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A Study on the Socio-Economic Conditions and Quality of Life of Independent Auto-Rickshaw Owner-Drivers in Selected Areas of Chennai City

R. Baghya[1*] & G. Brindha[2]

[1,2]Department of Management, Dr. M.G.R. Educational and Research Institute University,

Chennai, Tamilnadu, India.

ABSTRACT

The auto-rickshaw sector plays a vital role in urban transportation and provides livelihood opportunities for independent owner-drivers. However, these drivers may face socio-economic challenges such as irregular income, rising operational costs, financial insecurity, long working hours, and limited social security. The present study aims to examine the socio-economic conditions and quality of life of independent auto-rickshaw owner-drivers in selected areas of Chennai city. It focuses on their demographic profile, income, expenditure, savings, indebtedness, working conditions, health, social security, and overall well-being. The study adopts a descriptive research design, using primary data collected through a structured questionnaire and secondary data from relevant sources. Appropriate statistical tools will be employed to analyse the data. The findings are expected to identify the major challenges faced by owner-drivers and provide insights for improving their livelihood security, welfare, and quality of life.

Keywords: Socio-economic conditions, quality of life, auto-rickshaw owner-drivers, livelihood security, Chennai city.

1. Introduction

Auto-rickshaws play a significant role in providing accessible and affordable transportation in Chennai city. Independent auto-rickshaw owner-drivers contribute to urban mobility while managing their own income, vehicle maintenance, and operating expenses. However, they may face challenges such as fluctuating earnings, rising fuel costs, financial insecurity, long working hours, and limited social security.

Socio-economic conditions and quality of life are closely interconnected, influencing an individual's financial stability, health, family well-being, and overall life satisfaction. Understanding these aspects is essential to identifying the challenges and welfare needs of independent auto-rickshaw owner-drivers.

Therefore, the present study examines the socio-economic conditions and quality of life of independent auto-rickshaw owner-drivers in selected areas of Chennai city, with a focus on their livelihood, working conditions, financial security, and overall well-being.

2. Review of Literature

The following review of literature is organized thematically around the socio-economic conditions, occupational challenges, health, and quality of life of independent auto-rickshaw owner-drivers.

2.1. Socio-economic conditions of auto-rickshaw drivers

Tigari and Santhosh (2020), in their study "Socio-Economic Background of Auto-Rickshaw Drivers," examined the economic background and working conditions of auto-rickshaw drivers. The study highlighted issues relating to educational background, income, occupational health, inadequate infrastructure, and competition from other modes of transportation. The authors emphasized the importance of understanding drivers' economic circumstances and occupational difficulties.

2.2. Occupational challenges and financial security

The study "Auto-rickshaws in Indian Cities: Public Perceptions and Operational Realities" (2016)

examined the role of auto-rickshaws in urban transportation and the challenges faced by drivers. It highlighted the economic difficulties experienced by drivers and discussed concerns relating to fare-setting mechanisms and permit regulations. The study indicates that occupational policies and operating conditions are important factors affecting drivers' livelihoods.

2.3. Stress and psychological well-being

Joshi, Reddy, and Agarwal (2021) conducted a study titled "The Prevalence of Stress, Stressors and Coping Mechanisms and the Socio-demographic Factors Associated among the Auto-Rickshaw Drivers in Bengaluru City, India." The study included 140 auto-rickshaw drivers and identified financial problems and road traffic as major sources of stress. The findings highlight the importance of examining psychological well-being alongside the socio-economic conditions of auto-rickshaw drivers.

2.4. Occupational health and quality of life

Aggarwal et al. (2024) reviewed occupational health risks among taxi and auto-rickshaw drivers in India. Their review discussed exposure to air pollution, prolonged sitting, musculoskeletal problems, psychological stress, and limited access to healthcare. The authors emphasized the need for targeted health interventions and policy measures to protect drivers' well-being.

2.5. Concept of quality of life

The World Health Organization (1995), in its position paper on the "World Health Organization Quality of Life Assessment (WHOQOL)," presented quality of life as a multidimensional concept influenced by individuals' physical health, psychological state, independence, social relationships, and surrounding environment. This framework provides a useful basis for examining the quality of life of independent auto-rickshaw owner-drivers beyond their income and economic status.

2.6. Socio-economic characteristics of paratransit drivers

A study published in IATSS Research (2021), titled "Understanding the Socioeconomic Characteristics of Paratransit Drivers and Their Perceptions Toward Electric Three-Wheeled Rickshaws in Delhi, India," examined 620 paratransit drivers. The study found that many drivers came from economically disadvantaged and less-educated backgrounds. It also identified inadequate parking facilities, charging infrastructure, fare regulation, and road safety as important operational concerns. The study highlights the importance of examining drivers' socio-economic status alongside changes in urban transport systems

2.7. Socio-demographic profile and working conditions

Melwani et al. (2018), in their study "Study to Assess the Socio-Demographic Profile, Health Status and Working Conditions of Auto-Rickshaw Drivers in Bhopal," examined the relationship between occupation and health. The study discussed exposure to air pollution, noise, vehicle vibration, prolonged sitting, irregular meals, and occupational stress. These findings indicate that working conditions can have important implications for drivers' health and overall quality of life.

2.8. Occupational stress and financial difficulties

Joshi, Reddy, and Agarwal (2021) studied stress and coping mechanisms among 140 auto-rickshaw drivers in Bengaluru. The researchers reported that 78.6% of participants had stress based on the Perceived Stress Scale. Financial problems and road traffic were the leading reported stressors. The study demonstrates that economic pressure and the urban working environment are important factors to consider when assessing drivers' psychological well-being.

2.9. Low back pain and occupational health

Faiyazi, Sidiq, and Sharma (2026), in "Prevalence and Risk Factors of Low Back Pain Among Auto Rickshaw Drivers in Urban Settings: A Cross-Sectional Study," investigated 353 auto-rickshaw drivers. The study reported persistent low back pain in 48.16% of participants and identified longer driving hours and ergonomic factors, including vehicle vibration and inadequate lumbar support, as relevant concerns. The researchers recommended improved seating, regular rest breaks, and posture education. This study is

relevant to assessing the physical health dimension of quality of life.

2.10. Wrist pain and quality of life

A cross-sectional study titled "Prevalence and Associated Risk Factors for Wrist Pain and Quality of Life Among Auto-Rickshaw Drivers: A Cross-Sectional Study" examined 384 male auto-rickshaw drivers in Greater Noida, India. The researchers assessed wrist pain, functional disability, and quality of life using standardized measures. The study reported that longer driving experience was associated with greater pain and functional disability. These findings suggest that occupational exposure may affect drivers' physical functioning and quality of life.

2.11. Occupational health risks among transport drivers

Aggarwal et al. (2024), in "Occupational Health Risks Among Taxi and Auto-Rickshaw Drivers in India: A Review," examined occupational hazards affecting professional drivers. The review identified air pollution, prolonged sitting, inadequate vehicle ergonomics, musculoskeletal disorders, and psychological stress as important concerns. It also highlighted the need for targeted public health interventions and improved access to healthcare. The review supports the inclusion of health and occupational well-being in studies of auto-rickshaw drivers.

2.12. Heat stress and livelihood conditions

Bajare, Tasgaonkar, and Sankpal (2026), in "Examining Perceived Heat Stress: Health and Livelihood Effects on Auto-Rickshaw Drivers in Satara City (India) of the South Asia Region," investigated heat exposure among 107 auto-rickshaw drivers in Satara. The study examined the effects of extreme temperatures on health, well-being, and livelihood. This research is particularly relevant to urban drivers who work outdoors for extended periods and may experience environmental stress that affects their working capacity and daily earnings.

2.2. Research gap

The reviewed studies have examined the socio-economic background, financial difficulties, occupational stress, and health problems of auto-rickshaw drivers in different Indian cities. However, further research focusing specifically on independent auto-rickshaw owner-drivers in selected areas of Chennai city is needed to understand how their economic conditions, working environment, health, and social security collectively influence their quality of life. The present study seeks to address this gap.

3. Research Methodology

Research Design: The study adopts a descriptive research design to examine the socio-economic conditions and quality of life of independent auto-rickshaw owner-drivers in selected areas of Chennai city.

Study Area: The study will be conducted in selected areas of Chennai city, including Mogappair, Vanagaram, Maduravoyal, and Anna Nagar.

Sample Size: A sample of 100 independent auto-rickshaw owner-drivers will be selected for the study.

Sampling Technique: Convenience sampling will be used to select respondents who meet the study's eligibility criteria.

Sources of Data: Primary data will be collected from respondents using a structured questionnaire. Secondary data will be obtained from books, journals, research articles, government reports, and relevant publications.

Tools for Data Collection: The questionnaire will cover demographic characteristics, income, expenditure, savings, indebtedness, working conditions, health, social security, and quality of life.

Statistical Tools: Percentage analysis, descriptive statistics, chi-square tests, and correlation analysis will be used, where appropriate, to analyse the collected data and examine relationships between selected variables.

Scope of the Study: The study focuses on the socio-economic status, occupational challenges, financial security, and overall quality of life of independent auto-rickshaw owner-drivers in the selected areas of Chennai city.

Limitations of the Study: The study is limited to the selected geographical areas and sample size. The findings may not be generalizable to all auto-rickshaw owner-drivers in Chennai. Responses may also be subject to recall errors and individual perceptions.

4. Data Analysis

Section I: Socio-economic and Demographic Profile

Table 4.1: Area-wise Distribution of Respondents

Study area	Frequency	Percentage
Mogappair	27	27.0%
Vanagaram	13	13.0%
Maduravoyal	25	25.0%
Anna Nagar	10	10.0%
Unmapped – verification required	25	25.0%
Total	**100**	**100%**

Interpretation:

The above table reveals that 27 per cent of the respondents belong to Mogappair, followed by Maduravoyal (25 per cent), Vanagaram (13 per cent) and Anna Nagar (10 per cent). However, 25 per cent of the respondents are recorded under an unmapped category. This requires verification because the questionnaire identifies only four study areas.

Table 4.2: Age-wise Distribution of Respondents

Age group	Frequency	Percentage
Below 25 years	11	11.0%
25–34 years	36	36.0%
35–44 years	19	19.0%
45–54 years	21	21.0%
55 years and above	13	13.0%
Total	**100**	**100%**

Interpretation:

The findings indicate that the highest proportion of respondents (36 per cent) belongs to the age group of 25–34 years. This is followed by the 45–54 years age group (21 per cent), 35–44 years (19 per cent), 55 years and above (13 per cent) and below 25 years (11 per cent). Thus, the majority of the respondents belong to the 25–34 years age group.

010203040Below 2525–3435–4445–5455+

Table 4.3: Educational Qualification of Respondents

Educational qualification	Frequency	Percentage
No formal education	22	22.0%
Primary education	26	26.0%
Middle school	18	18.0%
Secondary school	19	19.0%
Higher secondary	10	10.0%
Diploma/Degree	5	5.0%
Total	**100**	**100%**

Interpretation:

The table shows that 26 per cent of the respondents have completed primary education, representing the highest proportion. This is followed by respondents with no formal education (22 per cent), secondary education (19 per cent), middle school education (18 per cent), higher secondary education (10 per cent) and diploma/degree qualifications (5 per cent). The findings indicate that a considerable proportion of auto-rickshaw owner-drivers have relatively limited formal educational qualifications.

Table 4.4: Marital Status of Respondents

Marital status	Frequency	Percentage
Unmarried	10	10.0%
Married	85	85.0%
Widowed	5	5.0%
Total	**100**	**100%**

Interpretation:

The table reveals that the majority of the respondents (85 per cent) are married. Unmarried respondents constitute 10 per cent, while widowed respondents account for 5 per cent. This indicates that most of the auto-rickshaw owner-drivers surveyed are married.

Table 4.5: Number of Family Members Dependent on Respondents' Income

Number of dependents	Frequency	Percentage
1–2 members	18	18.0%
3–4 members	50	50.0%
5–6 members	32	32.0%
Total	**100**	**100%**

0153045601–2 members3–4 members5–6 members

Interpretation:

The findings indicate that 50 per cent of the respondents have 3–4 family members dependent on their income. Around 32 per cent have 5–6 dependents, while 18 per cent have 1–2 dependents. This suggests that a considerable proportion of the respondents have family responsibilities involving three or more dependents.

Table 4.6: Biggest occupational challenge

Occupational challenge	Frequency	Percentage
High fuel costs	14	14.0%
Vehicle maintenance costs	13	13.0%
Traffic congestion	10	10.0%
Insufficient passengers	55	55.0%
Competition from other transport services	8	8.0%
Total	**100**	**100%**

Interpretation: The majority of respondents (55%) identified insufficient passengers as their biggest occupational challenge. High fuel costs were reported by 14%, followed by vehicle maintenance costs (13%), traffic congestion (10%) and competition from other transport services (8%). This indicates that the availability of passengers is the major occupational concern affecting independent auto-rickshaw owner-drivers.

Table 4.7: Quality of life – Sleep and rest

Response	Frequency	Percentage
Never	2	9.5%
Rarely	8	38.1%
Sometimes	6	28.6%
Often	3	14.3%
Always	2	9.5%
Total valid responses	**21**	**100%**

Interpretation: Among the 21 respondents who answered this question, 38.1% reported that they rarely get sufficient sleep and rest, while 28.6% reported sometimes. Only 9.5% stated that they always get sufficient sleep and rest. This suggests that inadequate rest may be a concern among the respondents. However, 79 responses are missing, and the findings should be interpreted with caution.

Table 4.8: Measures needed to improve socio-economic conditions

Improvement measure	Frequency	Percentage
Better income opportunities	37	37.0%
Reduced fuel and maintenance expenses	40	40.0%
Affordable healthcare and	9	9.0%

insurance		
Pension and social security benefits	5	5.0%
Affordable loans	5	5.0%
Other	4	4.0%
Total	**100**	**100%**

Interpretation: The findings reveal that 40% of respondents considered reduced fuel and maintenance expenses the most important measure for improving their socio-economic conditions. Better income opportunities were identified by 37% of respondents. Affordable healthcare and insurance were suggested by 9%, while pension and social security benefits and affordable loans were each reported by 5%. The results indicate that reducing operational expenses and improving income opportunities are the primary expectations of independent auto-rickshaw owner-drivers.

Table 4.9: Satisfaction with current earnings

Response	Frequency	Percentage
Very satisfied	0	0.0%
Satisfied	5	5.0%
Neutral	53	53.0%
Dissatisfied	15	15.0%
Very dissatisfied	27	27.0%
Total	**100**	**100%**

Interpretation: The majority of respondents (53%) expressed a neutral opinion regarding their current earnings. A considerable proportion (27%) were very dissatisfied, while 15% were dissatisfied. Only 5% reported being satisfied, and none were very satisfied. This indicates that earnings satisfaction is relatively low among the surveyed auto-rickshaw owner-drivers.

Table 4.10: Overall satisfaction with quality of life

Response	Frequency	Percentage
Never	61	61.0%
Rarely	10	10.0%
Sometimes	24	24.0%
Often	5	5.0%
Always	0	0.0%
Total	**100**	**100%**

Interpretation: A significant majority of respondents (61%) stated that they never felt satisfied with their overall quality of life. Another 24% reported sometimes, while 10% reported rarely. Only 5% reported often, and none selected always. This finding indicates a low level of overall quality-of-life satisfaction among the respondents.

Table 4.11: Financial security

Response	Frequency	Percentage
Never	63	63.0%
Rarely	13	13.0%
Sometimes	15	15.0%
Often	9	9.0%
Always	0	0.0%
Total	**100**	**100%**

Interpretation: The findings show that 63% of respondents never felt financially secure about their family's future. Another 15% reported sometimes, 13% rarely and 9% often. None of the respondents selected always. This indicates that financial insecurity is a major concern among independent auto-rickshaw owner-drivers.

Table 4.12: Ability to manage work-related stress

Response	Frequency	Percentage
Never	0	0.0%
Rarely	3	14.3%
Sometimes	13	61.9%
Often	2	9.5%
Always	3	14.3%
Total valid responses	**21**	**100%**

Interpretation: Among the 21 valid responses, 61.9% stated that they could sometimes manage work-related stress. Another 14.3% reported rarely, while 14.3% stated always. Only 9.5% reported often. This suggests that most respondents experience some difficulty in consistently managing work-related stress. However, 79 responses are missing, which limits the generalisation of the findings.

Table 4.13: Impact of Ola and Uber companies on daily income

Response	Frequency	Percentage
Always	52	52.0%
Sometimes	14	14.0%
Never	19	19.0%
No answer	15	15.0%
Total	**100**	**100%**

Interpretation: More than half of the respondents (52%) stated that companies like Ola and Uber always affect their daily income. Another 14% reported sometimes, while 19% stated never. Fifteen per cent did not provide an answer. This indicates that app-based transport companies are perceived as having a considerable influence on the daily earnings of independent auto-rickshaw owner-drivers.

Table 4.14: Enrolment in government welfare schemes

Response	Frequency	Percentage
Yes	5	23.8%
No	14	66.7%
Not sure	2	9.5%
Total valid responses	**21**	**100%**

Interpretation: Among the 21 respondents who answered this question, 66.7% reported that they were not enrolled in any government welfare scheme or applicable welfare board. Only 23.8% reported enrolment, while 9.5% were unsure. This suggests limited awareness or participation in welfare schemes among the respondents. Since 79 responses are missing, these percentages represent only the valid responses.

Table 4.15: Availability of health insurance

Response	Frequency	Percentage
Yes	22	22.0%
No	78	78.0%
Total	**100**	**100%**

Interpretation: The majority of respondents (78%) reported that they did not have health insurance, whereas only 22% reported having health insurance. This finding highlights the lack of health insurance coverage among independent auto-rickshaw owner-drivers and indicates a need for affordable healthcare protection.

Table 4.16: Method of purchasing the auto-rickshaw

Purchase method	Frequency	Percentage
Personal savings	5	5.0%
Bank/financial institution loan	13	13.0%
Private loan	54	54.0%
Family/friends' support	19	19.0%
Other	9	9.0%
Total	**100**	**100%**

Interpretation: The findings reveal that 54% of respondents purchased their auto-rickshaws through private loans. Another 19% received support from family members or friends, while 13% depended on bank or financial institution loans. Only 5% purchased their vehicles using personal savings. This indicates a considerable dependence on private borrowing for vehicle ownership among the respondents.

Table 4.17: Number of working days per week

Working days	Frequency	Percentage
1–3 days	0	0.0%
4–5 days	4	4.0%

6 days	19	19.0%
7 days	77	77.0%
Total	**100**	**100%**

Interpretation: The majority of respondents (77%) reported working all seven days of the week. Another 19% worked six days, while only 4% worked four to five days. None reported working between one and three days. This indicates that most independent auto-rickshaw owner-drivers work throughout the week, reflecting the continuous nature of their occupation.

Table 4.18: Daily working hours

Working hours	Frequency	Percentage
Below 6 hours	10	10.0%
6–8 hours	12	12.0%
9–10 hours	50	50.0%
11–12 hours	8	8.0%
Above 12 hours	20	20.0%
Total	**100**	**100%**

Interpretation: Half of the respondents (50%) reported working between 9 and 10 hours per day. Another 20% worked for more than 12 hours, while 12% worked between 6 and 8 hours. Ten per cent worked below 6 hours, and 8% worked between 11 and 12 hours. This indicates that a considerable proportion of respondents spend long hours at work to earn their livelihood.

Table 4.19: Ability to save money regularly

Response	Frequency	Percentage
Yes	0	0.0%
No	66	66.0%
Sometimes	34	34.0%
Total	**100**	**100%**

Interpretation: The findings indicate that 66% of respondents were unable to save money regularly, while 34% reported that they could save sometimes. None of the respondents selected yes. This suggests that the respondents face difficulties in maintaining regular savings, which may affect their long-term financial security.

Table 4.20: Outstanding loans or debt

Response	Frequency	Percentage
Yes	70	70.0%
No	26	26.0%
Unclassified response	4	4.0%
Total	**100**	**100%**

Interpretation: The findings show that 70% of respondents reported having outstanding loans or debts, whereas 26% reported having no outstanding debt. The remaining 4% were recorded under an unclassified response code. This indicates that debt is a significant financial concern among the respondents. The four unclassified entries should be verified before finalising the analysis.

Table 4.21: Average daily fuel expenditure

Daily fuel expense	Frequency	Percentage
₹200	14	14.0%
₹300	27	27.0%
₹350	4	4.0%
₹500	12	12.0%
₹600	5	5.0%
₹800	20	20.0%
₹1,000	14	14.0%
₹2,000	4	4.0%
Total	**100**	**100%**

Interpretation: The highest proportion of respondents (27%) reported an average daily fuel expenditure of ₹300. Another 20% spent ₹800 per day, while 14% each spent ₹200 and ₹1,000. Twelve per cent spent ₹500, 5% spent ₹600, and 4% each reported ₹350 and ₹2,000. This indicates that fuel expenditure forms an important component of the daily operating costs of auto-rickshaw owner-drivers.

Table 4.22: Average monthly net income

Monthly net income	Frequency	Percentage
Below ₹10,000	18	18.0%
₹10,000–₹14,999	36	36.0%
₹15,000–₹19,999	17	17.0%
₹20,000–₹24,999	9	9.0%
₹25,000 and above	20	20.0%
Total	**100**	**100%**

Interpretation: The findings reveal that 36% of respondents earned a monthly net income between ₹10,000 and ₹14,999, representing the largest income group. Another 20% earned ₹25,000 and above, while 18% earned below ₹10,000. Seventeen per cent earned between ₹15,000 and ₹19,999, and 9% earned between ₹20,000 and ₹24,999. This indicates considerable variation in the monthly net income of independent auto-rickshaw owner-drivers.

Table 4.23: Driving experience

Driving experience	Frequency	Percentage
Below 5 years	19	19.0%
5–10 years	22	22.0%
11–15 years	4	4.0%
Above 15 years	55	55.0%
Total	**100**	**100%**

Interpretation: The majority of respondents (55%) had more than 15 years of driving experience. Another 22% had between 5 and 10 years of experience, while 19% had less than 5 years. Only 4% had between 11 and 15 years of experience. This indicates that a substantial proportion of the respondents are experienced auto-rickshaw owner-drivers with long-term involvement in the occupation.

Table 4.24: Pearson Correlation between Daily Gross Collection, Daily Fuel Expenses and Overall Quality of Life Satisfaction

Variables	Daily Gross Collection	Daily Fuel Expenses	Overall QOL Satisfaction
Daily Gross Collection	1.000	0.088	0.047
Daily Fuel Expenses	0.088	1.000	0.348***
Overall QOL Satisfaction	0.047	0.348***	1.000

Note: *** Correlation is significant at the 0.001 level ($p < 0.001$).

Interpretation:

The Pearson correlation analysis reveals that the relationship between daily gross collection and daily fuel expenses is positive but very weak ($r = 0.088$), indicating that there is no meaningful linear association between these two variables. Similarly, the relationship between daily gross collection and overall quality of life satisfaction is negligible and positive ($r = 0.047$), suggesting that daily gross collection does not have a statistically significant linear relationship with overall quality of life satisfaction.

However, the correlation between daily fuel expenses and overall quality of life satisfaction is positive and moderate ($r = 0.348$), and statistically significant at the 0.001 level. This indicates a significant association between daily fuel expenses and overall quality of life satisfaction among the respondents.

Table 4.25: Confidence Intervals for Pearson Correlation Coefficients

Relationship between variables	Pearson's r	95% Confidence Interval
Daily Gross Collection and Daily Fuel Expenses	0.088	-0.111 to 0.279
Daily Gross Collection and Overall QOL Satisfaction	0.047	-0.151 to 0.241
Daily Fuel Expenses and Overall QOL Satisfaction	0.348	0.162 to 0.509

Interpretation:

The confidence interval analysis further supports the findings of the Pearson correlation analysis. The 95% confidence interval for the relationship between daily gross collection and daily fuel expenses ranges from -0.111 to 0.279. Similarly, the confidence interval for daily gross collection and overall quality of life satisfaction ranges from -0.151 to 0.241. Since both intervals include zero, these relationships are not statistically significant.

In contrast, the confidence interval for the relationship between daily fuel expenses and overall quality of life satisfaction ranges from 0.162 to 0.509. Since this interval does not include zero, it confirms a statistically significant positive association between the two variables.

5. Major Findings of the Study

A. Findings from Frequency Analysis

1. **Occupational Challenges:** Insufficient passengers was the major occupational challenge reported by 55% of the auto-rickshaw owner-drivers.

2. **Sleep and Rest:** Among the 21 valid responses, 38.1% rarely experienced adequate sleep and rest.

3. **Expected Improvements:** Reduced fuel and maintenance expenses was the most preferred improvement measure (40%), followed by better income opportunities (37%).

4. **Earnings Satisfaction:** A majority of respondents (53%) expressed neutral satisfaction with their earnings, while 27% were very dissatisfied.

5. **Overall Quality of Life:** 61% of respondents reported that they never experienced overall quality of life satisfaction, based on the recorded response scale.

6. **Financial Security:** 63% of respondents reported never experiencing financial security.

7. **Stress Management:** Among the 21 valid responses, 61.9% reported sometimes being able to manage stress.

8. **Impact of Ola and Uber:** 52% of respondents reported that app-based transport services always affected their income.

9. **Awareness of Welfare Schemes:** Among the 21 valid responses, 66.7% reported that they were not aware of or did not have access to welfare schemes, as represented by the recorded response category "No".

10. **Health Insurance:** 78% of respondents did not have health insurance.

11. **Vehicle Purchase Method:** 54% of respondents purchased their auto-rickshaws through private loans.

12. **Working Days:** 77% of respondents worked all seven days of the week.

13. **Daily Working Hours:** 50% of respondents worked for 9–10 hours daily, while 20% worked for more than 12 hours.

14. **Regular Savings:** 66% of respondents reported that they did not save regularly, while 34% saved sometimes.

15. **Outstanding Debt:** 70% of respondents reported having outstanding debt. However, 4% of responses require verification because they contain an invalid response code.

16. **Daily Fuel Expenses:** The largest proportion of respondents (27%) spent ₹300 per day on fuel, followed by 20% who spent ₹800.

17. **Monthly Net Income:** 36% of respondents earned between ₹10,000 and ₹14,999 per month, representing the largest income category.

18. **Driving Experience:** 55% of respondents had more than 15 years of driving experience.

B. Findings from Pearson Correlation Analysis

1. A very weak positive correlation (r = 0.088) was found between daily gross collection and daily fuel expenses. The relationship was not statistically significant.

2. A negligible positive correlation (r = 0.047) was found between daily gross collection and overall quality of life satisfaction. The relationship was not statistically significant.

3. A moderate positive correlation (r = 0.348) was found between daily fuel expenses and overall quality of life satisfaction. This relationship was statistically significant at the 0.001 level.

4. The analysis indicates that daily fuel expenses had a statistically significant association with overall quality of life satisfaction, whereas daily gross collection did not show a statistically significant association with either of the other two variables.

6. Suggestions for the Improvement of Socio-Economic Conditions and Quality of Life of Auto-Rickshaw Owner-Drivers

Based on the findings of the study, the following suggestions are recommended:

1. **Improvement in Passenger Availability:** The government should establish designated auto-rickshaw stands at important locations such as bus terminals, railway stations, hospitals, markets and commercial areas to improve passenger availability.

2. **Reduction in Fuel Expenses:** Subsidised fuel schemes or special fuel allowances should be considered for economically weaker auto-rickshaw owner-drivers to reduce their daily operating expenses.

3. **Affordable Vehicle Maintenance:** Government-supported vehicle service centres and maintenance subsidies should be introduced to reduce repair and maintenance costs.

4. **Financial Assistance:** Banks and financial institutions should provide low-interest loans to auto-rickshaw owner-drivers to reduce their dependence on private moneylenders.

5. **Social Security Benefits:** Special welfare schemes should be implemented to provide pension benefits, financial assistance and other social security support to auto-rickshaw owner-drivers.

6. **Health Insurance Coverage:** Affordable health insurance schemes should be made accessible to all auto-rickshaw owner-drivers and their families.

7. **Promotion of Regular Savings:** Financial literacy programmes should be organised to encourage regular savings, budgeting and responsible financial management.

8. **Debt Reduction Support:** Financial counselling and affordable loan restructuring facilities should be provided to drivers facing difficulties in repaying outstanding debts.

9. **Regulation of App-Based Transport Services:** Appropriate policies should be developed to ensure fair competition between independent auto-rickshaw drivers and app-based transport service providers.

10. **Improvement in Working Conditions:** Drivers should be encouraged to follow reasonable working hours and take adequate rest to protect their physical and mental health.

11. **Stress Management Programmes:** Periodic health camps, counselling services and awareness programmes should be organised to address occupational stress and improve mental well-being.

12. **Digital Literacy and Technology Training:** Training should be provided to help independent auto-rickshaw drivers use digital payment facilities, navigation applications and online passenger-booking platforms.

13. **Awareness of Government Welfare Schemes:** Awareness campaigns should be conducted to educate drivers about available government welfare schemes, insurance benefits and registration procedures.

14. **Improvement in Road and Parking Facilities:** The government and local authorities should provide adequate parking facilities, proper auto-rickshaw stands and safe waiting areas.

15. **Special Welfare Measures for Independent Drivers:** A dedicated welfare policy should be considered for independent auto-rickshaw owner-drivers, recognising their contribution to urban public transportation.

16. **Periodic Socio-Economic Surveys:** Government departments and research institutions should conduct periodic surveys to identify the changing socio-economic needs and quality-of-life challenges of auto-rickshaw owner-drivers.

7. Conclusion

The study concludes that the quality of life of auto-rickshaw owner-drivers is influenced by their socio-economic conditions, occupational challenges and financial stability. The findings highlight the need

to improve their working conditions, income security, healthcare facilities and social welfare protection. As an important part of urban transportation, auto-rickshaw owner-drivers deserve greater institutional and government support. Strengthening welfare measures, providing financial assistance and ensuring social security can significantly contribute to improving their standard of living and overall quality of life.

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