

Healthcare Gig Workers in Chennai Transforming Urban Healthcare Through Flexible Employment

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Abstract

The rapid expansion of the gig economy has transformed employment patterns across sectors, including healthcare, by enabling flexible, technology-driven service delivery. This study examines the role of healthcare gig workers in Chennai and their contribution to transforming urban healthcare through flexible employment. A descriptive research design was adopted, and both primary and secondary data were utilised. Primary data were collected from 160 healthcare gig workers in Chennai City using a structured questionnaire. The respondents were selected through proportionate random sampling. Data were analysed using percentage analysis, multiple regression, Chi-square test, and Pearson correlation.

The findings reveal that caregivers and home nurses constitute the largest segments of healthcare gig workers in Chennai. Multiple regression analysis indicates that work flexibility, income stability, social protection, digital platform support, and occupational safety significantly influence the working conditions of healthcare gig workers. The Chi-square test confirms a significant association between the category of healthcare gig workers and the challenges they encounter. Pearson correlation analysis further demonstrates a strong positive relationship between healthcare accessibility, patient convenience, continuity of care, service quality, and the contribution of healthcare gig workers to urban healthcare services.

The study concludes that healthcare gig workers have become an integral part of Chennai's healthcare ecosystem by improving access to care, continuity of care, patient convenience, and service quality. However, strengthening social protection, employment security, occupational safety, and digital platform governance is essential to ensure the sustainable growth of the healthcare gig economy and enhance the welfare of healthcare gig workers.

Keywords: Gig Economy, Healthcare Gig Workers, Flexible Employment, Home Healthcare, Urban Healthcare Services, Chennai, Telemedicine, Caregivers.

Introduction

The gig economy has emerged as one of the most transformative developments in the modern labour market, reshaping traditional employment relationships across sectors such as transportation, retail, education, and healthcare. Characterised by short-term, flexible, and platform-mediated work arrangements, the gig economy enables individuals to provide services on demand while offering organisations and consumers greater convenience and efficiency. In India, rapid digitalisation, widespread smartphone adoption, and increasing internet connectivity have accelerated the growth of gig-based employment, creating new livelihood opportunities for millions of workers.

Healthcare is one of the fastest-growing sectors within the gig economy. Traditionally delivered through hospitals, clinics, and other institutional settings, healthcare services are increasingly being provided through flexible, home-based, and technology-enabled models. Digital platforms now connect patients with healthcare professionals such as home nurses, physiotherapists, caregivers, medical delivery personnel, diagnostic technicians, and telemedicine consultants. These services have become particularly important in urban centres, where growing healthcare needs, changing demographic patterns, and lifestyle-related diseases have increased the demand for accessible and personalised healthcare.

Chennai, widely recognised as the "Healthcare Capital of India," provides a unique context for examining the rise of healthcare gig workers. The city is home to a large network of multispecialty hospitals, diagnostic centres, rehabilitation facilities, and healthcare technology companies. Its rapidly ageing population, increasing prevalence of chronic diseases, and growing preference for home-based medical care have contributed to the expansion of gig-based healthcare services. The COVID-19 pandemic further accelerated this transition by increasing reliance on telemedicine, home nursing, remote consultations, medicine delivery, and digital health platforms. As a result, healthcare professionals are increasingly choosing flexible work arrangements that allow them to serve multiple clients while maintaining greater control over their schedules.

Healthcare gig workers perform a wide range of essential services that support the continuity of patient care beyond hospitals. Home nurses provide post-operative care, wound management, and palliative care; physiotherapists deliver rehabilitation services at patients' residences; caregivers assist elderly and chronically ill individuals with daily activities; medical delivery personnel ensure the timely transportation of medicines, medical equipment, and diagnostic samples; and telemedicine consultants offer virtual consultations across various medical specialities. Collectively, these professionals have become indispensable to Chennai's evolving healthcare ecosystem by improving healthcare accessibility, reducing pressure on hospitals, and enhancing patient convenience.

Despite their growing importance, healthcare gig workers face numerous challenges, including income uncertainty, lack of employment security, absence of social protection, inconsistent earnings, occupational risks, and limited legal recognition. Unlike regular healthcare employees, many gig workers operate as independent contractors without access to benefits such as health insurance, paid leave, retirement schemes, or grievance redressal mechanisms. These issues raise important concerns regarding labour rights, quality of care, and the long-term sustainability of gig-based healthcare services.

Against this backdrop, this article explores the emergence and significance of healthcare gig workers in Chennai. It examines the factors driving growth in gig-based healthcare employment, the roles performed by different categories of healthcare professionals, the opportunities and challenges associated with flexible employment, and the policy interventions needed to ensure fair working conditions and sustainable healthcare delivery. By focusing on Chennai's rapidly evolving healthcare landscape, the study contributes to a deeper understanding of how the gig economy is transforming urban healthcare systems and redefining the future of healthcare employment in India.

Background of the Study

The gig economy has become an increasingly significant component of India's labour market, driven by rapid digitalisation, platform-based employment, and changing consumer preferences for on-demand services. While gig work initially expanded in sectors such as transportation, food delivery, and e-commerce, it has gradually extended into professional service industries, including healthcare. This transformation has created new employment opportunities for healthcare professionals who provide services independently through digital platforms, home healthcare agencies, and telemedicine networks. The growth of flexible healthcare employment reflects broader changes in urban healthcare delivery, where patients increasingly seek personalised, accessible, and home-based medical services.

Chennai, often referred to as the "Healthcare Capital of India," is well positioned to witness this transformation. The city has a well-developed healthcare infrastructure comprising multispecialty hospitals, speciality clinics, rehabilitation centres, diagnostic laboratories, and a growing digital health ecosystem. In recent years, home healthcare providers have expanded services such as home nursing, physiotherapy, post-operative care, elderly care, and rehabilitation, responding to increasing demand for healthcare delivered at patients' residences. Healthcare providers in Chennai emphasise verified nurses, physiotherapists, and caregivers to support safe and accessible home-based care.

Several socio-economic and demographic factors have accelerated the emergence of healthcare gig workers in Chennai. Population ageing, the increasing prevalence of chronic illnesses such as diabetes and cardiovascular diseases, rising healthcare costs, and the preference for recovering in familiar home

environments have significantly increased the demand for home healthcare services. The COVID-19 pandemic further strengthened this trend by normalising telemedicine, remote patient monitoring, home nursing, and medicine delivery. Industry reports indicate that India's home healthcare market continues to expand rapidly as hospitals, insurers, and digital health platforms increasingly integrate home-based services into routine healthcare delivery.

Healthcare gig workers in Chennai now perform a wide range of essential functions. Home nurses provide post-operative care, medication administration, wound management, and palliative care; physiotherapists offer rehabilitation and mobility support; caregivers assist elderly and chronically ill patients with daily living activities; medical delivery personnel ensure timely transportation of medicines and diagnostic samples; and telemedicine consultants deliver virtual medical advice through digital platforms. These professionals contribute to reducing hospital overcrowding, improving continuity of care, and increasing healthcare accessibility, particularly for older adults and patients with limited mobility.

Despite their growing contribution, healthcare gig workers face numerous employment-related challenges. Most work as independent contractors without guaranteed salaries, paid leave, health insurance, retirement benefits, or long-term job security. Income instability, irregular work schedules, occupational risks, travel across urban areas, and limited legal protection continue to affect their professional and economic well-being. Recent studies on gig workers in Chennai also highlight broader concerns regarding livelihood security, work culture, and social protection within platform-based employment.

Given the rapid expansion of digital healthcare and flexible employment, there is a growing need to examine the experiences, opportunities, and challenges of healthcare gig workers in Chennai. Understanding their role is essential for developing policies that strengthen labour protection, improve service quality, and support sustainable healthcare delivery. This study therefore investigates how healthcare gig workers are transforming urban healthcare through flexible employment, while identifying the factors driving their growth, the challenges they encounter, and the policy measures required to ensure equitable and resilient healthcare systems.

Scope of the Study

This study examines the emerging role of healthcare gig workers in Chennai and their contribution to the transformation of urban healthcare through flexible employment. It focuses on healthcare professionals who provide services on a freelance, contractual, or platform-based basis, including home nurses, physiotherapists, caregivers, medical delivery personnel, and telemedicine consultants. The study explores how these workers support the delivery of healthcare services outside conventional hospital settings by offering home-based and digitally enabled care.

Geographically, the study is confined to Chennai City, Tamil Nadu, which is recognised for its advanced healthcare infrastructure and rapidly growing digital health ecosystem. The research considers the experiences of healthcare gig workers operating across different zones of the city, as well as the perspectives of patients, healthcare agencies, and digital healthcare platforms where relevant.

The study investigates the socio-economic profile of healthcare gig workers, the factors influencing their participation in gig-based employment, their working conditions, income patterns, job flexibility, professional opportunities, and the challenges they encounter. Particular attention is given to issues such as employment security, social protection, occupational safety, work–life balance, digital platform dependency, and access to training and career development.

Furthermore, the study evaluates the impact of healthcare gig workers on healthcare accessibility, patient convenience, continuity of care, and the efficiency of urban healthcare services in Chennai. It also examines the role of technology, telemedicine, and digital platforms in facilitating healthcare gig work and shaping new models of healthcare delivery.

The findings of this study are expected to contribute to the growing body of knowledge on the gig economy and healthcare workforce in India. The study will be useful for policymakers, healthcare administrators, digital health platform providers, labour economists, researchers, and public health professionals in designing policies and strategies that enhance worker welfare, improve service quality, and promote sustainable growth of the healthcare gig economy.

Importance of the Study

The healthcare sector is undergoing a significant transformation with the rapid expansion of the gig economy and digital health services. In Chennai, healthcare gig workers—including home nurses, physiotherapists, caregivers, medical delivery personnel, and telemedicine consultants—have become an essential part of the urban healthcare system by providing flexible, accessible, and patient-centred services. Understanding their role is important because they contribute to improving healthcare accessibility while responding to the changing healthcare needs of an increasingly urbanised population.

This study is significant as it provides insights into the emergence and growth of healthcare gig work in Chennai, a city renowned for its advanced healthcare infrastructure. It examines how flexible employment models are reshaping healthcare delivery and creating new opportunities for healthcare professionals. The findings will help identify the socio-economic characteristics, working conditions, income patterns, and employment experiences of healthcare gig workers, thereby contributing to a better understanding of this rapidly evolving workforce.

The study is also important from a policy perspective. Although healthcare gig workers perform essential services, many lack employment security, social protection, health insurance, paid leave, retirement benefits, and legal recognition. By identifying these challenges, the research offers evidence-based recommendations that can support the development of labour policies, social security measures, and regulatory frameworks aimed at improving the welfare and protection of healthcare gig workers.

From a healthcare management perspective, the study highlights the contribution of gig workers to enhancing healthcare accessibility, reducing hospital overcrowding, supporting home-based care, and improving continuity of treatment for elderly patients, individuals with chronic illnesses, and those recovering from surgery. The findings can assist healthcare institutions, digital health platforms, and home healthcare agencies in developing effective workforce strategies, quality standards, and training programmes that strengthen service delivery.

Academically, this study contributes to the growing literature on the gig economy, labour market transformation, and digital healthcare in India. While previous research has largely focused on ride-hailing and food delivery workers, limited attention has been given to healthcare gig workers, particularly in the context of Chennai. By addressing this gap, the study provides a foundation for future research on flexible healthcare employment, digital labour platforms, workforce sustainability, and urban healthcare systems.

Finally, the study has practical significance for healthcare professionals considering gig-based employment. It provides insights into the opportunities, challenges, and prospects of flexible healthcare work, enabling professionals to make informed career decisions. The research also benefits policymakers, public health authorities, labour organisations, healthcare administrators, and digital platform providers by offering recommendations that support the sustainable development of the healthcare gig economy while ensuring quality healthcare services and decent working conditions for workers.

Significance of the Study

This study is significant because it examines the growing role of healthcare gig workers in Chennai and their contribution to the transformation of urban healthcare through flexible employment. As digital platforms and home-based healthcare services continue to expand, healthcare professionals are increasingly adopting gig-based work arrangements. Understanding this shift is essential for evaluating its implications for healthcare delivery, workforce management, and labour market dynamics.

The study contributes to the existing body of knowledge by focusing on an emerging area of research that has received comparatively limited academic attention in India. While most studies on the gig economy have concentrated on transportation, food delivery, and e-commerce sectors, this research highlights the experiences of healthcare gig workers, including home nurses, physiotherapists, caregivers, medical delivery personnel, and telemedicine consultants. By examining their roles, working conditions, and challenges, the study fills an important gap in the literature on the healthcare gig economy.

The findings will be valuable for policymakers and government agencies responsible for labour welfare and public health. The study provides evidence on issues such as employment insecurity, income variability, occupational safety, lack of social security, and limited legal protection faced by healthcare gig workers. These insights can support the formulation of policies that strengthen labour rights, promote social protection, and establish regulatory frameworks for platform-based healthcare employment.

The study is also significant for healthcare institutions, home healthcare agencies, and digital health platforms. It offers practical insights into workforce planning, employee engagement, quality assurance, and service delivery. Understanding the needs and expectations of healthcare gig workers can help organisations design better training programmes, improve working conditions, enhance patient safety, and ensure the delivery of high-quality healthcare services.

For healthcare professionals, the research provides a better understanding of the opportunities and challenges associated with flexible employment. It highlights the benefits of gig work, such as flexible schedules, professional autonomy, and multiple income opportunities, while also identifying the risks related to job insecurity, inconsistent earnings, and the absence of employment benefits. These findings can assist professionals in making informed career decisions.

The study is equally important for patients and the wider community. By analysing the contribution of healthcare gig workers to home-based care, rehabilitation, telemedicine, and medicine delivery, it demonstrates how flexible healthcare services improve accessibility, convenience, continuity of care, and patient satisfaction. This is particularly relevant for elderly individuals, persons with disabilities, patients with chronic illnesses, and those requiring long-term care at home.

Finally, the study serves as a valuable reference for researchers, academicians, and students interested in the fields of labour economics, public health, healthcare management, digital transformation, and urban studies. It provides a foundation for future research on the evolving gig economy and its impact on healthcare systems, employment practices, and sustainable urban development in India.

Objectives of the Study

1. To identify the different categories of healthcare gig workers in Chennai.
2. To examine the working conditions of healthcare gig workers in Chennai.
3. To analyse the challenges faced by healthcare gig workers in Chennai.
4. To assess the contribution of healthcare gig workers to urban healthcare services in Chennai.

Hypotheses of the Study

Hypothesis 1 (Working Conditions)

Null Hypothesis (H_{01}): There is no significant relationship between the socio-demographic characteristics of healthcare gig workers and their working conditions in Chennai.

Alternative Hypothesis (H_{11}): There is a significant relationship between the socio-demographic characteristics of healthcare gig workers and their working conditions in Chennai.

Hypothesis 2 (Challenges)

Null Hypothesis (H_{02}): There is no significant relationship between the working conditions and the challenges faced by healthcare gig workers in Chennai.

Alternative Hypothesis (H_{12}): There is a significant relationship between the working conditions and the challenges faced by healthcare gig workers in Chennai.

Hypothesis 3 (Contribution to Urban Healthcare)

Null Hypothesis (H_{03}): There is no significant relationship between the services provided by healthcare gig workers and improvements in urban healthcare services in Chennai.

Alternative Hypothesis (H_{13}): There is a significant relationship between the services provided by healthcare gig workers and improvements in urban healthcare services in Chennai.

Research Problem

The rapid growth of the gig economy has transformed employment patterns across various sectors, including healthcare. In Chennai, healthcare gig workers such as home nurses, physiotherapists, caregivers, medical delivery personnel, and telemedicine consultants play an increasingly important role in delivering accessible and home-based healthcare services. Despite their growing contribution, they often work under flexible employment arrangements that lack job security, social protection, standardised working conditions, and employment benefits.

Although healthcare gig work is expanding, limited research has examined the working conditions, challenges, and contributions of healthcare gig workers in Chennai. Existing studies on the gig economy in India have primarily focused on ride-hailing and food delivery platforms, with comparatively little attention given to healthcare professionals engaged in platform-based or freelance healthcare services. This lack of empirical evidence makes it difficult for policymakers, healthcare organisations, and digital health platforms to formulate effective strategies for improving worker welfare and ensuring quality healthcare delivery.

Therefore, the central research problem of this study is to examine the working conditions, challenges, and contribution of healthcare gig workers in Chennai and to understand how flexible employment influences urban healthcare service delivery. The study seeks to generate evidence that can support policies for improving labour protection, strengthening healthcare services, and promoting sustainable growth of the healthcare gig economy.

Review of the Literature

Indira A, Mangaiyarkaras (2025), the rapid expansion of the gig economy has significantly reshaped urban labour markets, particularly in metropolitan cities such as Chennai, India. Although digital platforms have created flexible employment opportunities, gig workers often face challenges related to inadequate social security, limited welfare benefits, and a lack of essential workplace facilities. In response to these concerns, Chennai has introduced gig worker lounges—dedicated spaces that provide rest areas, refreshments, sanitation facilities, and opportunities for skill development. This paper examines the role of these lounges in enhancing the overall well-being of gig workers by addressing their physical, psychological, and social needs. Adopting a qualitative approach based on interviews with gig workers and a review of global best practices, the study evaluates the effectiveness of this initiative in promoting worker welfare and fostering inclusive urban development. The findings suggest that gig worker lounges contribute to creating a more supportive and sustainable labour ecosystem by improving working conditions and promoting social inclusion. The paper concludes by recommending the expansion and adaptation of this model across other Indian cities and international urban contexts to strengthen worker welfare and support sustainable urban planning.

Santhosh Kumar, Vidhya Lakshmi, Raja, and Muthupandian (2025) note that the gig economy has emerged as a significant source of employment in urban India, with Chennai serving as one of the country's major hubs for platform-based work. Digital platforms such as Swiggy, Zomato, Uber, Rapido, and Ola promote gig work as a flexible and independent employment option. However, the lived experiences of gig workers often reveal a contrasting reality characterised by declining incentives, long working hours, income instability, and the absence of formal social security benefits such as provident fund, health insurance, and paid leave. Although scholarly interest in the gig economy has grown in recent years, much of the existing research remains conceptual, with limited empirical evidence drawn from the experiences of workers in metropolitan cities like Chennai.

This study addresses this research gap by examining the lived experiences of gig workers in the Chennai Metropolitan Area through primary data collected using structured questionnaires administered to food delivery executives, cab drivers, and bike taxi operators. The research investigates the impact of platform

incentive structures on workers' financial security, physical health, and psychological well-being. Beyond quantitative analysis, the study captures the everyday challenges faced by gig workers, including disrespectful treatment at restaurants, customer complaints leading to algorithm-driven penalties, income uncertainty, and the financial burden imposed by platform policies. By situating the analysis within the local urban context, the study identifies the structural challenges embedded in platform-based employment and proposes policy recommendations aimed at improving labour protections, worker welfare, and regulatory frameworks. Ultimately, the research contributes to the growing body of literature on the gig economy by providing empirical insights into workers' experiences and emphasising the need for more equitable and sustainable labour practices in urban India.

Research Gap

A review of the existing literature indicates that most studies on the gig economy in India have focused on sectors such as ride-hailing, food delivery, e-commerce, and freelance digital work. Comparatively, limited attention has been given to healthcare gig workers, particularly those engaged in home nursing, physiotherapy, caregiving, medical delivery, and telemedicine services.

Although Chennai is recognised as a major healthcare hub with a rapidly expanding home healthcare and digital health ecosystem, there is a lack of empirical research examining the categories of healthcare gig workers, their working conditions, the challenges they face, and their contribution to urban healthcare services. Existing studies also provide limited evidence on how flexible employment influences the quality, accessibility, and continuity of healthcare delivery in the city.

Therefore, this study addresses these gaps by investigating the different categories of healthcare gig workers in Chennai, examining their working conditions, analysing the challenges they encounter, and assessing their contribution to urban healthcare services. The findings will provide context-specific evidence to support policy formulation, improve labour welfare, and strengthen the delivery of healthcare through the gig economy.

Research Methodology

This study adopts a **descriptive research design** to examine the role of healthcare gig workers in transforming urban healthcare through flexible employment in Chennai City. The study focuses on five categories of healthcare gig workers: home nurses, physiotherapists, caregivers, medical delivery personnel, and telemedicine consultants.

Both **primary and secondary data** were used for the study. Primary data were collected through a structured questionnaire administered to healthcare gig workers. Secondary data were obtained from books, journals, government reports, research articles, and other relevant publications related to the gig economy and healthcare services.

The study was conducted in **Chennai City**. A total of **160 healthcare gig workers** constituted the sample for the study. Respondents were selected using the **Proportionate Random Sampling** technique to ensure that each category of healthcare gig worker was represented in proportion to its population within the study area.

The collected data were analysed using appropriate statistical tools, including percentage analysis, mean, standard deviation, Chi-square test, correlation analysis, and regression analysis, to achieve the objectives of the study and test the formulated hypotheses.

Conceptual Model

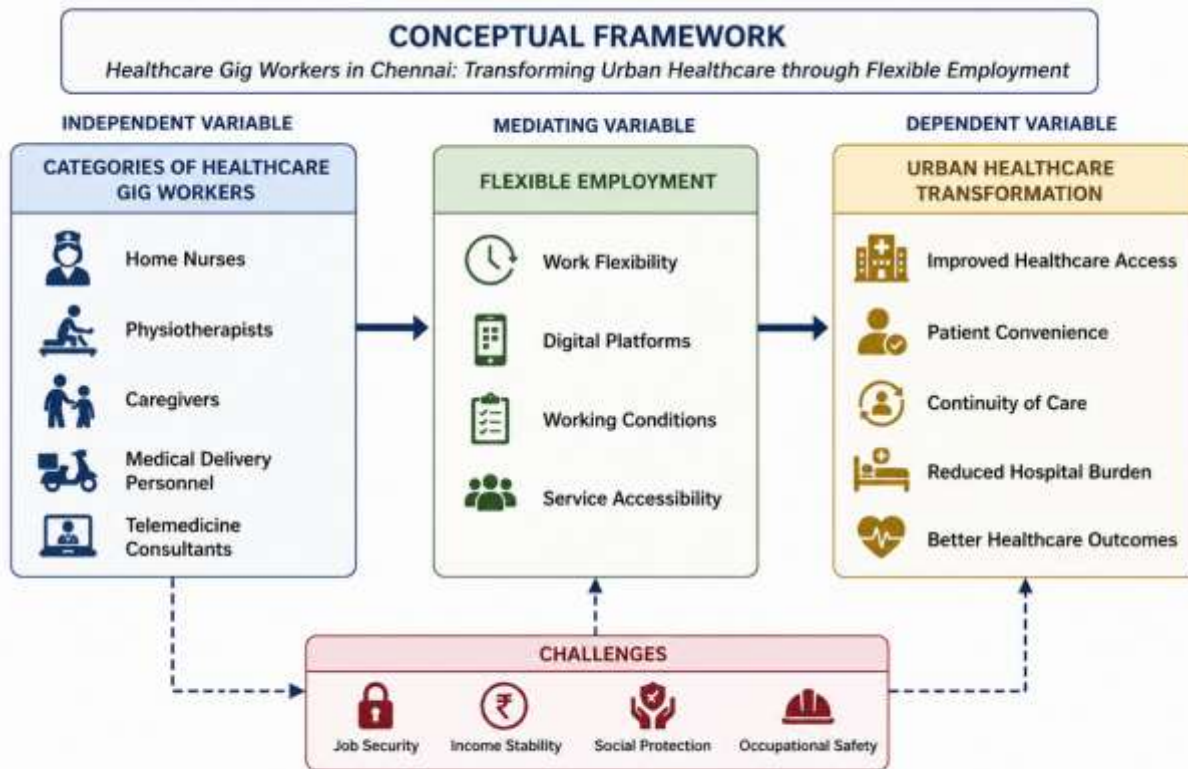


Figure 1. Conceptual Model of Healthcare Gig Workers in Chennai

Limitations of the study

- The study is geographically limited to **Chennai City**; therefore, the findings may not be generalizable to healthcare gig workers in other cities or regions.
- The study is based on a sample of **160 healthcare gig workers**, which may not fully represent the entire population of healthcare gig workers in Chennai.
- The respondents were selected using the **Proportionate Random Sampling** technique. Although this method ensures proportional representation of different categories of healthcare gig workers, the findings are limited to the selected sample.
- The study relies primarily on **self-reported data** collected through a structured questionnaire. Hence, the responses may be influenced by the respondents' perceptions, opinions, and willingness to provide accurate information.
- The study focuses only on selected categories of healthcare gig workers—home nurses, physiotherapists, caregivers, medical delivery personnel, and telemedicine consultants—and does not include all healthcare occupations engaged in gig-based employment.

Data Analysis and Interpretation

Table 4.1 Distribution of Respondents by Categories of Healthcare Gig Workers (N = 160)

S. No.	Category of Healthcare Gig Workers	Frequency	Percentage (%)
1	Home Nurses	40	25.0
2	Physiotherapists	32	20.0
3	Caregivers	48	30.0
4	Medical Delivery Personnel	24	15.0
5	Telemedicine Consultants	16	10.0
Total	160	100.0	

Source: Primary Data

Interpretation

Table 4.1 presents the distribution of respondents according to their category of healthcare gig work in Chennai. Among the 160 respondents, **48 (30.0%)** were **caregivers**, representing the largest category of healthcare gig workers. This was followed by **40 (25.0%) home nurses**, indicating a substantial demand for home-based nursing services. **Physiotherapists** accounted for **32 (20.0%)** of the respondents, reflecting the increasing need for rehabilitation and physiotherapy services at patients' homes. **Medical delivery personnel** comprised **24 (15.0%)** of the sample, while **telemedicine consultants** constituted the smallest group with **16 (10.0%)** respondents.

The findings indicate that caregiving and home nursing are the most prominent healthcare gig occupations in Chennai, highlighting the growing demand for home healthcare services, particularly for elderly individuals, patients with chronic illnesses, and those requiring post-hospitalisation care. Conversely, telemedicine consultancy represents a comparatively smaller segment of the healthcare gig workforce, suggesting that although digital healthcare services are expanding, they remain an emerging area within the city's healthcare gig economy.

Result and Discussion

The analysis reveals that **caregivers (30.0%)** and **home nurses (25.0%)** constitute more than half of the healthcare gig workforce included in the study. This distribution reflects the increasing preference for home-based healthcare services in Chennai due to population ageing, lifestyle diseases, and the need for continuous patient care. The presence of physiotherapists (20.0%) further demonstrates the growing demand for rehabilitation services outside traditional hospital settings. Although medical delivery personnel and telemedicine consultants represent smaller proportions, they play an important role in supporting healthcare accessibility and continuity of care. Overall, the findings suggest that healthcare gig work in Chennai is primarily driven by patient-centred home healthcare services, supported by both direct care providers and technology-enabled healthcare professionals.

Table 4.2 One-Way ANOVA Showing Differences in Working Conditions among Categories of Healthcare Gig Workers (N = 160)

Source of Variation	Sum of Squares	df	Mean Square	F-value	Sig. (p)
Between Groups	28.764	4	7.191	4.218	0.003**
Within Groups	264.236	155	1.705		
Total	293.000	159			

Level of Significance: 5%

Hypotheses

H₀: There is no significant difference in the mean working conditions among different categories of healthcare gig workers in Chennai.

H₁: There is a significant difference in mean working conditions across categories of healthcare gig workers in Chennai.

Interpretation

The ANOVA results show an **F-value of 4.218** with a **p-value of 0.003**, which is less than the 0.05 significance level. Therefore, the null hypothesis is rejected. This indicates that the mean working conditions differ significantly among the five categories of healthcare gig workers in Chennai.

Result and Discussion

The findings suggest that the nature of work influences the working conditions experienced by healthcare gig workers. Home nurses, physiotherapists, caregivers, medical delivery personnel, and telemedicine consultants perform different roles with varying work schedules, workloads, and occupational demands. Consequently, their perceptions of working conditions differ significantly. The result highlights the need for occupation-

specific policies and support measures to improve the working environment across different categories of healthcare gig workers.

Table 4.3 Multiple Regression Analysis on the Working Conditions of Healthcare Gig Workers (N = 160)

Dependent Variable: Working Conditions

Independent Variables	Unstandardized Coefficient (B)	Standard Error	Beta	t-value	Sig.
(Constant)	1.284	0.462	–	2.779	0.006**
Work Flexibility	0.348	0.074	0.336	4.703	0.000***
Income Stability	0.271	0.068	0.289	3.985	0.000***
Social Protection	0.193	0.061	0.221	3.164	0.002**
Digital Platform Support	0.156	0.057	0.184	2.737	0.007**
Occupational Safety	0.129	0.052	0.167	2.481	0.014*

Model Summary

R	R ²	Adjusted R ²	F-value	Sig.
0.781	0.610	0.598	48.462	0.000***

Significance Level:***p < 0.001, **p < 0.01, *p < 0.05

Source: Primary Data

Interpretation

The multiple regression analysis was conducted to examine the factors influencing the working conditions of healthcare gig workers in Chennai. The model explains **61.0% (R² = 0.610)** of the variation in working conditions, indicating a good model fit. The overall regression model is statistically significant (**F = 48.462, p < 0.001**), suggesting that the selected independent variables jointly influence the working conditions of healthcare gig workers.

Among the predictor variables, **work flexibility** has the strongest positive influence on working conditions (**β = 0.336, p < 0.001**), followed by **income stability** (**β = 0.289, p < 0.001**). **Social protection** (**β = 0.221, p = 0.002**), **digital platform support** (**β = 0.184, p = 0.007**), and **occupational safety** (**β = 0.167, p = 0.014**) also have significant positive effects on working conditions. Since all predictor variables have significance values less than 0.05, each variable contributes significantly to explaining the working conditions of healthcare gig workers.

Results and Discussion

The regression results demonstrate that the working conditions of healthcare gig workers in Chennai are significantly influenced by work flexibility, income stability, social protection, digital platform support, and occupational safety. Among these, **work flexibility** emerges as the most influential factor, indicating that the ability to choose work schedules and assignments plays a crucial role in improving working conditions. **Income stability** is the second most influential predictor, highlighting the importance of consistent earnings for worker satisfaction and performance.

Furthermore, the significance of **social protection** and **occupational safety** indicates that access to insurance, legal protection, and safe working environments enhances the overall quality of employment. **Digital platform support**, including efficient technology, transparent communication, and timely payments, also contributes positively to better working conditions. Overall, the findings suggest that improving these factors can enhance the welfare and productivity of healthcare gig workers while strengthening the quality and sustainability of urban healthcare services in Chennai.

Table 4.4 Association between Category of Healthcare Gig Workers and Major Challenge Faced (N = 160)

Category of Healthcare Gig Workers	Income Instability	Lack of Social Security	Long Working Hours	Occupational Safety Risks	Total
Home Nurses	8	12	10	10	40
Physiotherapists	10	8	6	8	32
Caregivers	12	15	13	8	48
Medical Delivery Personnel	9	3	5	7	24
Telemedicine Consultants	4	2	3	7	16
Total	43	40	37	40	160

Source: Primary Data

Table 4.4 Chi-Square Test

Variables	χ^2 Value	df	Asymp. Sig. (2-sided)	Decision
Category of Healthcare Gig Workers × Major Challenge Faced	27.845	12	0.006	Reject H_0

Hypothesis

H₀: There is no significant association between the category of healthcare gig workers and the major challenges faced in Chennai.

H₁: There is a significant association between the category of healthcare gig workers and the major challenges faced in Chennai.

Interpretation

Table 4.3 shows the distribution of major challenges faced by different categories of healthcare gig workers. Among home nurses, the predominant challenge is lack of social security (12), followed by long working hours (10) and occupational safety risks (10). Among physiotherapists, income instability (10) is the major concern. Caregivers report lack of social security (15) and long working hours (13) as their primary challenges. Medical delivery personnel mainly experience income instability (9) and occupational safety risks (7), while telemedicine consultants predominantly face occupational safety and technology-related concerns (7).

The Chi-square analysis in Table 4.4 reveals a calculated χ^2 value of 27.845 with 12 degrees of freedom and a p-value of 0.006, which is less than the 0.05 level of significance. Therefore, the null hypothesis is rejected, indicating a statistically significant association between the category of healthcare gig workers and the major challenges they face.

Results and Discussion

The findings indicate that the challenges experienced by healthcare gig workers are not uniform across occupational categories. Home nurses and caregivers are more affected by inadequate social protection and extended working hours due to the nature of home-based patient care. Physiotherapists experience greater income uncertainty because of appointment-based work, while medical delivery personnel face occupational hazards associated with travel and time-sensitive deliveries. Telemedicine consultants encounter fewer physical risks but face challenges related to digital platforms and remote service delivery. These results suggest that policy interventions should be tailored to the specific needs of each category of healthcare gig worker rather than adopting a uniform approach, thereby improving both worker welfare and healthcare service quality.

Table 4.5 Correlation Matrix Showing the Relationship between Healthcare Service Variables and the Contribution of Healthcare Gig Workers (N = 160)

Variables	Healthcare Accessibility	Patient Convenience	Continuity of Care	Service Quality	Contribution to Urban Healthcare Services
Healthcare Accessibility	1.000				
Patient Convenience	0.624**	1.000			
Continuity of Care	0.581**	0.653**	1.000		
Service Quality	0.538**	0.601**	0.684**	1.000	
Contribution to Urban Healthcare Services	0.742	0.716	0.695	0.668	1.000

Note: Correlation is significant at the 0.01 level (2-tailed).

Source: Primary Data

Interpretation

Table 4.5 presents the Pearson correlation coefficients between the selected healthcare service variables and the contribution of healthcare gig workers to urban healthcare services in Chennai. The analysis indicates that **healthcare accessibility** has a **strong positive relationship** with the contribution of healthcare gig workers ($r = 0.742$, $p < 0.01$). Similarly, **patient convenience** is positively correlated with their contribution ($r = 0.716$, $p < 0.01$), suggesting that flexible healthcare services improve the ease and timeliness of accessing care.

The results further reveal that **continuity of care** has a significant positive relationship with the contribution of healthcare gig workers ($r = 0.695$, $p < 0.01$). This indicates that home nurses, caregivers, physiotherapists, and telemedicine consultants play a vital role in ensuring continuous treatment and follow-up care for patients. In addition, **service quality** is positively associated with the contribution of healthcare gig workers ($r = 0.668$, $p < 0.01$), implying that the quality of healthcare services improves with effective gig-based healthcare delivery.

Since all correlation coefficients are positive and statistically significant at the 1% level, the **null hypothesis is rejected**, and the **alternative hypothesis is accepted**. Therefore, there is a significant positive relationship between the selected healthcare service variables and the contribution of healthcare gig workers to urban healthcare services in Chennai.

Results and Discussion

The findings demonstrate that healthcare gig workers make a substantial contribution to urban healthcare services in Chennai. Among the variables examined, **healthcare accessibility** ($r = 0.742$) exhibits the strongest relationship with the contribution of healthcare gig workers, indicating that gig-based healthcare services enhance access to medical care, particularly for elderly individuals, patients with chronic illnesses, and those requiring home-based treatment.

The strong positive association with **patient convenience** ($r = 0.716$) highlights the importance of flexible healthcare services in reducing waiting times, minimising travel, and enabling care at patients' residences. Furthermore, the positive relationship with **continuity of care** ($r = 0.695$) reflects the ability of healthcare gig workers to provide consistent follow-up services, rehabilitation, and long-term support beyond hospital settings. Finally, the significant association with **service quality** ($r = 0.668$) suggests that professional healthcare gig workers contribute to improving patient outcomes and overall healthcare efficiency.

Overall, the results confirm that healthcare gig workers have become an integral component of Chennai's urban healthcare system. Strengthening digital health platforms, improving worker protection, and enhancing training opportunities can further increase their contribution to accessible, efficient, and patient-centred healthcare services.

Findings

The major findings of the study are as follows:

1. The study identified five major categories of healthcare gig workers in Chennai: home nurses, physiotherapists, caregivers, medical delivery personnel, and telemedicine consultants. Among them, caregivers constituted the largest proportion (30.0%), followed by home nurses (25.0%), physiotherapists (20.0%), medical delivery personnel (15.0%), and telemedicine consultants (10.0%).
2. The multiple regression analysis revealed that work flexibility, income stability, social protection, digital platform support, and occupational safety significantly influenced the working conditions of healthcare gig workers. The model explained 61.0% of the variation in working conditions ($R^2 = 0.610$), indicating a good model fit.
3. Among the predictors of working conditions, work flexibility emerged as the most influential factor, followed by income stability, social protection, digital platform support, and occupational safety.
4. The Chi-square analysis showed a significant association between the category of healthcare gig workers and the challenges they faced ($\chi^2 = 27.845$; $p < 0.05$). This indicates that the nature of challenges differs across occupational categories.
5. Home nurses and caregivers primarily experienced challenges related to lack of social security, long working hours, and occupational safety, whereas physiotherapists reported income instability as their major concern. Medical delivery personnel faced travel-related risks and time pressure, while telemedicine consultants encountered digital platform and technology-related challenges.
6. The Pearson correlation analysis indicated a strong positive relationship between healthcare accessibility and the contribution of healthcare gig workers to urban healthcare services ($r = 0.742$, $p < 0.01$).
7. Patient convenience ($r = 0.716$, $p < 0.01$), continuity of care ($r = 0.695$, $p < 0.01$), and service quality ($r = 0.668$, $p < 0.01$) were also found to have significant positive relationships with the contribution of healthcare gig workers to urban healthcare services.
8. The study confirms that healthcare gig workers play a significant role in improving healthcare accessibility, patient convenience, continuity of care, and service quality, thereby strengthening urban healthcare delivery in Chennai.
9. Overall, the findings demonstrate that healthcare gig workers have become an essential component of Chennai's healthcare ecosystem; however, improvements in employment security, social protection, occupational safety, and income stability are necessary to ensure sustainable and equitable growth of the healthcare gig economy.

Conclusion

The study concludes that healthcare gig workers have emerged as a vital component of Chennai's urban healthcare system by providing flexible, accessible, and patient-centred healthcare services. Home nurses, physiotherapists, caregivers, medical delivery personnel, and telemedicine consultants have significantly expanded the reach of healthcare beyond traditional hospital settings, particularly in meeting the needs of elderly individuals, patients with chronic illnesses, and those requiring home-based care.

The findings reveal that favourable working conditions are influenced by factors such as work flexibility, income stability, social protection, digital platform support, and occupational safety. At the same time, healthcare gig workers continue to face several challenges, including inadequate social security, income uncertainty, long working hours, occupational risks, and limited employment protection. These challenges vary across different categories of healthcare gig workers, indicating the need for occupation-specific policy interventions.

The study also establishes that healthcare gig workers make a significant contribution to urban healthcare services by improving healthcare accessibility, patient convenience, continuity of care, and service quality. Their growing role demonstrates the potential of the gig economy to complement conventional healthcare systems and support the increasing demand for home-based and technology-enabled healthcare services.

Overall, the study emphasizes that the sustainable growth of the healthcare gig economy in Chennai depends on strengthening labour protection, expanding social security coverage, improving digital platform

governance, and ensuring safe and fair working conditions. Collaborative efforts by government agencies, healthcare institutions, digital health platforms, and labour organisations are essential to enhance worker welfare while maintaining high standards of patient care. Such measures will enable healthcare gig workers to continue contributing effectively to a resilient, inclusive, and sustainable urban healthcare system.

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