Int. j. adv. multidisc. res. stud. 2026; 6(2):1893-1899

Received: 09-03-2026
Accepted: 19-04-2026

International Journal of Advanced Multidisciplinary Research and Studies

ISSN: 2583-049X

Household Food Insecurity and Health of Gig Economy Workers in Chennai and Trichy

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DOI: https://doi.org/10.62225/2583049X.2026.6.2.6188
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Abstract
This study examines the extent of household food insecurity and health-related quality of life (HRQL) among gig economy workers in Chennai and Tiruchirappalli. With the rapid expansion of platform-based employment in India, gig workers face income instability and limited access to social protection, raising concerns about their nutritional and health outcomes. Using a cross-sectional design, primary data were collected from 69 gig workers through a structured questionnaire. Food insecurity was measured using the Household Food Insecurity Access Scale (HFIAS), while HRQL was assessed through the EQ-5D-5L instrument.

The findings reveal severe levels of food insecurity, with 68.12% of respondents classified as severely food insecure and only 5.80% as food secure. A large proportion reported anxiety regarding food availability (73.91%), compromised dietary quality (89.85%), and reduced food intake (84.05%). Despite relatively stable physical functioning, significant health concerns emerge in terms of pain and mental well-being. Around 42.03% of respondents experienced moderate pain, while 68.12% reported moderate anxiety or depression. The average health utility score (0.85) and VAS score (80.07) suggest a divergence between perceived and actual health status.

Further analysis indicates that improved health outcomes and insurance coverage reduce the likelihood of food insecurity, highlighting the role of institutional support. The study underscores the multidimensional vulnerability of gig workers and calls for targeted policy interventions focusing on food access, health insurance, and mental health support. Strengthening social protection mechanisms is essential to ensure sustainable livelihoods in the evolving gig economy.

Keywords: Food Insecurity, Gig Economy, Health-Related Quality of Life (HRQL), HFIAS, EQ-5D-5L, Informal Employment, India, Social Protection, Urban Labour, Health Inequality

Introduction

Food security and health are intricately connected by making it impossible to achieve one without addressing the other. Food security is defined as physical and economic access to all people at all times to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life [1]. According to the Food and Agriculture Organization (FAO), food security comprises three essential elements: availability, access, and absorption (nutrition). These elements are interconnected, and ensuring food security is crucial for India, where a significant portion of the population suffers from malnutrition and poverty. In 2024, the United Nations' report on the State of Food Security and Nutrition highlights that over half of India's population (55.6%) cannot afford a healthy meal [i]. Given this interdependence, understanding both food security and health as complementary dimensions of well-being is essential, particularly for vulnerable populations.

The World Health Organization (WHO) defines health as" *a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.*" [2] Health-related quality of life (HRQL) is an important measure that evaluates how health affects a person's overall ability to live a fulfilling life. It incorporates physical, psychological, and social dimensions of well-being and has become a vital tool for assessing the effectiveness of health interventions and programs.

[1] https://www.fao.org/fileadmin/templates/faoitaly/documents/pdf/pdf_Food_Security_Cocept_Note.pdf
[2] https://www.hopkinsarthritis.org/arthritis-research/patient-centered-outcomes-research/what-is-health- related-quality-of-life/

Amid these pressing concerns, the growth of India's gig economy [3] has brought new challenges, with the precarious conditions of gig workers intensifying the risks to food security and health. The rapid expansion of India's gig economy, powered by platforms like Swiggy, Zomato, and Uber, has generated new employment opportunities, yet has also exposed workers to economic instability and precarious working conditions. Studies on urban food insecurity in cities like Delhi and Chennai reveal that socio-economic vulnerability and reliance on low-wage, informal employment exacerbate the risk of food insecurity among low-income households (Rautela G, 2020). A report by NITI Aayog estimates that India's gig workforce will grow to 23.5 million by 2029-30, tripling from an estimated 7.7 million in 2020-21[ii]. Despite gig workers' critical role in facilitating urban services, many lack access to adequate nutrition and healthcare, raising significant concerns about their health-related quality of life (HRQL) and overall well-being (Chinnakali, 2014).

These intersecting issues highlights the need for focused research on gig workers, a group whose vulnerability to both food insecurity and compromised HRQL has critical implications for public health. Examining gig workers' health and food security through established tools like EQ-5D-5L and HFIAS provides insight into their specific challenges and underscores the urgent need for policies that mitigate the risks posed by precarious employment.

Health-Related Quality of Life (HRQL) has gained attention in public health studies across diverse populations, including individuals with chronic illnesses and those in vulnerable urban environments (Parik, 2019). Instruments like the EQ-5D-5L, as employed in studies of diabetic and COVID-19 patients in Tamil Nadu, provide valuable metrics for assessing well-being across multiple dimensions, including physical mobility, self-care, pain, anxiety, and overall life satisfaction (Barani, 2022).

Food insecurity is also a persistent issue in India which has been widely documented in research as a challenge that extends beyond rural areas (Nidhi Joshi, 2020). Studies in urban North India and rural Tamil Nadu have used the Household Food Insecurity Access Scale (HFIAS) to assess food insecurity in capturing key dimensions such as anxiety over food availability and the quality and quantity of food accessible to households (Abirami Kailasam, 2019). These studies underscore that economic instability particularly within informal sectors which poses a direct risk to food security and nutritional health.

This study aims to measure the food insecurity and health-related quality of life (HRQL) of the gig economy workers who works in Swiggy, Zomato, Uber, etc in Chennai and Trichy. This study will collect primary data from gig economy workers to assess their food insecurity and health outcomes through the Household Food Insecurity Access Scale (HFIAS) 9-item questionnaire and the EuroQol EQ-5D-5L instrument. The convenience sampling method will be used to gather survey responses from the gig economy workers.

[3] The "gig economy involves the exchange of labour for money between individuals or companies via digital plaGorms that actively facilitate matching between providers and customers, on a short-term and payment-by-task basis".

The objective of this research is to measure levels of food insecurity using HFIAS, to assess health-related quality of life through the EQ-5D-5L tool and to explore workers' awareness, access, and utilization of health insurance. By shedding light on these issues, this research aims to contribute to policy discussions on improving support for vulnerable urban workers, enhancing food security, and advancing public health interventions within India's rapidly growing gig economy.

Methodology

Study Design

This study utilizes a cross-sectional design to examine the levels of food insecurity and health- related quality of life (HRQL) among gig economy workers in the cities of Chennai and Trichy, Tamil Nadu.

Study Setting

Data were collected in Chennai (Metro city) and Trichy (Second-Tier city), where gig economy platforms like Swiggy, Zomato, and Uber is active. These urban settings provide insight into the socio-economic and health challenges faced by workers in informal task-based employment.

Ethical Considerations

All participants were informed of the study's aims, their voluntary participation, and confidentiality measures.

Study Period, Sample Size and Sampling Method

Data collection took place in October 2024 in both Chennai and Trichy. A total of 69 participants were surveyed, with 39 from Chennai and 30 from Trichy. Using a **convenience sampling method**, the workers were selected from common gig work locations within these cities.

Data Collection Tools

An interviewer-administered questionnaire was used, composed of two main sections:

1. **Socio-Economic and Demographic Information**: Data on participants' age, gender, education level, monthly income, household composition, and work history were collected to provide context for analysing food security and HRQL.
2. **Food Insecurity and Health Assessment**:
   - **Household Food Insecurity Access Scale (HFIAS) [4]:** This tool assesses food security over a four-week recall period, capturing issues such as anxiety over food availability, limited food quality, and reduced meal frequency. Responses were categorized to reflect levels of food security, including high, marginal, low, and very low food security.
   - **EuroQol EQ-5D-5L Instrument [5]:** The EQ-5D-5L tool measures HRQL across five domains—mobility, self-care, usual activities,

[4] The Household Food Insecurity Access Scale (HFIAS) questionnaire is publicly available and widely used for research on household food security.

[5] The EuroQol EQ-5D-5L instrument requires permission for use. I personally registered by completing the EQ-5D registration form on the EuroQol website. Upon registration, the EuroQol Office will provide information on terms, conditions, and any licensing fees (if applicable).

pain/discomfort, and anxiety/depression. Additionally, a Visual Analog Scale (VAS) was used to capture participants' self-rated health on a scale from 0 (worst imaginable health) to 100 (best imaginable health).

- **Insurance Awareness:** This section included questions designed to gauge participants' awareness, access, and utilization of health insurance.

Results

Table 1: Key sociodemographic profile of the study respondents (N=69) [6]

Variables		Count	Frequency (%)
Gender	Male	64	92.75
	Female	5	7.25
Educational status	Illiterate	0	0.00
	Primary	7	10.14
	Middle	20	28.99
	Matric	9	13.04
	Senior secondary	18	26.09
	Graduate and above	15	21.74
Marital status	Married	44	63.77
	Never Married	25	36.23
Religion	Hindu	38	55.07
	Muslim	19	27.54
	Christian	12	17.39
Family	Joint-Family	39	56.52
	Nuclear	30	43.48
Age group (in years)	17-19	0	0.00
	20-29	15	21.74
	30-39	14	20.29
	40-49	20	28.99
	50-59	15	21.74
	60-69	5	7.25
	70+	0	0.00
Classification of Income Groups [7]	≥9131	3*	4.35
	9130-4566	66**	95.65
	4565-2739	0	0.00
	2738-1370	0	0.00
	<1370	0	0.00
House ownership	Rent	39	56.52
	Own	30	43.48

The Table 1 displays the sociodemographic profile of the study respondents (N=69) shows a diverse background. **Gender-wise**, the majority are male (92.75%), with only 7.25% female respondents. In terms of **education**, most respondents have completed middle school (28.99%) or senior secondary education (26.09%), while a smaller group has achieved graduate-level education or higher (21.74%). **Marital status** reveals that a majority are married (63.77%). **Religion** distribution shows Hindu respondents as the largest group (55.07%), followed by Muslims (27.54%) and Christians (17.39%). In terms of **family structure**, 56.52% belong to joint families, while 43.48% live in nuclear families. The **age distribution** is predominantly between 20 and 59 years, with the highest concentration in the 40-49 age group (28.99%).

Income classification indicates that nearly all respondents fall into the income group of ₹4566 to ₹9130 (95.65%), with a small fraction (4.35%) earning above ₹9131. Regarding **house ownership**, a slight majority rent their homes (56.52%), while the remaining 43.48% own their homes.

Table 2: Household Food Insecurity Access-related Conditions

S. No	Households experiencing condition at any time during the recall period *	Percentage (Yes)
1	Percent of households that worried their household would not have enough food:	73.91
2	Percent of households that were unable to eat preferred foods because of a lack of resources:	81.16
3	Percent of households that had to eat a limited variety of foods due to a lack of resources:	63.77
4	Percent of households that had to eat foods they did not want because of a lack of resources:	69.57
5	Percent of households that ate a smaller meal than they felt they needed because of a lack of food:	63.77
6	Percent of households that had to eat fewer meals in a day because of a lack of food:	57.97
7	Percent of households that ran out of food due to lack of resources:	49.28
8	Percent of households that went to sleep at night hungry because of a lack of food:	53.62
9	Percent of households that went a whole day and night without eating because of a lack of food:	50.72

This table shows the percentage of households that responded "yes" to each food insecurity condition.

Household Food Insecurity Access-related Conditions [8]

The Table 2 shows that **73.91% of households worried about food availability**, reflecting widespread anxiety regarding food security. Around **81.16% were unable to eat preferred foods**, and **63.77% had to consume a limited variety due to resource constraints**, indicating substantial issues with food quality. A significant **50.72% of households went a full day without eating**.

The Table 3 displays the frequency data which indicates that **33.33% of households often worried about food supply**, and **27.54% often couldn't eat preferred foods**. High percentages reported regular hunger, with **44.93% reducing meal frequency rarely due to scarcity**, showing that food insufficiency is a persistent issue.

Household Food Insecurity Access-related Domains

1	Anxiety and Uncertainty (Domain 1)	73.91
2	Insufficient Quality (Domain 2)	89.85
3	Insufficient Food Intake and Its Physical Consequences (Domain 3)	84.05

Anxiety and Uncertainty (Domain 1) in which **73.91%** of households experienced concern about food supply. **Insufficient Quality (Domain 2)** in which **89.85%** faced restricted access to quality food, suggesting compromised dietary quality. **Insufficient Food Intake and Physical Consequences (Domain 3)** in which **84.05%** has reported

[6] The key sociodemographic profile of the study respondents for Chennai and Trichy is been included in the appendix.

[7] Classification of Income Groups follows the Modified Kuppuswamy socio-economic status scale (K J, 2024): *I-upper class; **II-upper class.

[8] Note: This interpretation is based on the total sample. Differences between Trichy and Chennai will be discussed in a separate paragraph, and similar tables for Trichy and Chennai are included in the appendix.

for reduced meals or skipped meals due to scarcity, indicating severe impact on physical well-being.

Indicator	Score
Average HFIAS Score	13.63768116

Table 3: Households experiencing condition at a given frequency

S. No	Households experiencing condition at a given frequency*	Rarely (%)	Sometimes (%)	Often (%)
1	Percent of households that often worried their household would not have enough food (more than ten times in the past four weeks):	26.09	37.68	33.33
2	Percent of households that often could not eat preferred foods because of a lack of resources (more than ten times in the past four weeks):	36.23	33.33	27.54
3	Percent of households that often had to eat a limited variety of foods due to a lack of resources (more than ten times in the past four weeks):	27.54	39.13	18.84
4	Percent of households that often ate foods they did not want because of a lack of resources (more than ten times in the past four weeks):	34.78	34.78	14.49
5	Percent of households that often ate a smaller meal than they needed because of a lack of food (more than ten times in the past four weeks):	36.23	37.68	11.59
6	Percent of households that often ate fewer meals in a day because of a lack of food (more than ten times in the past four weeks):	44.93	18.84	17.39
7	Percent of households that often ran out of food due to a lack of resources (more than ten times in the past four weeks):	27.54	27.54	17.39
8	Percent of households that often went to sleep at night hungry because of a lack of food (more than ten times in the past four weeks):	33.33	21.74	17.39
9	Percent of households that often went a whole day and night without eating because of a lack of food (more than ten times in the past four weeks):	31.88	23.19	14.49

This table breaks down the frequency of each condition, showing the percentage of households that experienced each condition rarely, sometimes, or often.

Average HFIAS Score

Table 4: Household Food Insecurity Access Prevalence (HFIAP) Status

HFIAP Status	Percentage of Households (%)
Severely Food Insecure	68.11594203
Moderately Food Insecure	15.94202899
Mildly Food Insecure	10.14492754
Food Secure	5.797101449

The HFIAP breakdown shows **68.12% of households are severely food insecure**, highlighting serious access issues. Only **5.80% of households are food secure**, while **15.94% are moderately** and **10.14% mildly food insecure**. The high prevalence of severe food insecurity indicates an urgent need for measures to improve food access and quality.

Trichy has a wider spread of food insecurity, with more households worrying about food and eating less. In Chennai, although fewer households face food insecurity overall, those affected experience more severe issues, like going longer without food. Trichy might need general support to improve food access, while Chennai may benefit from focused help for the most impacted households. Overall, Trichy faces broader food insecurity, while Chennai's problems are deeper for those affected.

Table 5: EQ-5D-5L frequencies reported by dimension and level [9]

	Mobility	Self-Care	Usual Activities	Pain / Discomfort	Anxiety / Depression
Level 1 (No problems)	94.20	100.00	88.41	2.90	0.00
Level 2 (Slight problems)	4.35	0.00	11.59	55.07	21.74
Level 3 (Moderate problems)	1.45	0.00	0.00	42.03	68.12
Level 4 (Severe problems)	0.00	0.00	0.00	0.00	10.14
Level 5 (Extreme problems/ unable to do)	0.00	0.00	0.00	0.00	0.00

Average Scores: The average utility score is approximately **0.85**, while the average VAS score (self-reported health) is around **80.07**. **Correlation**: There is a modest positive correlation (**0.33**) between the VAS score and utility score, indicating that while they are somewhat related, they capture different aspects of health status. **Most Common Health States**: The most frequent health state code is **11123** (33.33% of respondents), followed by **11133** (20.29%) and **11122** (13.04%).

The EQ-5D-5L data shows that most people in the sample face no issues with **mobility** (94.20%), **self-care** (100%), and **usual activities** (88.41%). However, there are significant concerns in **pain/discomfort** and **anxiety/depression**. About **55.07% of respondents have slight pain**, and **42.03% have moderate pain**. In terms of anxiety and depression, **68.12% report moderate problems**, and **10.14% face severe issues**. No one reported extreme difficulties or being completely unable to perform any activities. This suggests that while people generally manage well in terms of physical movement and daily tasks, but the mental health and pain are major areas where they struggle. Addressing anxiety, depression, and physical discomfort could be important for improving overall well-being in this group.

In both Trichy and Chennai, most people report no issues with **mobility, self-care, and usual activities**. Chennai has a slightly higher percentage of people with no mobility problems (97.44%) than Trichy (90%). When it comes to **pain and anxiety**, both cities show similar patterns. In Trichy, more people experience slight pain (63.33%) compared to Chennai (48.72%), while moderate pain levels are close in both cities. For **anxiety**, most people in both

[9] Note: This interpretation is based on the total sample. Differences between Trichy and Chennai will be discussed in a separate paragraph, and similar tables for Trichy and Chennai are included in the appendix.

cities report moderate problems (69.23% in Chennai, 66.67% in Trichy). Severe anxiety is a bit higher in Chennai (12.82%) than in Trichy (6.67%).

Table 6: Knowledge and possession of various insurance

Question	Response	Counts	Frequency (%)
Do they own an insurance	Yes	**39**	**56.52**
	No	30	43.48
Are they paying TAX	No	69	100.00
Holding PAN Card	Yes	**69**	**100.00**
Have ever heard of insurance? Yes/No	Yes	**50**	**72.46**
	No	19	27.54
Possession of various forms of health insurance – Yes (GOVT, PRIVATE) / No	Yes	**36**	**52.17**
	No	32	46.38
Heard that hospitalization costs will be given to the insured Yes/No	Yes	**52**	**75.36**
	No	17	24.64
Do you think insurance is something similar to monthly saving? Yes/No	Yes	**41**	**59.42**
	No	28	40.58
Do you think that insurance is an amount you pay to get some compensation if something bad happens? Yes/No	Yes	**48**	**69.57**
	No	21	30.43
Do you think insurance is an amount you pay to get some compensation, but do Not get anything if Nothing happens? Yes/No	Yes	**44**	**63.77**
	No	25	36.23
Seen some body asking to take insurance Yes/No	**Yes**	**49**	**71.01**
	No	20	28.99
Knew someone who bought some form of insurance Yes/No	**Yes**	**55**	**79.71**
	No	14	20.29

The data on knowledge and possession of insurance reveals that **56.52%** of respondents own insurance, while **43.48%** do not. Interestingly, none of the respondents pay taxes, but all possess a PAN card, indicating formal identification without tax contributions. About **72.46%** have heard of insurance, and **52.17%** possess some form of health insurance, either government or private. When it comes to understanding insurance, **75.36%** know that it can cover hospitalization costs. However, views on insurance as a financial concept vary: **59.42%** see it as similar to monthly savings, while **69.57%** think of it as a way to get compensation if something bad happens. Additionally, **63.77%** understand that insurance does not provide returns if no claims are made. Social awareness about insurance is high, with **71.01%** having seen someone promote insurance and **79.71%** knowing someone who has bought it.

The below Table 7 provides descriptive statistics for key variables used in logit model. *Food_insecure* has a mean of 0.81, indicating 81% of the sample is food insecure. *UtitliyScore_scaled*, reflecting health quality on a 0–100 scale, averages 75.32 with moderate variability. Insured shows a mean of 0.34, meaning 34% of respondents have health insurance coverage.

Table 7

Variable	Observations	Mean	Standard Deviation	Minimum	Maximum
food_insecure	69	0.81	0.39	0	1
UtitliyScore_scaled	69	75.32	8.45	58.2	100
insured	69	0.34	0.48	0	1

In below Table 8 displays that the logit model results show ***UtitliyScore_scaled*** has a negative coefficient (-0.1138, p = 0.073), indicating that higher health quality slightly reduces the likelihood of food insecurity. The ***insured*** variable has a strong negative coefficient (-2.7743, p = 0.012), suggesting that having insurance significantly lowers the probability of being food insecure.

The marginal effects reveal that a 1-point increase in health score reduces food insecurity by 1.4%, while being insured reduces it by 34.4%.

Table 8

Variable	Coefficient	P value	Odds Ratio	Marginal Effect
UtiliyScore_scaled	-0.1138	0.073	0.89	-0.0141
insured	-2.7743	0.012	0.06	-0.3442
Constant	13.2896	0.02	N/A	N/A

Table 9: The Table 9 displays that the model performs well overall, with a goodness-of-fit p-value of 0.6787, indicating a good fit to the data. It correctly classifies 79.71% of cases, showing decent accuracy. The sensitivity is high at 94.64%, meaning the model effectively identifies food-insecure individuals. However, the specificity is lower at 15.38%, so the model is less accurate in predicting food-secure cases, tending to classify individuals as food insecure more often [10].

Table 9

Measure	Value
Goodness-of-fit	0.6787
Overall classification	79.71%
Sensitivity	94.64%
Specificity	15.38%

Discussion

The results from the Household Food Insecurity Access Scale (HFIAS) reveal critical insights into food insecurity in the surveyed regions. This analysis highlights significant levels of anxiety, insufficient food quality, and limited food intake, underscoring the severity of food insecurity in these areas. The findings align with other studies that emphasize the utility of HFIAS in capturing food insecurity across different cultural and socio-economic contexts (Desiere *et al*., 2015; Knueppel *et al*., 2009) [3, 12]. For instance, in Burundi, Desiere *et al*. (2015) [3] found that HFIAS was effective in identifying households with insufficient food availability and quality. This is similar to our observations in Chennai and Trichy, where households frequently reported limiting meals and expressing concerns about food access.

Our study indicates that anxiety over food access is prevalent, with 73.91% of households expressing concerns about food sufficiency. This anxiety reflects the psychological strain associated with food insecurity, as highlighted by Naja *et al*. (2014) [15] in rural Lebanon, where food insecurity was linked to socio-economic challenges and limited food diversity. The high levels of insufficient food quality and restricted variety reported in both Chennai and Trichy further emphasize the lack of food diversity and

[10] OLS Model is also performed; the results are included in appendix.

access to preferred foods, a recurring theme in food-insecure regions (Kabalo *et al*., 2019) [10].

In terms of the HFIAS score, the average score of 13.64 in our study indicates moderate to high levels of food insecurity. Similar scoring patterns have been observed in studies from rural and urban settings in countries like Ethiopia and Iran, where high HFIAS scores were associated with limited food access and financial constraints (Gebreyesus *et al*., 2015; Mohammadi *et al*., 2011) [5, 14]. These results suggest that households in Chennai and Trichy face comparable challenges, particularly in terms of food affordability and availability, potentially influenced by seasonal and economic factors. The high prevalence of severe food insecurity (68.12%) in our sample underscores the extent of food access issues, aligning with findings from rural Tanzania where food insecurity was similarly severe due to economic barriers and agricultural limitations (Knueppel *et al*., 2009) [12]. Our study also reveals disparities between the two cities; Trichy experiences a broader spread of food insecurity, while Chennai exhibits deeper issues among affected households. This trend is consistent with findings in other culturally diverse settings, where the impacts of food insecurity vary significantly based on local economic and social dynamics (Kabalo *et al*., 2019) [10].

The results from the EQ-5D-5L assessment highlight some key health concerns in Chennai and Trichy. Most people reported no issues with mobility, self-care, or usual activities, but significant challenges were seen in pain/discomfort and anxiety/depression. These findings align with similar studies, which also found that pain and mental health issues are major factors affecting quality of life. For example, (Feng *et al*, 2021) [4] noted that pain and anxiety greatly influence well-being across different populations and should be a priority in health interventions.

In our study, **55.07%** of respondents reported slight pain, and **42.03%** had moderate pain. This pattern is similar to findings by (Jyani *et al*, 2020) [8], who observed that pain is a common issue in India, often due to limited healthcare access and socio-economic challenges. Improving pain management could significantly enhance quality of life in both Chennai and Trichy. Mental health is also a significant concern. Our data shows that **68.12%** of respondents experience moderate anxiety, while **10.14%** face severe anxiety. This reflects similar patterns in (Herdman *et al*, 2011) [6] study, which highlighted the strong impact of anxiety and depression on health perceptions. This finding suggests a need for mental health programs in these regions, as mental health issues are often under-addressed in public health policies.

The average VAS score of **80.07** in our sample, along with a moderate correlation (0.33) between VAS and utility scores, shows that people generally perceive their physical health positively. The lower utility scores highlight gaps in mental health and pain management. This correlation aligns with (Mannava *et al*, 2024) [13], who found that VAS scores and utility scores often reflect different aspects of health, combining both subjective feelings and measurable health factors.

When comparing Trichy and Chennai, there are some interesting differences. Trichy has a wider spread of slight to moderate pain, while Chennai has more cases of severe anxiety. These variations may be due to differences in healthcare access or socio-economic conditions, as noted by (Barani *et al*, 2020) [1], who observed that regional factors can significantly impact health outcomes within India. Addressing these differences with targeted interventions like pain management in Trichy and mental health support in Chennai which could improve overall well- being in these cities.

Conclusion

This study highlights the significant struggles faced by gig economy workers in Chennai and Trichy, particularly in terms of food security and health. The results show that food insecurity is widespread, with 68.12% of respondents classified as severely food insecure. Many of these workers are unable to access enough or the right kinds of food, often going entire days without meals due to limited resources. This reflects the unstable nature of gig work, where irregular income and lack of benefits make it challenging to meet basic needs. Health challenges are evident particularly in terms of mental health and pain. While most respondents report no issues with mobility or self-care, over half experience regular pain, and nearly 70% report moderate anxiety, with some even facing severe anxiety. These findings reflect the pressures of gig work, which is often unpredictable and lacks job security, contributing to high levels of stress.

These findings suggest an urgent need for support programs to improve both food access and health resources for gig workers. Food assistance programs could help reduce high levels of food insecurity, while access to mental health and pain management resources would address key health issues faced by these workers. Improving these areas would not only enhance their well-being but also create a more sustainable and supportive environment for those working in the gig economy, which is becoming a major part of Indian labor markets.

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