EMPIRICAL INSIGHTS INTO FACTORS SHAPING THE ADOPTION OF HOME AND MOBILE NURSING CARE IN INDIAN HEALTHCARE LANDSCAPE

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ABSTRACT

The healthcare sector in India is currently experiencing a notable shift, mostly influenced by shifting demographic patterns, a rise in life expectancy, and an escalating prevalence of chronic illnesses. A prominent trend in healthcare delivery involves the increasing utilization of home and mobile nursing care services. These services adopt a patient-centric approach by delivering medical treatment within the confines of patients' residences, while also utilizing mobile technology to enhance accessibility and the standard of care provided. Nevertheless, the determinants that impact the acceptance and implementation of home and mobile nursing care in the Indian context have not been thoroughly investigated. The primary objective of the present research study is to conduct an empirical examination of the various elements that have an impact on the adoption of home and mobile nursing care services in India. The research study is intended to offer a thorough comprehension of the factors that influence the choices made by both patients and healthcare providers when it comes to adopting home and mobile nursing care services.

Keywords: Home nursing care, Mobile nursing care, Healthcare adoption, Indian healthcare industry.

INTRODUCTION

The healthcare industry in India has emerged as a significant sector, with substantial growth in terms of both income generation and employment opportunities. The healthcare sector encompasses various components such as hospitals, medical devices, clinical trials, outsourcing, telemedicine, medical tourism, health insurance, and medical equipment. The healthcare sector in India is seeing rapid growth as a result of enhanced coverage, improved services, and more investments from both public and private entities. India possesses a substantial competitive advantage due to its expansive reservoir of proficiently qualified medical practitioners. India has a notable degree of cost competitiveness in relation to its counterparts in both Asian and Western nations. The cost of surgical procedures in India is around one-tenth of the expenses incurred in the United States or Western European countries. The affordable nature of medical services has led to an increase in the phenomenon of medical tourism in the nation, drawing patients from all parts of the globe.

Additionally, India has been a prominent centre for research and development (R&D) endeavours undertaken by global entities, mostly owing to its comparatively affordable clinical research expenses.

In India, the concept of healthcare is rapidly evolving to meet the changing needs and preferences of patients. As part of this transformation, home and mobile nursing care has emerged as a crucial component of the healthcare ecosystem. Home and mobile nursing care refers to the provision of medical and non-medical services to individuals in the comfort of their homes or at a location convenient to them. This innovative approach to healthcare delivery has gained significant traction in India, offering personalized care, convenience, and cost-effectiveness to patients and their families.

Traditionally, healthcare services were primarily provided in hospital settings, requiring patients to travel and stay away from the familiarity and comfort of their homes. However, the rise of home and mobile nursing care has revolutionized this model, bringing healthcare professionals directly to the doorstep of patients. This paradigm shift has brought about numerous benefits, including enhanced patient comfort, personalized care, reduced hospital readmissions, and cost savings.

There is a growing shift in the field of healthcare and nursing towards the provision of care in home settings, as opposed to traditional hospital-based treatment (Wälivaara et al., 2011). Home and mobile nursing care plays a crucial role in addressing the diverse healthcare needs of individuals in India. From assisting with wound care and medication administration to providing post-operative care, physiotherapy, and general health monitoring, home nurses offer a wide range of services to support patients in their recovery and overall well-being. Additionally, home nursing care is particularly beneficial for patients with chronic illnesses who require long-term care, as well as for elderly individuals and those with mobility issues who may find it challenging to access healthcare facilities.

The notion of home nursing care in India had a lengthy historical foundation deeply entrenched in traditional healthcare customs. Families frequently depended on local caretakers, commonly referred to as 'ayahs' or 'dais', to provide support during the process of childbirth or periods of illness. Over the course of time, these conventional procedures have undergone transformation and broadened their scope in order to cater to the evolving healthcare demands of a society that is undergoing modernization. In contrast, mobile nursing care utilizes technology and connection to deliver healthcare services in non-traditional hospital environments. The scope of this concept includes the utilization of telemedicine, remote monitoring, and mobile applications for the provision of healthcare services and the monitoring of patients' well-being. The increased prevalence of smartphones and enhanced internet connectivity in India has facilitated greater accessibility and viability of mobile nursing care. The proliferation of mobile phones and Internet technology has created a platform for communication between patients and healthcare practitioners (Chiang & Wang, 2016).

The significance of home and mobile nursing care extends beyond the patients themselves. Family caregivers also benefit from these services as they receive support, respite, and guidance from skilled nurses. By training and educating family members, home nurses empower them to provide better care to their loved ones and alleviate the burden of caregiving. Moreover, home and mobile nursing care services play a vital role in reducing the strain on hospitals and healthcare facilities. By shifting certain healthcare services to patients' homes, the burden on hospitals is lessened, allowing them to allocate their resources more efficiently and prioritize critical cases. This becomes especially important during times of increased demand or emergencies when hospitals may be overwhelmed.

As the healthcare landscape continues to evolve, home and mobile nursing care in India is poised to become an integral part of the care continuum (Tabish & Syed, 2013). The advancements in technology, changing patient preferences, and the need for cost-effective

healthcare solutions have paved the way for the expansion of home nursing services across the country.

At this backdrop, the proposed research study is intended to explore the factors influencing the adoption of home and mobile nursing care services in India.

LITERATURE REVIEW

Home and mobile nursing care services offer individuals the chance to receive medical care and support within the comfort of their own homes, thereby enhancing their overall quality of life and well-being. The utilization of home-based care has been increasingly favoured due to its ability to enhance patient happiness, improve clinical outcomes, and offer a more accessible and cost-effective alternative. This issue holds particular significance within the context of the healthcare system in India, given the inadequate presence of primary healthcare centres, step-down facilities, hospices, rehabilitation centres, and similar resources. Hospitals frequently have high levels of congestion, characterized by lengthy waits observed at various service counters, including billing offices and investigation rooms. There is a need for increased allocation of facilities and resources in tertiary hospitals. The implementation of high-quality primary care services and the effective management of health events inside the home environment have the potential to yield substantial benefits at both the local and national levels.

Most of the developed as well as developing countries are facing problems regarding healthcare services due to various reasons such as increase in aging population, changed lifestyle, increase in chronic disease, need for increased efficiency, difficulty in recruiting and retaining healthcare professionals etc. Due to these difficulties, home healthcare is one of the healthcare sectors that is expanding the fastest. In (Koch, 2006) provides an assessment of the state of the art in research on home telehealth from an international viewpoint based on an analysis of the scientific literature published between 1990 and 2003.

One of the most promising options to improve care and save costs is to move care delivery from hospitals to homes. A rising number of new and established organizations are introducing and scaling up models to deliver primary, acute, and palliative care into the home. The five main obstacles to providing healthcare in the home-patient preference, clinician concerns, supporting infrastructure, patient safety, and the regulatory environment-are discussed by (Chandrashekar et al., 2019). They then provide potential answers for overcoming these difficulties.

Thanks to the availability of affordable telecommunications networks and physiologic monitoring equipment designed for patient self-measurements, elderly patients in need of expert nursing care at home can now gain from beneficial telemedicine applications. Patient outcomes and expenditures for patients receiving skilled nursing care at home were compared when conventional methods or telemedicine were used to deliver the care. According to (Finkelstein et al., 2006), virtual visits between a skilled home healthcare nurse and chronically ill patients at home can improve patient outcomes while costing less than regular professional face-to-face home healthcare visits.

The utilization of information and communication technology (ICT) is gaining widespread recognition across several fields and industries, encompassing education, banking, and healthcare. In recent times, the implementation of telemedicine healthcare services has had a substantial influence on enhancing the provision of healthcare services. The implementation of telemedicine health services is characterized by its cost-effectiveness, efficiency, time-saving capabilities, and freedom from errors. In their study, (Rahi et al., 2020) aim to examine the attitudes and behaviours of patients in relation to the adoption of telemedicine health services. To achieve this, the researchers integrate three established theories: the unified theory of acceptance and use of technology (UTAUT), the protection

motivation theory (PMT), and the DeLone & McLean information success model. The findings of the study demonstrate that a combination of factors including information quality, system quality, service quality, performance expectancy, effort expectancy, social influence, facilitating condition, perceived vulnerability, perceived severity, and response efficacy collectively accounted for 80.4% of the variability observed in patient attitudes towards the adoption of telemedicine health services.

In recent decades, the healthcare industry has seen significant transformations in numerous countries worldwide, mostly driven by the rapid progress of information and communication technology (ICT). Emerging data indicates that mHealth, an abbreviation for mobile health, may potentially be a beneficial outcome of information and communication technology (ICT), and is likely to be one of the leading services that significantly impacts the advancement of the healthcare industry. As to the World Health Organization (WHO), a significant proportion of nations worldwide, including Bangladesh, are confronted with a severe deficit in their healthcare staff. mHealth is widely regarded as a convenient, cost-effective, and accessible approach to enhancing the availability of healthcare services, particularly for populations facing substantial limitations in healthcare resources. Utilizing the widespread use of mobile phones and their recognized capacity to enhance healthcare services, numerous mHealth programs and services have been implemented or are currently being developed in developing nations. In their study, (Hoque & Sorwar, 2017) endeavor to construct a theoretical framework utilizing the Unified Theory of Acceptance and Use of Technology (UTAUT). Subsequently, they conduct an empirical investigation to ascertain the primary aspects that influence the intention of older users to accept and utilize mHealth services.

The World Health Organization (WHO) defines e-Health as "the leveraging of information and communication technology (ICT) to connect providers, patients and governments; to educate and inform health care professionals, managers and consumers; to stimulate innovation in care delivery and health system management; and to improve our health care system". The e-Health movement has gained significant traction in the health care sector because to the rapid expansion of Internet access and advancements in networking and information communication technology. E-Health efforts are commonly perceived as a potential avenue for significant enhancement in the public healthcare sector, aiming to address the substantial demand and supply challenges in healthcare systems of both developed and developing nations. Developed nations have allocated and are expected to continue allocating significant resources towards the implementation of e-Health systems, with the aim of reducing costs and enhancing the standard of healthcare provision. In recent times, there has been a significant focus from both academic and non-academic research communities on the examination of factors that impact the adoption and acceptability of e-Health systems. In this study, (Hoque et al., 2016) endeavor to examine the various aspects that impact the adoption and utilization of e-Health applications in Bangladesh, specifically from the viewpoint of citizens (patients). To achieve this, they expand upon the technology acceptance model (TAM) by incorporating the dimensions of privacy and trust. This study establishes that the perceived simplicity of use, perceived utility, and trust are influential elements that affect the intention to adopt e-Health.

Mobile health applications, commonly referred to as mHealth apps, are implemented with the primary objective of enhancing the accessibility, quality, and overall user experience of healthcare services. There is a potential for varying effects across different user groups when implementing any mHealth intervention. The objective of the study conducted by (Kaphle et al., 2015) is to establish a comprehensive framework for evaluating the impact of mHealth platforms on the quality and experience of care delivered by frontline healthcare workers. Additionally, the study aims to investigate whether the effects on quality and experience vary based on the level of technology adoption and individual characteristics of

the healthcare worker. Individual variables such as literacy, education, age, and prior mobile experience have been recognized as influential elements that impact the acceptance and utilization of technology. These factors also have a direct influence on the quality of care and the overall user experience, both directly and through the use of technology. The deployment of mHealth technology by frontline workers has been observed to have a favourable impact on the quality and experience of care they deliver. Various individual factors, such as literacy and age, have a significant role in influencing the acceptance of technology and the manner in which users utilize it for their professional endeavours.

Annually, an estimated 15 million infants are born worldwide prior to reaching 37 full weeks of gestation, indicating a preterm birth. The prevalence of preterm birth is escalating due to various factors, including the rise in multiple pregnancies, unwarranted medical induction of labor and premature caesarean deliveries, adolescent pregnancy, advanced maternal age, infections, and chronic ailments like diabetes and hypertension. Nevertheless, a significant proportion of preterm births continue to lack a clear explanation. The utilization of mobile health (mHealth) solutions is currently being extensively investigated in low- and middle-income countries (LMICs) as a means to address the healthcare access disparity and enhance health outcomes. The compatibility of mobile health (mHealth) solutions with individual users and their suitability within a specific context is a crucial factor in achieving effective uptake and long-term usage. In this study, (Phagdol et al., 2021) elucidate the methodology employed in the development of a mHealth application with a focus on sustainability. The objective of this application is to facilitate the provision of home care to preterm infants who have been discharged from the neonatal intensive care unit (NICU) in India.

The emergence of mobile computing has presented a recent advancement in the field of home care. The system enables a nurse working in a residential setting to effectively handle the patient's clinical information, coordinate visitations, develop care plans, and facilitate data exchange with other members of the healthcare team. The study conducted by (Pare et al., 2011) examined the impact of the use of mobile computing on the overall quality of home care nursing practice in the province of Quebec. The software, which facilitated the structuring and organization of nursing tasks in patients' residences, was systematically implemented across nine community health centres. The selected health centres exhibited diversity in various aspects, including the composition of their teams, the extent of coverage provided by the nursing staff, and the geographical distribution of clients receiving home care, taking into account both rural and urban settings. According to the research findings, patients said that the utilization of mobile computing during home visits facilitated improved management of their health condition by nurses, thus leading to the provision of enhanced care services. The utilization of mobile computing has had favourable and substantial impacts on the calibre of treatment delivered by home healthcare professionals.

With the advent of an aging population, there will be a significant surge in the need for home nursing services catering to the needs of senior individuals. Healthcare administrative departments globally are actively striving to efficiently address the demands for in-home nursing services among senior patients diagnosed with chronic illnesses. The significant importance of home nursing services in the management of medical conditions in elderly individuals has garnered growing interest. Extensive research has been performed to examine the acceptability, practicality, and cost-effectiveness of delivering home nursing services to elderly people. The study conducted by (Gong et al., 2022) provides a comprehensive description of a novel home nursing service system that utilizes mobile internet technology. Additionally, the researchers examine the factors that contribute to the adoption of this system by senior patients. This study examined a total of 520 instances of mobile internet-based home nursing services. The senior patients exhibited a 100% satisfaction rate when utilizing the novel mobile internet-based home nursing service. The

study revealed that older patients primarily sought mobile internet-based home nursing services for pressure ulcers, peripherally inserted central catheter (PICC) care, subcutaneous injection administration, general stoma care, psychological support, and intramuscular injection administration.

The utilization of mobile technology presents significant opportunities for enhancing service quality, achieving productivity enhancements, and minimizing costs within the healthcare industry. Mobile applications have the capability to facilitate the retrieval and modification of patient records, input the outcomes of medical examinations, oversee the condition of patients, and provide clinical data to assist medical practitioners and other healthcare professionals. Several indicators indicate that the use of mobile technology is likely to experience significant growth in the near future. These factors encompass the rise in individual usage of mobile devices due to their decreased expenses and the availability of more dependable and user-friendly technology and telecoms infrastructure. Despite the recognition of this potential, the widespread deployment of mobile applications has not been observed in the majority of modern healthcare systems. The study conducted by Standing and (Standing et al., 2008) investigates the potential impact of mobile technologies within the healthcare industry. This study investigates the possibilities of the aforementioned technology and analyses the obstacles that hinder its widespread use. In the present study, our objective is to examine the adoption of mobile technology within the healthcare industry. Specifically, we aim to determine the degree to which the adoption of such technology is influenced by several aspects, including cost, usability, management considerations, strategic considerations, and systemic issues. This study utilizes an investigation of the adoption of mobile technology in the healthcare industry to examine the extent to which Technology Adoption Models (TAMs) can offer comprehensive explanatory capacities. Additionally, it investigates if the barriers to adoption are rooted in more intricate and fundamental systemic issues.

The twenty-first century has witnessed innovative innovations and steady expansion in the mobile device market. The ubiquity of mobile devices has rendered them indispensable for a significant portion of the population, exerting an indisputable influence on various sectors, including the field of healthcare. Contemporary health care systems have numerous obstacles, including issues of financial accessibility and disparities in the distribution of resources. M-Health has been identified as a subset of e-Health, wherein the provision of healthcare services and the exchange of health-related information heavily depend on information and communication technology. The concept of m-health revolutionizes the healthcare business by introducing a chain that deviates significantly from the conventional healthcare model. Patients play a pivotal role as the primary stakeholders and users across the m-Health industry chain. Enhancing comprehension of patients' inclination to adopt can assist designers in identifying crucial components and functionalities of applications, ultimately enabling them to optimize their goods and reduce inefficiencies. Mobile devices with advanced capabilities and intuitive interfaces have emerged as a significant means of tackling the aforementioned challenges, leading to the emergence of a novel domain known as Mobile Health (m-Health). In (Miao et al., 2017) provides valuable insights for developers in the mobile health industry regarding the optimal design of their products, with the aim of enhancing users' intention to adopt and overall satisfaction.

The healthcare industry is widely recognized as a prominent and rapidly advancing sector within contemporary society. The healthcare industry leaders have been compelled to implement and utilize various digital platforms and tools to connect different stakeholders in the healthcare sector, such as physicians, doctors, and care providers. This is due to the significant pressure to deliver high-quality care services in a synchronized and real-time manner. The use of IoT (Internet of Things) platforms has garnered significant attention and has been recognized for its widespread usage and substantial value in the contemporary and

evolving corporate landscape. Although the healthcare sector was not initially at the forefront of adopting IoT technology, the pursuit of enhanced healthcare efficiency at a reasonable cost, as well as the desire to maintain technological integrity and connectivity, have prompted the healthcare sector to widely embrace IoT. This has become a pressing necessity in the current context. The Internet of Things (IoT) has significantly impacted the dynamics of several industries by enabling the connection and integration of devices. This transformative technology has emerged in the past decade and has paved the way for the development of Industry 4.0. Industry 4.0 is characterized by its ability to orchestrate devices, frequently through wireless communication channels. In (Chakraborty & Bhatt, 2019) aim to examine the impact of mobile Internet of Things (m-IoT), namely wearables, on the efficiency of care services and the subsequent enhancement of care delivery. Furthermore, the objective of this study is to empirically establish the adoption of mobile Internet of Things (m-IoT) as a precursor to the repercussions of care delivery.

Home healthcare robots (HHRs) represent a burgeoning technological advancement that holds the potential to enhance the accessibility of clinical information, leading to a reduction in human errors and an improvement in safety and quality. In recent years, Home Health Robots (HHRs) have emerged as valuable tools for healthcare professionals, including nurses, doctors, therapists, and physicians. These robots facilitate the delivery of home health care and services to patients through various means, such as monitoring personal health and safety, managing medication and scheduling, detecting individuals lying on the floor, and assisting with physical, cognitive, occupational therapy, and nursing tasks. Examples of nursing tasks include monitoring blood pressure and providing bed baths. The objective of the study conducted by (Alaiad & Zhou., 2014) is to gain insight into the factors that influence the adoption of home healthcare robots. This is achieved by employing technology acceptance theories as a framework for analysis. This study utilized a combination of quantitative and qualitative methodologies to observe that Sociotechnical elements exert a significant influence in elucidating the inclination to embrace home healthcare robots. The study's findings offer valuable insights into potential strategies for enhancing the efficacy of robot technology for home healthcare service providers and robot makers.

The projected rise in life expectancy indicates a significant surge in the population necessitating nursing home care during the next two decades. Nursing home inhabitants encompass a population of elderly individuals who exhibit frailty and possess intricate requirements, relying on specialized nursing interventions for their care. The establishment of enduring relationships between long-term residents in nursing homes and nurses necessitates a distinctive approach to the interpersonal dimensions of nursing care. In order to fully appreciate the quality of care, particularly in terms of interpersonal processes, it is essential to get an understanding of the viewpoints of the residents. This understanding is crucial for maximizing the value of care provided. In their study, (Nakrem et al., 2011) examine the experiences of nursing home patients in relation to the interpersonal components of quality of care provided by direct nursing staff. The study involved conducting in-depth interviews with the inhabitants. The transcribed interviews underwent analysis through the process of meaning categorization. The significance of nurses recognizing the unique requirements of the residents was underscored by the persons themselves. These needs encompassed both general and specialist treatment, as well as health promotion and prevention of complications. Furthermore, the residents stressed the need of prioritizing their individual circumstances. The residents' perception of their integrity being jeopardized in the patient-nurse contact and treatment was influenced by several major factors, including the delicate balance between self-determination and dependency, the transition from homeowner to resident, and the experience of feelings such as indignity and a diminished social position.

RESEARCH METHODOLOGY

The presence of a well-designed research methodology is often regarded as crucial in the context of a research investigation. Research methodology refers to a systematic approach employed to address research problems (Kothari, 2004). In simple words, a research methodology can be understood as a framework that delineates the process by which a research study is conducted. This section encompasses a comprehensive examination of the diverse tools and methodologies utilized for the purpose of identifying and analysing material pertaining to the chosen research subject. The present research study will employ following key elements of the research methodology;

Research Design

The research design encompasses the selection of research methods and procedures employed by a researcher in order to carry out a study. The design facilitates the refinement of research methodologies appropriate for the subject matter and enables researchers to provide optimal conditions for the success of their studies.

The current research study is characterized as a descriptive study, wherein the primary focus is on seeing and measuring phenomena without intentional manipulation of factors. There are typically three primary classifications of descriptive research design: the observational technique, case study method, and survey method. For the current research study, the chosen research design would involve the utilization of the survey method.

Population and Sample

The concepts of population and sample are fundamental in research and statistical analysis. The term 'population' refers to the entirety of things inside the universe, whereas a 'sample' represents a smaller subset of the population that is considered to be representative of the larger population. Research is typically conducted on samples due to the inherent difficulty of studying a complete community. The purpose of drawing conclusions from samples is to make generalizations that can be applied to the population, and in some cases, to future scenarios as well. Consequently, it is imperative that the sample is representative of the entire population.

The current research project would utilize convenience sampling to choose the sample and participants. Convenience sampling is the most commonly used form of non-probability sampling, wherein the researcher selects respondents based on their accessibility and convenience.

Sample Size

The sample size refers to the total number of observations or individuals that have been included in a study or experiment. Sampling refers to the process of selecting a subset of individuals, items, or data points from a larger population in order to statistically represent it. The determination of sample size is a critical factor in research as it has a direct influence on the dependability and generalizability of the findings to the broader population. Increasing the size of the sample has the potential to improve the accuracy of estimations, resulting in a reduced margin of error. Put simply, it is highly probable that the outcomes derived from a more extensive sample will exhibit a greater proximity to the genuine parameter of the population. Increasing the sample size can also enhance the statistical power of a test. This implies that a greater sample size reduces the likelihood of encountering statistically insignificant findings. For the present research study, the sample size is 220. Typically, it is considered appropriate to have sample sizes ranging from 200 to 300 respondents (Williams

et al., 2010), as this range offers a reasonable margin of error without reaching the point of decreasing returns.

Data Source and Data Collection

The foundation of data analysis and interpretation is established by the process of data collection. The term 'data' refers to unstructured statistical information and numerical values that are gathered for specified objectives, typically for the purpose of analysis. Various sources of data can exist, encompassing both statistical and non-statistical sources.

The data source and data collection methods utilized in this study are of paramount importance in ensuring the validity and reliability of the findings. The current research study would utilize primary data obtained directly from the respondents. Primary data is regarded to be first hand as it is not available in the public domain and acquired directly from the respondents. A structured questionnaire (Appendix − I) has been devised to facilitate the gathering of data for the intended research purpose. Based on the findings of the literature research, a series of statements and questions was produced and incorporated into the questionnaire. In order to facilitate assessment, Likert five-point scales were employed to assess the perceptions of respondents towards the statements presented in the questionnaire.

Questionnaire Development

Present research study relies upon the use of structured questionnaire for the purpose of data collection. Different variables under study has been identified with the help of extant literature review of research articles related with the selected research areas. Variables were presented in the questionnaire in form of statements and respondents were asked to give their response in agreement or disagreement with the following statements by selecting any number in between 1 to 5 where 1 is 'Strongly Disagree' whereas 5 is 'Strongly Agree'. The scales used by (Hoque et al., 2016) were considered in the present research study for understanding the respondents' perspectives towards various factors influencing the adoption of home and mobile nursing care in Indian context.

Data Analysis Strategy

The current research study is characterized by its empirical nature, necessitating the use of statistical tools for data analysis. The present research study is intended to understand the influence of factors influencing the adoption of home and mobile nursing care in Indian context. In order to achieve the research objectives in an effective manner, data analysis would adopt multiple regression analysis for the purpose of data analysis (Gaurav, 2008). Multiple regression is a statistical methodology employed to examine the association between a solitary dependent variable and multiple independent variables (Uyanık & Güler, 2013). The primary aim of multiple regression analysis is to utilize the independent variables, whose values are already established, in order to forecast the value of a single dependent variable. Furthermore, the descriptive statistics has been employed to elucidate fundamental characteristics of the data under examination in the present research investigation.

DATA ANALYSIS & INTERPRETATION

The analysis of data is an essential component in all forms of research. Data analysis is the process of summarizing the data that has been collected (Islam, 2020). Data interpretation encompasses the process of analysing and making sense of collected data by employing analytical and logical reasoning techniques in order to identify patterns, correlations, or trends.

Hypotheses

The present research study is intended to understand the influence of various factors on the adoption of home and mobile nursing care in Indian context. In order to achieve the research objectives in the effective manner, in line with (Hoque et al., 2016) following research hypotheses were developed and subjected for testing;

H_{01}:   Perceived usefulness (PU) positively influences the adoption of home and mobile nursing care in Indian context.

H_{02}:   Perceived ease of use (PEU) positively influences the adoption of home and mobile nursing care in Indian context.

H_{03}:   Privacy (PRI) positively influences the adoption of home and mobile nursing care in Indian context.

H_{04}:   Trust (TRU) positively influences the adoption of home and mobile nursing care in Indian context.

The present research study relies upon multiple regression analysis (Gaurav, 2016) for the purpose of data analysis. Multiple regression is a statistical methodology employed to examine the association between a solitary dependent variable and multiple independent variables. The primary aim of multiple regression analysis is to utilize the independent variables with known values in order to forecast or estimate the value of a single dependent variable. In the predictive model, each predictor value is assigned a weight that represents its relative contribution to the overall forecast.

In the present research study, the Intention to Use (INT) has been considered as the dependent variable that is intended to elucidate the adoption of home and mobile nursing care in Indian context. At the same time, Perceived usefulness (PU), Perceived ease of use (PEU), Privacy (PRI) and Trust (TRU) have been considered as independent variables in the multiple regression analysis Table 1.

Table 1 SHOWING CONSTRUCTS OF INDEPENDENT AND DEPENDENT VARIABLES CONSIDERED IN THE STUDY	
PU	**Perceived usefulness**
PU1	Using the Home & Mobile Nursing Care services will improve my life quality.
PU2	Using the Home & Mobile Nursing Care services will make my life more convenient.
PU3	Using the Home & Mobile Nursing Care services will make me more effective in my life.
PU4	Overall, I find the Home & Mobile Nursing Care services to be useful in my life.
PEU	**Perceived ease of use**
PEU1	Learning to use the Home & Mobile Nursing Care services will be easy for me.
PEU2	I can easily become skillful at using the Home & Mobile Nursing Care services.
PEU3	I can get the Home & Mobile Nursing Care services to do what I want it to do.
PEU4	Overall, the Home & Mobile Nursing Care services are easy to use.
PRI	**Privacy**
PRI1	I believe privacy of Home & Mobile Nursing Care participants is protected.
PRI2	I believe personal information stored in Home & Mobile Nursing Care system is safe.
PRI3	I believe Home & Mobile Nursing Care systems to keep participants information secure.
TRU	**Trust**
TRU1	Based on my experience with the Home & Mobile Nursing Care in the past, I know it is trustworthy.
TRU2	Based on my experience with the Home & Mobile Nursing Care in the past, I know that it is not opportunistic.
TRU3	Based on my experience with Home & Mobile Nursing Care in the past, I know that it keeps its promises to its patient.
INT	**Intention to Use**
INT1	I have high intention to use the Home & Mobile Nursing Care service.
INT2	I intend to learn about using Home & Mobile Nursing Care services.

| INT3 | I plan to use Home & Mobile Nursing Care services to manage my health. |

Multiple Regression Analysis

Multiple regression analysis (MRA) is a statistical method employed to examine the association between a single dependent variable and one or more independent variables. This methodology proves to be quite advantageous in the process of quantifying the effects of multiple independent variables on a single dependent variable. The following multiple regression equation was developed in order to examine the influence of various factors on the adoption of home and mobile nursing care in Indian context.

$$Y = \alpha + \beta 1\ X1 + \beta 2\ X2 + \beta 3\ X3 + \beta 4\ X4 + \epsilon$$

Where,

Y represents dependent variable i.e. Intention to Use;

The α coefficient represents the intercept;

X1, X2, X3, and X4 represents independent variables viz. Perceived usefulness, Perceived ease of use, Privacy and Trust;

$\beta 1$, $\beta 2$, $\beta 3$, and $\beta 4$ denotes strength of different independent variables i.e. Perceived usefulness, Perceived ease of use, Privacy and Trust on the adoption of home and mobile nursing care in Indian context (Figure 1).
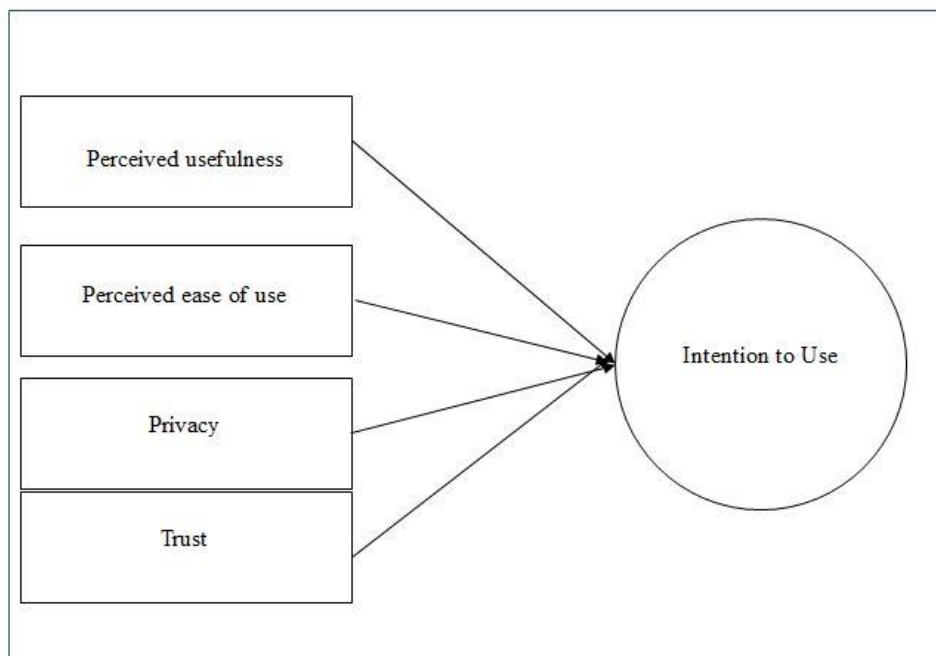
FIGURE 1
SHOWING SCHEMA OF RESEARCH ADOPTED IN THE RESEARCH STUDY

The above schema of research is based on the intended relationship between various variables considered for the present research study. This research study assumes that there would be significant influence of factors such as Perceived usefulness, Perceived ease of use,

Privacy and Trust on Intention to Use. Intention to use has been considered as the representation for the adoption of home and mobile nursing care in India.

The overall multiple regression model was found to be significant (F = 109.748, p<0.0) (Refer Table 2) at 5% level of significance. This implies that all the independent variables considered in this multiple regression model are significant in determining adoption of home and mobile nursing care in Indian context Table 2.

Table 2 ANOVA[a]						
	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	57.444	4	14.361	109.748	.000[b]
	Residual	28.134	215	.131		
	Total	85.578	219			
a. Dependent Variable: INT						
b. Predictors: (Constant), TRU, PU, PEU, PRI						

Besides the F Value, the ANOVA test provided strong support for the utilization of multiple regression analysis in order to assess the influence of selected independent variables on adoption of home and mobile nursing care in Indian context. In more concise terms, the present study utilizes multiple regression analysis to accurately assess the extent to which various factors contribute to the adoption of home and mobile nursing care in Indian context. (Table 3).

Table 3 MODEL SUMMARY[b]				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.819[a]	.671	.665	.362
a. Predictors: (Constant), TRU, PU, PEU, PRI				
b. Dependent Variable: INT				

Multiple regression analysis is a statistical technique used to examine the relationships between a dependent variable and multiple independent variables. In this study, we conducted a multiple regression analysis to explore the factors influencing 'Intention to Use' (INT) as the dependent variable. The independent variables considered in the analysis were 'Perceived Usefulness' (PU), 'Perceived Ease of Use' (PEU), 'Privacy' (PRI), and 'Trust' (TRU). The analysis yielded important insights into the extent to which these independent variables collectively explain the variation in 'Intention to Use' INT. The results indicated an R-square value of 0.671, an adjusted R-square value of 0.665,

The R-square value of 0.671 indicates that approximately 67.1% of the variance in 'Intention to Use' (INT) can be accounted for by the combination of the independent variables, namely 'Perceived Usefulness' (PU), 'Perceived Ease of Use' (PEU), 'Privacy' (PRI), and 'Trust' (TRU). This suggests that these four independent variables have a substantial impact on 'Intention to Use' (INT) i.e. adoption of home and mobile nursing care in India. However, it also implies that there may be other unaccounted factors influencing 'Intention to Use' (INT).

The adjusted R-square value of 0.665 is slightly lower than the R-square value but remains relatively high. This adjusted value takes into consideration the number of independent variables in the model. It suggests that the model is still a good fit after considering the complexity introduced by multiple predictors (Table 4).

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.113	.177		.641	.522
	PU	.301	..065	.284	4.603	.000
	PEU	.223	.065	.215	3.450	.001
	PRI	.182	.059	.193	3.091	.002
	TRU	.267	.060	.266	4.458	.000
a. Dependent Variable: INT						

Table 4
COEFFICIENTS[a]

The presented coefficients represent the results of a multiple regression analysis that aims to understand the relationship between the dependent variable 'Intention to Use' (INT), and four independent variables: 'Perceived Usefulness' (PU), 'Perceived Ease of Use' (PEU), 'Privacy' (PRI), and 'Trust' (TRU). This analysis provides valuable insights into the impact of each independent variable on INT. The positive sign of all the four estimates (beta coefficients) confirms that the greater the extent of these factors, higher the level of adoption of home and mobile nursing care in India.

On the basis of multiple regression analysis, it can be said that all the four independent variables i.e. have significant impact of the dependent 'Perceived Usefulness' (PU), 'Perceived Ease of Use' (PEU), 'Privacy' (PRI), and 'Trust' (TRU) on dependent variable i.e. 'Intention to Use' (INT).

The coefficients in this multiple regression analysis reveal that 'Perceived Usefulness' (PU), 'Perceived Ease of Use' (PEU), 'Privacy' (PRI), and 'Trust' (TRU) are all statistically significant predictors of 'Intention to Use' (INT). These findings suggest that users' perceptions of these factors positively influence their 'Intention to Use' home and mobile nursing care services. Among all the four beta coefficients, 'Perceived Usefulness' (PU) has emerged as the most powerful factor that impact 'Intention to Use' (INT) with beta coefficient value of 0.284 that is significant at 5% level of significance. At the same time, 'Privacy' (PRI) has emerged as the least powerful factor that impact 'Intention to Use' (INT) with beta coefficient value of 0.193 that is significant at 5% level of significance. Subsequently, all the hypotheses developed for the present research study are accepted.

Therefore, on the basis of the results of multiple regression analysis, it can be said that Indians are likely to adopt home and mobile nursing care if the healthcare organization elucidates its benefits, educates people about how to use it effectively, assures the privacy and stay trustworthy.

CONCLUSION

This research study aimed to unravel the critical factors influencing the adoption of home and mobile nursing care in India. The multiple regression analysis conducted to investigate the influence of key variables, namely 'Perceived Usefulness' (PU), 'Perceived Ease of Use' (PEU), 'Privacy' (PRI), and 'Trust' (TRU) on the 'Intention to Use' (INT) of these services has yielded valuable insights. The findings from the regression analysis have significant implications for the understanding of the adoption of home and mobile nursing care services in the Indian context.

Perceived Usefulness (PU)

The coefficient analysis indicated that PU has a substantial and positive influence on the intention to use these services. In other words, individuals who perceive home and mobile nursing care services as useful are more inclined to adopt them.

Perceived Ease of Use (PEU)

The results underscore the importance of PEU in shaping adoption intentions. Users who find these services easy to use are more likely to express an intention to utilize them.

Privacy (PRI)

The research demonstrates that privacy concerns are a significant factor in influencing the adoption of home and mobile nursing care. Individuals who perceive that their privacy is adequately safeguarded when using these services are more willing to consider their adoption.

Trust (TRU)

Trust plays a crucial role in driving the intention to use home and mobile nursing care services. Users who trust these services and providers are more likely to express a positive intention towards their adoption.

In nutshell, the study emphasizes the importance of addressing factors such as perceived usefulness, ease of use, privacy, and trust when promoting the adoption of home and mobile nursing care services in India. These findings provide actionable insights for healthcare providers, policymakers, and service developers to tailor their strategies and offerings to align with the preferences and concerns of potential users.

However, it's important to note that while these factors are statistically significant predictors of intention to use, the study's scope is limited to these variables. Other socio-cultural, economic, and contextual factors may also influence the adoption of such services and should be explored in future research. Overall, this research contributes to our understanding of the dynamics surrounding the adoption of home and mobile nursing care in India, paving the way for the enhancement of healthcare delivery and access in the country.

LIMITATIONS & FUTURE DIRECTIONS

The present research study successfully explored the factors influencing the adoption of home and mobile nursing care in Indian context. At the same time, the research study also appreciated the comparative importance of factors influencing the adoption of home and mobile nursing care in Indian context. The study is empirical in nature and is completely based on primary data collected directly from the respondents selected for the research study.

The research study was conducted for about five months and the respondents from two Indian states i.e. Andhra Pradesh and Telangana were considered for the purpose of data collection. Although, these two states host cosmopolitan population as people from different parts of the country stay here; the selected sample might now be the true representation of the country. The future researchers may consider data collection from all the states of India to ensure perfect representation of the country.

The research findings cannot be generalized due to the use of convenience sampling, which was employed to select respondents for the study. Convenience sampling is a non-probability sampling technique in which the selection of units for inclusion in the sample is based on convenience. The generalizability of convenience samples is uncertain, leading to potential bias in the estimates obtained from such samples. This bias arises from the fact that sample estimates may not accurately reflect the true effects within the target population, as

the sample inadequately represents the characteristics of the target population. The future researchers may consider simple random sampling or any other probability sample in order to find a sample that truly represent the population. Generalizations can be made on the basis of research study conducted on a sample that is true representation of the population.

The sample size selected for the present research study is 220 that is comparatively a smaller size in comparison with the population considered. The chances of sampling bias can't be ruled out. Sampling bias, also known as biased sampling, is a phenomenon that arises in research when individuals from the target population are chosen in an inappropriate manner, resulting in either an overrepresentation or underrepresentation of certain individuals. Future researcher can reduce the sampling bias by taking a larger sample and selecting respondents in more careful manner.

Although due care has been taken while collecting primary data directly from the respondents with the help of structured questionnaire, the presence of response bias during data collection can't be completely ruled out. Response bias encompasses various factors that may contribute to individuals providing misleading or erroneous responses to survey questions. Self-report measures, such as those administered through surveys or organized interviews, are particularly susceptible to this form of bias. Future researcher can reduce the response bias by employing various tools that help them collect more genuine and appropriate responses from the selected respondents.

As the present study is cross sectional in nature. Cross-sectional studies are a type of research design that simultaneously assesses the relationship between a cause (exposure) and an outcome (disease) at a single moment in time. In the context of cross-sectional research, variables are observed without any intentional manipulation or influence. The selected research context is likely to change over a period of time and cross-sectional study fails to accommodate those changes that occur over a period of time. Future researcher may consider longitudinal study to understand the importance of changes that may influence the factors influencing the adoption of home and mobile nursing care in India.

Future researchers can also replicate the same study in different locations and contexts apart from India. A replication study endeavours to authenticate the outcomes of a previous research endeavour. By doing a replication study, the accuracy and generalizability of the preceding research may be checked, as this type of study usually involves altering one or more variables from the original study, such as the sample population or industry sector.

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