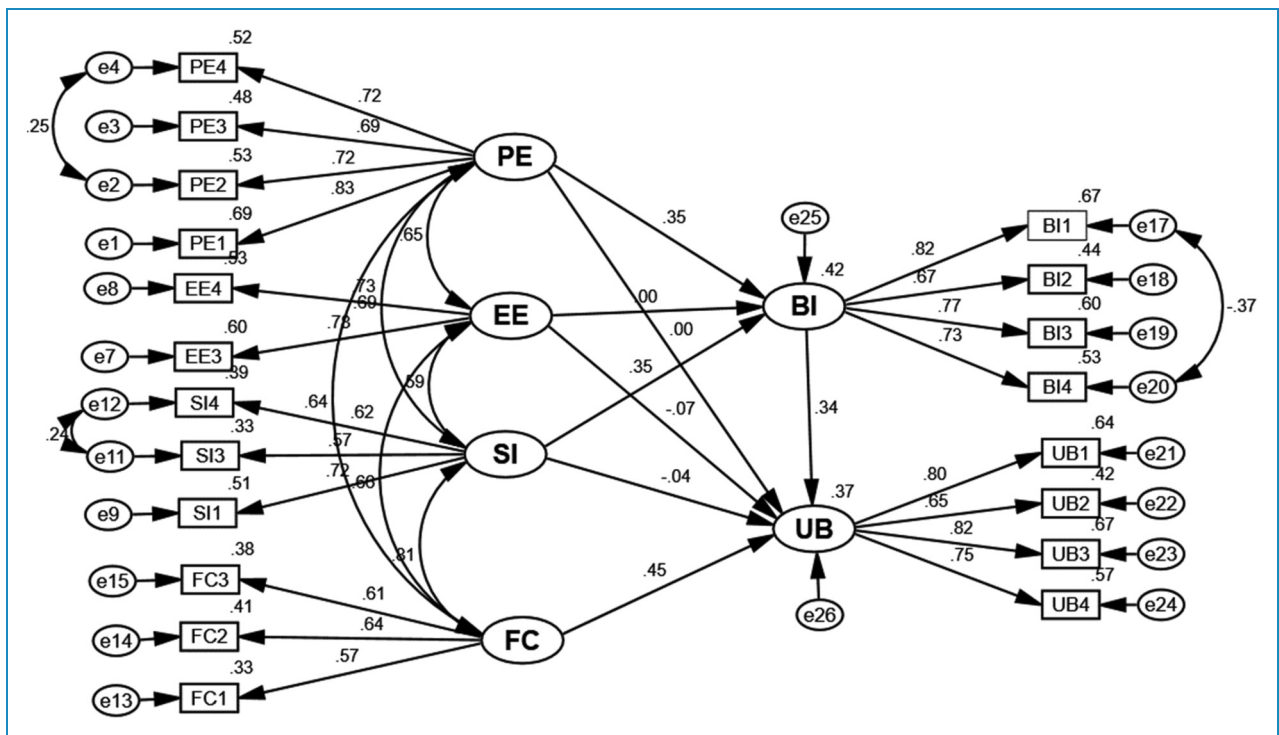


Figure 5. Mediating analysis BI.

Discussions

This study’s results provide valuable insights into the characteristics and usage patterns of health professionals in private healthcare facilities regarding social media use and factors influencing in the adoption of social media marketing. Regarding social media use, all participants had at least one social media account. Furthermore, Facebook is the most popular social media platform, followed by Telegram and YouTube. This finding is consistent with the trends observed in the general population, where Facebook continues to be the dominant social media platform.³⁵⁻³⁷ However, it is interesting to note that Telegram

is also widely used among health professionals, which may reflect the preference for secure messaging platforms in healthcare settings due to privacy and confidentiality concerns. Studies have found that healthcare professionals often prefer secure and encrypted platforms for communication and information sharing.^{38,39}

The primary purposes of using social media, such as staying connected with friends and family and maintaining connections with customers, are consistent with previous studies conducted in various professional contexts.^{40,41} Moreover, the utilization of social media as a marketing tool aligns with the growing recognition of social media

Table 12. Moderating factor analysis

			Estimate (β)	S.E.	C.R.	P value
BI	<--	PE * Gender Male	.155	.095	1.549	.121
BI	<--	PE * Age above Mean	.016	.091	.214	.830
BI	<--	EE * Experience above mean	-.066	.092	-.718	.473
BI	<--	EE * Gender Male	.003	.107	.030	.976
BI	<--	EE * Age above mean	.030	.101	.296	.767
BI	<--	SI * Vol above mean	-.206	.107	-1.69	.091
BI	<--	SI * Exper above mean	-.004	.084	-.050	.960
BI	<--	SI * Gender_Male	.149	.098	1.35	.178
BI	<--	SI * Age above mean	.047	.088	.57	.571
UB	<--	FC * Age Above Mean	.040	.095	.512	.608
UB	<--	FC * Experience above Mean	-.058	.095	-.662	.508

platforms as effective channels for promoting products and services.⁴² These results underscore the importance of social media in both personal and professional contexts for health professionals, as they use these platforms for both personal connections and business activities.

The findings regarding the UTAUT constructs demonstrate similarities and differences compared to previous research. The high level of agreement on Performance Expectancy (PE) and Effort Expectancy (EE) is consistent with studies emphasizing the perceived benefits and ease of use of social media among healthcare professionals.⁴³ This means that healthcare professionals in private healthcare settings are realizing the potential benefits of using social media for various purposes, such as connecting with colleagues, sharing knowledge and connecting with patients. The usability of social media platforms shows that healthcare professionals perceive social media as user-friendly and accessible.

However, the lower level of agreement on Facilitating Conditions (FC) indicates a need for organizations to provide more support and resources to optimize social media utilization, which aligns with previous research highlighting the importance of organizational support in technology adoption.^{26,44} The finding revealed that health professionals in private healthcare facilities may face challenges in accessing necessary guidance and assistance for using social media effectively. Studies revealed that to improve social media adoption, healthcare institutions should consider providing training, guidelines, and technical support to facilitate healthcare professionals' use of social media platforms.^{15,44}

The significant positive relationship between Social Influence (SI) and Behavioral Intention (BI) is consistent with the findings of previous studies emphasizing the role of social influence in shaping individuals' attitudes and intentions toward technology adoption.^{26,44} This suggests that the opinions and experiences of colleagues, peers, and other influential individuals play a crucial role in motivating health professionals to adopt social media for professional purposes. This finding highlights the importance of fostering a supportive social environment and encouraging knowledge sharing and collaboration among health professionals.

However, the non-significant impact of Effort Expectancy (EE) on Behavioral Intention (BI) contrasts with some previous research highlighting the importance of perceived ease of use in influencing behavioral intentions.⁴³ This may suggest that healthcare professionals in private healthcare facilities already perceive social media as easy to use, reducing the influence of Effort Expectancy on their intentions. These findings underscore the need for further investigation into the specific factors that influence behavioral intentions related to social media adoption among health professionals in different healthcare contexts.

Comparing the results of the present study with previous research highlights the importance of context-specific factors in shaping social media acceptance among healthcare professionals. While there are consistencies in the patterns of social media usage and the influence of certain UTAUT constructs, differences may arise due to variations

in organizational support, professional norms, and individual perceptions within different healthcare settings. These nuances underscore the need for tailored interventions and strategies to promote effective social media adoption in specific healthcare contexts.

Overall, the findings of this study contribute to the existing body of knowledge by providing insights into the characteristics, usage patterns, and factors influencing social media adoption among health professionals in private healthcare facilities. The study highlights the potential benefits of social media in enhancing professional connections, communication, and marketing efforts. By understanding these findings, healthcare organizations can develop targeted interventions and policies to support health professionals in utilizing social media effectively, ultimately improving patient care and engagement in the digital era.

Limitation of the study

The study's limitation is a cross-sectional design that limits the ability to establish causality. Additionally, self-report bias might influence data accuracy, and the reliability of measurement instruments could vary despite efforts to validate them. The generalizability of the study is limited due to limited sample size and specific group of health care professionals working in the private healthcare facilities. Moreover, the study's scope focused solely on factors within the UTAUT model, overlooking potential organizational, regulatory, and cultural influences.

Future implications of the study

The findings of this study can inform policymakers, healthcare organizations, and marketers in Gondar Town, Ethiopia, about the critical factors influencing social media adoption among healthcare professionals. This information can guide the development of policies and strategies aimed at promoting effective use of social media for healthcare marketing purposes. Recognizing the significance of social media in healthcare marketing, training programs and educational initiatives can be designed to enhance healthcare professionals' digital literacy and skills in utilizing social media platforms effectively. This can empower professionals to leverage social media for patient communication, engagement, and brand promotion. Future research could build upon this study by conducting longitudinal investigations to track changes in social media adoption behaviors among healthcare professionals over time. This longitudinal approach would enable researchers to assess the impact of interventions, changes in technology, and evolving market dynamics on social media adoption. To gain a more holistic understanding of social media adoption in the healthcare sector, future studies could explore additional factors beyond those considered in the UTAUT model. This may include organizational factors, regulatory

influences, and cultural norms shaping social media adoption behaviors among healthcare professionals. Comparative studies across different regions within Ethiopia or other countries could provide insights into variations in social media adoption patterns and underlying determinants. Understanding these regional differences can help tailor marketing strategies and interventions to specific contexts, maximizing their effectiveness.

Managerial implications

1. **Organizational Support for Social Media Use:** The lower agreement on Facilitating Conditions suggests a need for organizations to provide more support and resources for social media utilization. Managers should consider offering training sessions, developing guidelines, and providing technical assistance to help healthcare professionals effectively leverage social media platforms for professional purposes.
2. **Promoting Social Influence:** Recognizing the significant positive relationship between Social Influence and Behavioral Intention, managers should foster a supportive social environment within the organization. Encouraging knowledge sharing, collaboration, and peer support can motivate health professionals to embrace social media for professional activities, ultimately enhancing teamwork and information exchange.
3. **Tailored Interventions:** Acknowledging the importance of context-specific factors, managers should tailor interventions and strategies to promote social media adoption based on the unique characteristics and needs of their healthcare settings. Understanding organizational culture, professional norms, and individual preferences is crucial for designing effective initiatives that resonate with health professionals and facilitate smoother adoption processes.

Theoretical implications

1. **Effort Expectancy's Influence:** The non-significant impact of Effort Expectancy on Behavioral Intention suggests a nuanced understanding of technology adoption among health professionals. This finding challenges previous research emphasizing perceived ease of use as a significant determinant of behavioral intentions. Further exploration into the underlying factors influencing health professionals' perceptions of effort and ease of use can contribute to refining existing theoretical frameworks.
2. **Context-Specific Adoption Factors:** Comparing the study results with previous research underscores the importance of considering context-specific factors in technology acceptance models. Variations in organizational support, professional norms, and individual

perceptions across different healthcare settings highlight the need for adaptable frameworks that account for these contextual nuances. Future theoretical developments should integrate context-specific variables to provide a comprehensive understanding of technology adoption dynamics in diverse healthcare environments.

3. **Role of Social Influence:** The significant positive relationship between Social Influence and Behavioral Intention reaffirms the influential role of social factors in shaping individuals' attitudes and behaviors toward technology adoption. This finding aligns with previous research emphasizing the impact of social networks and peer interactions on technology acceptance. Further exploration into the mechanisms through which social influence operates can enhance theoretical models and inform interventions aimed at leveraging social dynamics to promote technology adoption in healthcare settings.
4. **Integration of Marketing Perspectives:** Recognizing social media's dual role in personal and professional contexts highlights the convergence of marketing principles and healthcare practices. Integrating marketing perspectives into theoretical frameworks can enrich our understanding of health professionals' motivations and behaviors related to social media use. Exploring how marketing strategies influence social media adoption and utilization among health professionals can contribute to interdisciplinary insights and inform targeted interventions aimed at optimizing marketing efforts in healthcare settings.

Conclusion and recommendations

In conclusion, the findings provide valuable insights into the characteristics, usage patterns, and factors influencing social media adoption among health professionals in private healthcare facilities. The study revealed that health professionals predominantly use social media platforms such as Facebook, Telegram, and YouTube, primarily for staying connected with friends and family and maintaining customer connections with Facebook being the most popular platform. The UTAUT model provided valuable insights into the factors influencing social media adoption, with performance expectancy, social influence, and facilitating conditions playing significant roles in shaping behavioral intention to use social media. However, Effort Expectancy did not significantly influence behavioral intention. These findings highlight the organizations to provide support and resources to enhance health professionals' utilization of social media for marketing purposes. Facilitating conditions were found to have a significant positive impact on use behavior. These findings contribute to a better understanding of the factors driving social media adoption among health professionals in private healthcare facilities. Thus,

healthcare organizations should provide guidance and support to health professionals on using social media effectively. This can include training programs or the establishment of dedicated teams to assist with system difficulties. Health professionals should be encouraged to leverage social media as a marketing tool for their online businesses. Organizations can provide resources and training to help them effectively utilize social media for promotional activities.

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Note: Guarantor BWA.

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