

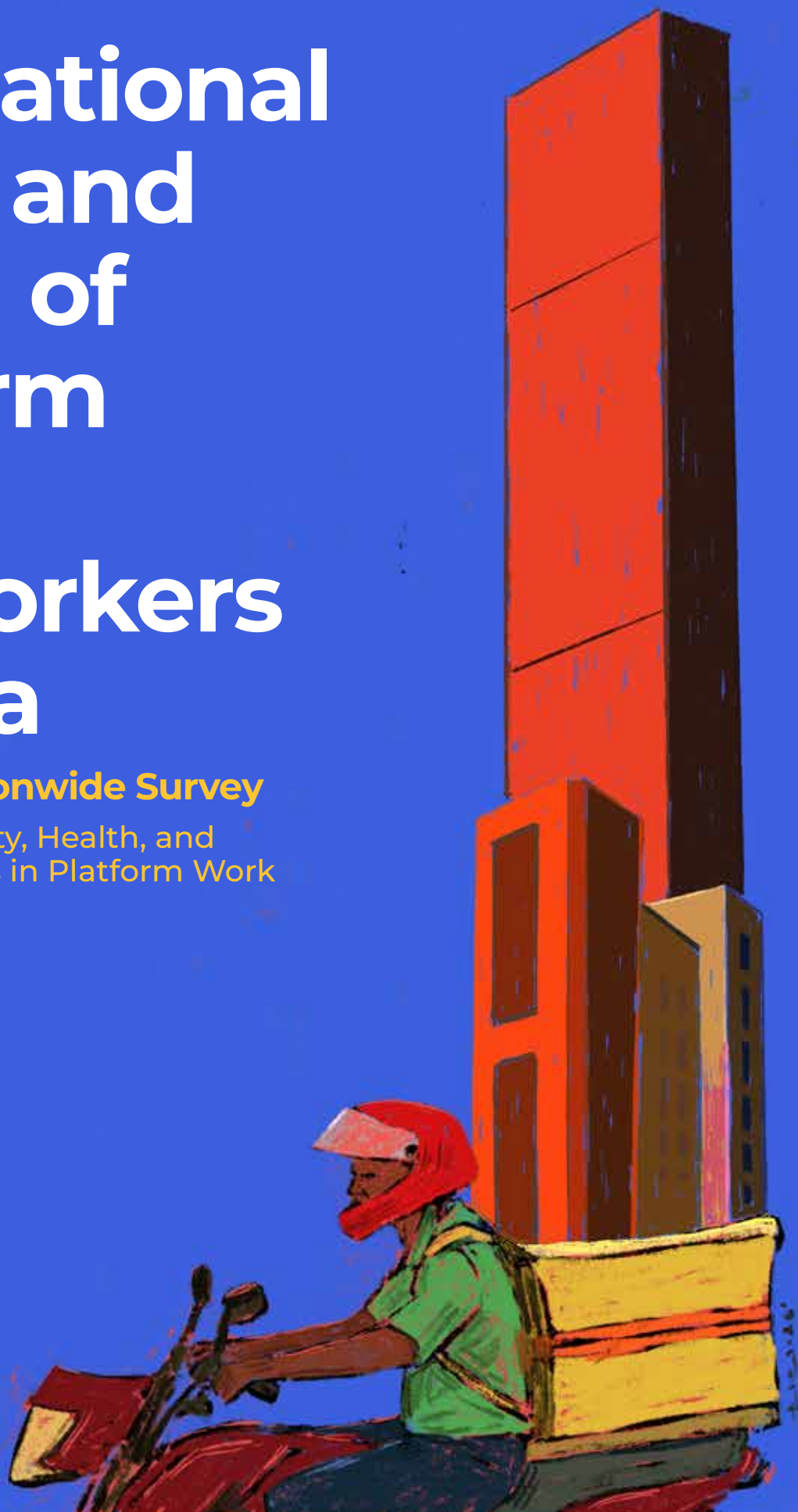
Occupational Safety and Health of Platform based Gig Workers in India

Report on a Nationwide Survey

Understanding Safety, Health, and
Environmental Risks in Platform Work



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email: janpahal@gmail.com
website: www.janpahal.com

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Research Team

Josika Mahindru, Dr. Muhammed Mukhtar Alam, Nitesh Kumar Das

Survey Execution Team

Vandana Narang, Neha, Aparna Saha, Shaik Salauddin, Inayath Ali, Indranil Banerjee, Javed Khan, Brajraj Singh Sikarwar, Mukesh Awasthi, Niraj Kumar Tiwary, Krishan Kumar Choudhary

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Pariplab Chakraborty

Design Support

@mananyadesigns



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It gives me great pleasure to present this report, Occupational Safety and Health of Platform-based Gig Workers in India: Report on a Nationwide Survey. This study is the result of the collective efforts of workers, researchers, surveyors, and colleagues who contributed their time, expertise, and commitment to documenting the realities of platform work in India.

I extend my heartfelt gratitude to the 1,000 platform workers across ten cities who participated in this survey and generously shared their experiences. Their willingness to speak about the challenges they face in their everyday work has made this report possible. Their voices and experiences form the foundation of this study.

I would like to sincerely thank the research team, Josika Mahindru, Dr. Muhammed Mukhtar Alam, and Nitesh Kumar Das, for their valuable contributions throughout the research process

I am deeply grateful to the members of the Survey Execution Team namely Ms. Vandana Narang, Neha, Ms. Aparna Saha, Shaik Salauddin, Inayath Ali, Indranil Banerjee, Javed Khan, Brajraj Singh Sikarwar, Mukesh Awasthi, Niraj Kumar Tiwary and Krishna whose commitment and hard work enabled us to conduct this nationwide survey.

At Janpahal, we believe that every worker has the right to a safe and healthy working environment. It is my hope that the findings of this report contribute to informed policy discussions and meaningful action to strengthen occupational safety, health protections, and social security for platform workers across India.

Dharmendra Kumar
Secretary,
Janpahal

FOREWORD

They have been given many names. Cybertariat. Precariat. Independent Partners. The Government calls them gig workers. Whatever the label, they have become such an integral part of urban infrastructure as to become almost invisible. This survey report on their occupational health issues, by Janpahal, brings that human dimension into focus fleshing out the many risks they are exposed to by virtue of their work. It also underlines the fact that they are the first generation of the working class to lose the hard-earned rights of their worker-ancestors.

This report 'Occupational Safety and Health of Platform-based Gig Workers in India' by Janpahal expands the horizon of the conversation around so called 'gig work' linking concerns of climate change to the lives and work of blue-collar workers in the gig economy. It has once again questioned the dominant narrative of flexi-work and part-time work for supplementary income and underlined the enormity of risks faced by millions compelled to earn a living through this insecure form of employment.

The nationwide survey of 1,000 workers across 10 cities makes visible what platforms have preferred to keep hidden. It reveals that half the workers surveyed put in over 49 hours a week and one fourth worked 70 hours a week. They have all worked consistently at such jobs for over a year strongly indicating that it is akin to regular employment for them. The word gig, with its connotations of casual, flexible work, therefore, feels like a convenient lie. Over the past decade, digitalisation has fundamentally changed the world of work, while labour laws and regulatory frameworks lag behind. A new generation of platform capitalists has sprung up building ecosystems of workers not formally recognised as employees and stripped clean of rights, protections, and safety measures traditionally associated with the workplace. In this ecosystem conventional boundaries of the workplace have collapsed. Roads, streets, and public spaces have become permanent worksites, while wages have become increasingly variable, uncertain, and dependent on algorithmic controls. All this under the guise of volition which is the most interesting and the most challenging part of this metamorphosis of capitalism into techno-capitalism.

The consequences are visible throughout this report: workers exposed to unsafe

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conditions, inadequate workplace protections, and health risks that are treated as individual burdens rather than occupational hazards.

The findings reveal a labour model in which risk has been normalised. Nearly two out of every three workers who experienced safety incidents reported narrowly escaping serious accidents, while road crashes, harassment and abuse have become familiar features of the job. Despite these glaring hazards, almost one in two lacks accident insurance, three in five have no health insurance, and most have never received formal safety training. Work hours are neither regular nor fixed though cycles of peaks and troughs do recur on a daily basis. Workers pay for this 'flexibility' with their poor health. Almost two-thirds live with fatigue and disrupted sleep. Musculoskeletal pain, stress, anxiety, and eye strain have become part of the everyday experience of work.

Heat stress has emerged as the report's most urgent finding. Impact of extreme heat was reported by over 84% of respondents as a regular feature of their working conditions. Nearly all reported that heat affected their ability to work, with three-fourths citing moderate to severe impact on productivity and safety. Three out of every four workers have no access to a rest area, more than half purchase their own drinking water during the working day, and some have no access to a toilet at all. Under these conditions, it is hardly surprising that many described heat exhaustion, dehydration and declining productivity. Yet, the overwhelming majority said, that platforms offered no guidance, policy or support for working safely in extreme weather. On the contrary it is in extreme weather conditions that workers are persuaded to work more through a system of incentives. They are left to navigate the consequences alone—working through dangerous conditions, cutting their hours and income, or stopping work altogether. The report also draws attention to those who remain at the margins of the platform economy: women gig workers. Only one in ten workers surveyed were women, a reminder that this much-celebrated labour market run by 'neutral' algorithms has been unable to root out gender-based prejudices and discrimination. Women who do enter platform work, face disproportionately higher levels of harassment, abuse and unsafe working conditions. Far from levelling the playing field, digital platforms have too often reproduced the inequalities they claimed to disrupt.

Occupational Safety and Health of Platform-based Gig Workers in India

One of the report's greatest strengths lies in how it was produced. The research team, comprising Josika Mahindru, Dr. Muhammed Mukhtar Alam, and Nitesh Kumar Das, deserves special mention for ensuring that workers themselves were at the heart of the research process. Both the formulation of the questionnaire and the data collection involved active participation of gig workers associated with Janpahal and its collectives of gig workers.

Many of its surveyors are themselves gig workers who have lived the realities documented in these pages. Their participation is not merely a methodological choice; it reflects Janpahal's commitment to ensuring that workers are not simply the objects of research but active producers of knowledge. By enabling workers to document, interpret and name their own realities, the report challenges the traditional hierarchy between researcher and the researched.

Thus, this report holds a mirror held up to the labour market that has outpaced the institutions meant to regulate it. If work in the digital economy continues to be organised without responsibility for safety, health or dignity, then the question before us is no longer about gig workers alone, but about the future of work itself. As 'gigification' of work expands across sectors, including the manufacturing sector, conditions documented here risk becoming the norm rather than the exception.

The Janpahal team deserves appreciation for its unflinching commitment to advocating and improving the working conditions and lives of gig workers. It combines advocacy with research, mobilising workers for collective action and dialogues with stakeholders including the government.

This report places workers and their concerns of safety and security at the centre of discussion and illuminates the multiple factors that endanger the health and safety of workers including poor infrastructure. It challenges policy makers, companies and users of these services to respond to issues it raises. The ball has been tossed in many courts. It is now the turn of policy makers and employers to respond because ignoring what concerns millions is not a choice.

Anjali Deshpande

Kinshuk Gupta

Authors, Mobile hi Maalik: Bharat mein Gig Kaamgaaron ki Dasha aur Disha

PREFACE

India's urban landscape is undergoing a profound transformation, shaped by rapid digitalisation, changing patterns of employment and the growing role of technology-enabled services. As cities evolve, the expansion of the digital platform economy has become an integral part of the urban economy, reshaping urban labour markets and transforming urban mobility, delivery services and everyday convenience for millions of citizens. Yet, behind this transformation lie the millions of platform-based gig workers—predominantly young men and women navigating city streets on two-wheelers—who form the backbone of these services. Their work, often portrayed as flexible and entrepreneurial, is in reality characterised by long hours, high physical demands, and significant exposure to occupational, health and environmental risks.

This report, 'Occupational Safety and Health of Platform-based Gig Workers in India: Report on a Nationwide Survey', presents timely and evidence-based insights into these challenges. Drawing on comprehensive survey data, it documents the lived realities of platform workers: excessive working hours that routinely exceed legal limits, frequent near-misses and accidents on poorly maintained roads, inadequate insurance coverage and safety training, limited access to basic amenities such as toilets, drinking water and rest areas, and acute vulnerability to extreme weather—particularly heatwaves that induce dehydration, exhaustion and reduced productivity. The findings further highlight pronounced gender disparities, with women workers facing heightened risks of harassment and unsafe conditions, especially in delivery and care services.

As cities continue to grow, urban economies evolve and climate stresses intensify, the occupational safety and health of gig workers can no longer remain peripheral to urban policy discourse. These workers are integral to the functioning of urban economies and the delivery of essential services. Ensuring their dignity, safety and well-being is, therefore, central to building inclusive, resilient and sustainable cities.

The National Institute of Urban Affairs welcomes this important contribution to the knowledge base on informal and platform labour in urban India. The report's detailed analysis and actionable recommendations—ranging from legal recognition of platform workers, extension of occupational safety and social security protections, provision of basic amenities and climate-adaptive measures, to gender-sensitive interventions—provide a valuable foundation for policymakers, platforms, urban local bodies and civil society organisations.

I commend Janpahal and the researchers involved in producing this study and urge all stakeholders to engage seriously with its findings. Only through concerted action can we ensure that the growth of the platform economy advances not merely convenience and efficiency, but also justice, safety and human dignity for the workers who make it possible.

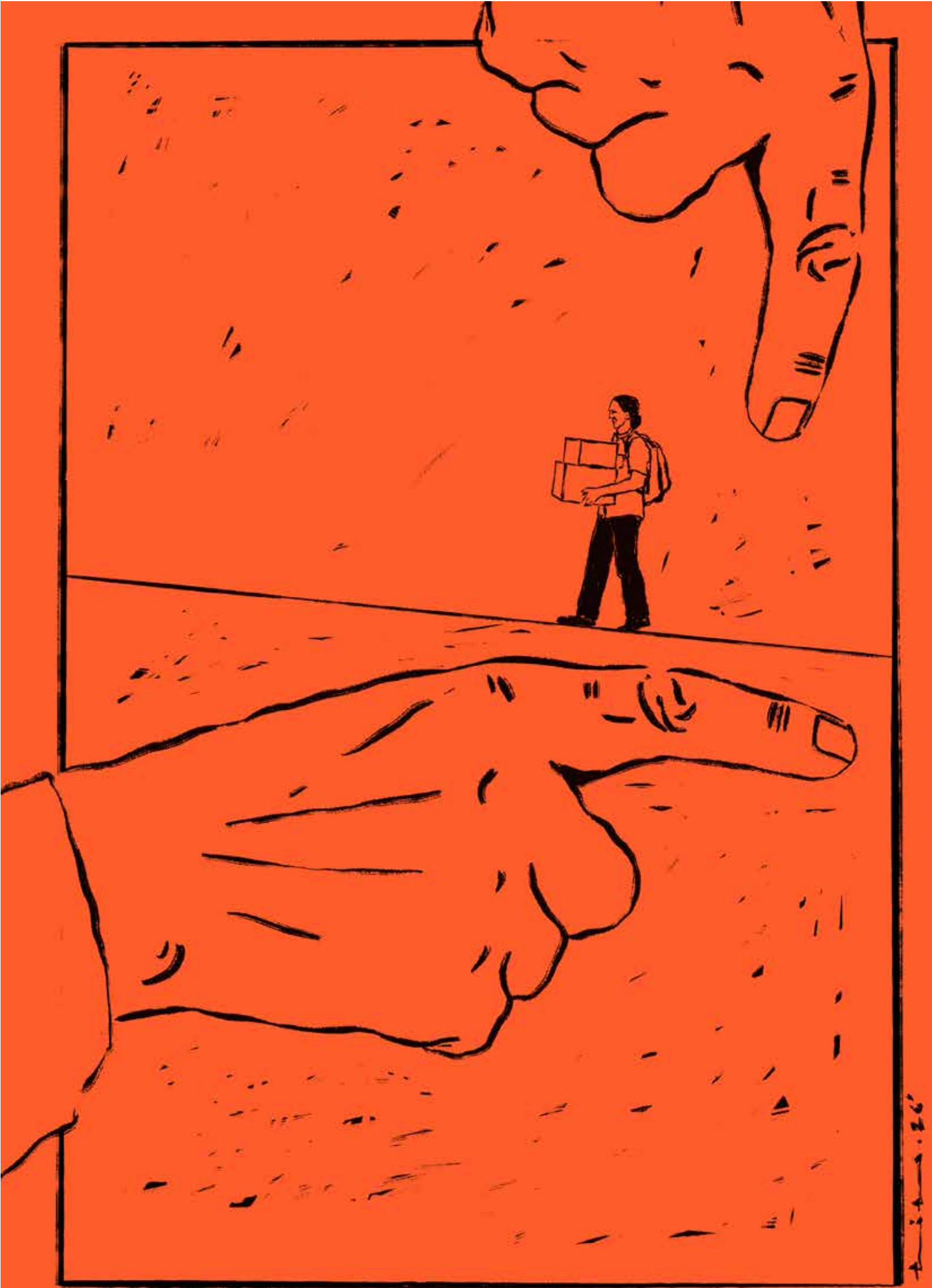
Dr. Debolina Kundu

Director

National Institute of Urban Affairs

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EXECUTIVE SUMMARY

PLATFORM WORK IS EXPANDING RAPIDLY

India's gig and platform economy has expanded rapidly in recent years, emerging as a significant source of employment in urban labour markets. Location-based platform work now encompasses a wide range of in-person services, including food and grocery delivery, e-commerce logistics, ride-hailing, and household and personal care. Estimates indicate that both the size and value of this sector will continue to grow substantially, positioning platform labour as a central component of India's future of work. In recognition of the evolution of the country's economic and labour landscape, the Government of India in 2019 and 2020 consolidated 29 labour laws into four new Labour Codes (effective November 21st, 2025), including the Code on Social Security, which, for the first time, formally acknowledges gig and platform workers as a distinct category of workers. While this legislative recognition marks an important shift in policy intent, the effective extension of labour protection to platform workers remains limited. In particular, the question of occupational safety and health (OSH) protection for gig workers continues to pose significant conceptual, regulatory, and implementation challenges.

NEW WORKPLACE, NEW RISKS

Location-based platform workers perform their labour in public, climate-exposed environments (roads, streets, markets, and residential neighbourhoods) that serve as de facto workplaces but also fall outside the traditional regulatory definitions of a workplace. As a result, major occupational hazards, including road accidents, exposure to violence and harassment, and increasingly, extreme weather, in particular heat, remain insufficiently addressed within existing regulatory frameworks. At the same time, platform business models that emphasise speed, efficiency, and rapid delivery have intensified work pressure and risk exposure, shifting a disproportionate share of occupational risk onto workers.

CLIMATE INTENSIFIES EXISTING HAZARDS

The International Labour Organisation has recognised that "a safe and healthy work environment" is a fundamental principle and right at work (ILO, 2022). Over recent years, the ILO has also identified that extreme weather, particularly extreme heat, is one of the most

serious emerging occupational hazards for outdoor workers globally. In India, intensifying heatwaves and poor urban infrastructure continue to heighten risks for platform workers who spend long hours navigating traffic, pollution, and weather extremes, often without access to basic amenities such as toilets, drinking water, rest areas, or institutional support. Despite this, systematic evidence on the intersection of occupational safety and health, and climate exposure in platform work remains limited.

► PURPOSE OF THIS STUDY

Against this background, Janpahal undertook a nationwide survey of 1,000 platform workers across 10 cities in India to document the everyday occupational safety and health risks they face, with particular attention to the effect of extreme weather and heat on their productivity and well-being. The key objective of this study was to provide a deeper understanding of the safety, health, and environmental risks associated with platform work, which could inform public action and policy formulation.

KEY FINDINGS

1. NOT JUST A 'GIG': PLATFORM WORK IS PREDOMINANTLY FULL-TIME AND LONG-TERM

The term gig work is commonly understood to refer to short-term, flexible, or part-time employment undertaken intermittently to supplement income rather than serve as a primary livelihood. In public and policy discourse, platform-based gig work is often portrayed as offering workers autonomy over their schedules, enabling temporary or occasional participation in the labour market. However, the findings from this study challenge this prevailing perception. Survey evidence suggests that platform-based gig work functions less as casual or supplementary employment and more as sustained, full-time labour for a large share of workers. Among the 1,000 respondents in this study,



57% reported working more than

49 HOURS



nearly one-fourth (23%) worked

70 HOURS

far exceeding the 48-hour weekly limit set by formal-sector labour regulations. Patterns of

worker tenure further reinforce this shift away from the conventional idea of gig work: 72.3% of respondents had been continuously engaged in platform work for more than 1 year, including 38.4% for over 2 years and 18.4% for more than 5 years. Taken together, these findings indicate that platform work has evolved beyond the notion of a temporary “gig,” serving instead as a medium to long-term source of employment and livelihood for many workers.

2. ROAD SAFETY RISKS AND EXPOSURE TO VIOLENCE ARE ROUTINE IN PLATFORM WORK

Among workers who reported experiencing safety incidents at work (n=777), a large proportion reported encountering unsafe road conditions,

62.2%

reporting near-miss incidents with vehicles

38%

reporting injuries caused by poor road conditions

27%

reporting traffic accidents

These risks are particularly significant given that two-thirds (66.4%) of respondents reported using two-wheelers as their primary mode of transport for work. Poor road infrastructure, traffic congestion, and weak enforcement of road safety norms can compound these risks.

Apart from road safety, a significant portion of the respondents also reported having either personally experienced harassment, abuse, or violence (34.1%) while working or having witnessed it happen to another worker (26.6%), indicating that occupational safety risks extend beyond road safety incidents and include issues related to personal security and dignity at work.

3. HIGH EXPOSURE, LOW PROTECTION: INSURANCE AND SUPPORT REMAIN INADEQUATE

Despite high exposure to safety risks, a substantial share of workers reported lacking basic insurance coverage. 44.2% of the respondents reported not having accident insurance and

62.2%

reported not having health insurance

Among those who attempted to make insurance claims, many reported difficulties in accessing benefits.

The survey also reveals limited safety training and institutional support from platforms. 59% of the workers reported receiving no safety training, and 23.4% reported receiving training that they considered inadequate for the risks they face. Confidence in

platform mechanisms for reporting safety concerns was also low, with 56.8% of workers reporting being not confident that their platform provided effective channels for reporting safety issues and for taking follow-up action. These findings suggest that responsibility for managing occupational risk is largely individualised, with limited institutional support from platforms or effective linkage to social security mechanisms.

4. EXTENDED HOURS AND INTENSE WORK TAKE A TOLL ON WORKERS' PHYSICAL AND MENTAL HEALTH

Workers reported a wide range of work-related health issues. At 64.5%, fatigue and sleep disruption were the most commonly reported problems, reflecting long hours and physically demanding work. Nearly half (47.42%) of the respondents reported musculoskeletal pain, including back and neck pain, likely linked to prolonged riding, sitting, or carrying loads.

Mental health concerns were also prominent. 41.08% of workers reported experiencing stress and anxiety related to work, indicating that platform work exerts psychological as well as physical strain. Respiratory problems (26.45%) and eye strain (30%) were also reported, indicating prolonged exposure to pollution, dust, and screen-based navigation.

Despite this burden, access to health-related platform support remains limited, with 68.4% of the workers reporting that no support was being provided, indicating that the responsibility for managing occupational health concerns is also largely individualised.

5. BASIC AMENITIES AND DIGNIFIED WORK: LIMITED ACCESS TO TOILETS, WATER, REST AREAS AND BREAKS

Access to basic workplace amenities emerged as a significant concern.

15%

reported that toilets were not accessible during working hours

43.9%

reported relying on paid public toilets

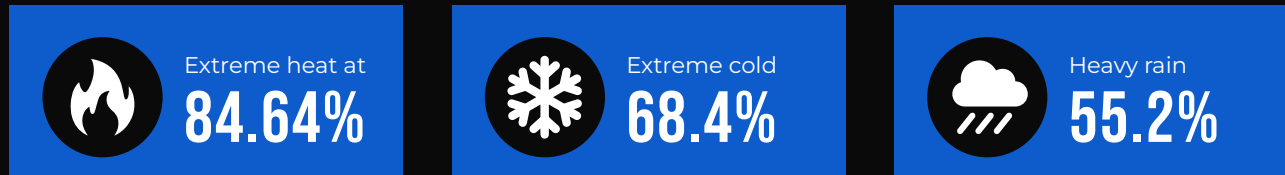
11.3%

on informal access at restaurants or customers' homes.

Access to drinking water and rest areas was similarly constrained, with 53.8% of the respondents reporting they had to purchase water out of pocket while working and 74.6% reporting the absence of any rest areas. Apropos of the figures indicating limited access to rest areas, 66.2% respondents also reported rarely or never taking breaks during working hours. These findings indicate that platform work is carried out in environments lacking even the most basic infrastructure for safe, healthy, and dignified work.

6. HEAT AND EXTREME WEATHER EXPOSURE ARE ROUTINE FEATURES OF PLATFORM WORK

Exposure to extreme weather was a near-universal experience among the surveyed workers (n= 778).



Almost all respondents (n= 778) reported that heat affected their ability to work, with 75.5% reporting moderate to severe impact of heat on their productivity and safety.

Workers also reported a high prevalence of heat-related health symptoms, including dehydration (50.4%), heat exhaustion (61.80%), severe overheating (49%), and skin irritation (41.3%). Many also reported respiratory problems (26.9%), reflecting the interaction between heat and poor air quality in urban environments. Despite these risks, 75% of the respondents reported that platforms provided no policies or guidance on working during extreme weather. Protective measures were also reported to be largely self-managed, often involving reduced working hours (58.9%) or stopping work altogether (15.6%), which could negatively affect workers' incomes.

7. GENDER-BASED OCCUPATIONAL DIVISION, ACCESS TO WORKPLACE AMENITIES, AND SAFETY CONCERNS OF WOMEN WORKERS IN THE PLATFORM ECONOMY

Women constituted only 10.5% of the 1,000 surveyed platform workers nationwide and were predominantly concentrated in care-oriented segments, particularly household and personal care and food and grocery delivery. In contrast, men were more strongly represented in ride-hailing, delivery, and e-commerce platforms, suggesting a clear pattern of gender-based occupational segmentation within the platform economy. The limited participation of women in platform work also reflects structural constraints, including concerns about personal safety, socio-cultural restrictions on women's mobility, and barriers to owning or possessing a vehicle, a requirement central to most location-based platform jobs.

The findings of this survey reinforce these concerns about platform work as being insufficiently women-friendly. Women workers reported substantially higher exposure to unsafe working conditions and harassment-related risks, especially in Food and Grocery

Delivery (78.9% of women compared to 35.2% of men) and Household and Personal Care services (52.2% of women compared to 23.5% of men). While some platform-specific subgroups are small and therefore warrant cautious interpretation, the overall evidence points to persistent gender disparities in occupational access, workplace safety, and working conditions across platform sectors.

1. INTRODUCTION

1.1. WHAT IS PLATFORM WORK?

Platform work refers to labour that is mediated through digital platforms, where algorithms match service providers and customers, allocate tasks, and often monitor and evaluate performance (Ghosh et al., 2022). In India, such work spans both location-based platforms (services delivered in person) and online web-based platforms (tasks performed remotely). The current study focuses on location-based platforms, where workers' "workplaces" are roads, streets, markets, transport hubs, and residential neighbourhoods rather than enclosed establishments.

Workers in these segments are commonly treated as independent contractors rather than employees and are paid on a task basis. Emerging empirical studies show that a large share of platform workers, especially food delivery and e-commerce workers, work full-time hours despite the rhetoric of flexibility and supplemental earnings (Samal et al., 2025a; Srinivasan et al., 2023). For many, platform work has become a primary source of livelihood, characterised by long and often unpredictable working days, high dependence on platform income, and limited alternative employment options.

1.2. THERE HAS BEEN A SIGNIFICANT INCREASE IN THE PREVALENCE OF PLATFORM WORK IN INDIA.

Recent national estimates indicate that several million workers are engaged in gig and platform work, with numbers expected to grow markedly over the next decade (NITI Aayog, 2022). Although precise estimates vary across studies and methodologies, three conclusions remain relatively constant.

- First, on-demand transport and delivery services account for the bulk of location-based platform work, including ride-hailing drivers and food, grocery, and e-commerce delivery personnel.
- Second, household services and personal care form a smaller but growing segment, particularly in larger metropolitan areas.
- Third, platform work is increasingly becoming a medium-to long-term livelihood rather than a marginal side activity, as workers remain on platforms for multiple years with limited exit pathways.

1.3. CHARACTERISTICS OF PLATFORM WORK

Platform work in India is increasingly characterised by long working hours and sustained engagement rather than short-term, flexible gigs. A study of food delivery workers in Bengaluru found that most riders routinely worked “well beyond” eight hours per day, often depending on a single platform as their primary source of income (Bharadkar, 2021). Diary-based research on platform workers’ financial lives similarly shows that incentive structures and eligibility thresholds are designed to compel workers to stay logged in for long stretches to secure adequate earnings (Ponnathpur, 2023). Recent analyses of app-based drivers report average weekly hours of around 51, with some workers logging 90–95 hours and identifying as full-time earners for their households (India Development Review, 2026). Health studies of online delivery personnel in Chennai further indicate that full-time status and working more than eight hours a day are significant predictors of stress and work-related musculoskeletal disorders (Devadharshini et al., 2026).

1.4. PLATFORM-BASED WORKERS ARE VULNERABLE TO OVERLAPPING FORMS OF PRECARIY, INCLUDING OCCUPATIONAL SAFETY AND HEALTH (OSH) RISKS.

Platforms intensify income precarity (Ghosh et al., 2022), increase algorithmic control over work allocation and performance (Anwar et al., 2024; Athreya, 2021; Shyamini & Rejuna, 2025), and isolate workers from one another and from the organisation (Kasliwal, 2020). Evidence from studies across Indian cities suggests that platform workers tend to work long hours, with high work intensity and strong income dependence on platform earnings (Kallu & Sushmitha, 2025; Mukherjee et al., 2025; Srinivasan et al., 2023). At the same time, surveys and

media reports highlight workers' routine exposure to traffic hazards, occupational violence, and harassment, frequently without adequate institutional support or recourse (Business & Human Rights Resource Centre, 2023; Srivastava, 2024). Despite this, policymakers often present platform work as a solution to unemployment concerns and a pathway to entrepreneurship (Nair, 2023), while paying less attention to the everyday risks borne by workers.

1.5. THE EVERYDAY WORK ENVIRONMENT FOR PLATFORM WORKERS IS SHAPED BY PUBLIC INFRASTRUCTURE AND THE ABSENCE OF BASIC AMENITIES.

Delivery workers, ride-hailing drivers, and home-service providers spend prolonged periods waiting outside restaurants, warehouses, transit hubs, and residential complexes. Emerging audits of “dark stores” and quick-commerce warehouses in Delhi-NCR, for instance, document that many outlets lack usable toilets, safe drinking water, shaded rest areas, or seating for delivery workers (Shankar, 2025). Similar accounts from other Indian cities indicate that workers are often compelled to urinate in the open, purchase drinking water out of pocket, or rest on pavements and parking lots between tasks (HeatWatch & Telangana Gig and Platform Workers Union, 2024; Das & Bhat, 2025). Such conditions undermine workers' dignity and contribute to health risks, but are rarely recognised within conventional OSH frameworks that presume fixed workplaces.

1.6. LEGAL AND POLICY PERSPECTIVES

Legal and policy debates in India have increasingly recognised the distinctive vulnerabilities of gig and platform workers And the need to extend social protection and OSH safeguards to them.

► The Code on Social Security, 2020, is the first central legislation to formally define and recognise gig workers and platform workers as a distinct category outside traditional employer–employee relationships.

The framework aims to provide access to a comprehensive social security package, including health, maternity, pension, insurance, and portable welfare entitlements. Aggregators are required to contribute to a dedicated Social Security Fund, and Aadhaar-linked e-Shram registration is expected to facilitate benefit portability and grievance redress. In parallel, schemes such as microcredit facilities for gig and platform workers and regulatory interventions on “10-minute delivery” promises signal growing public concern about worker safety and livelihoods.

1.7. SEVERAL INDIAN STATES HAVE BEGUN LEGISLATING SPECIFICALLY FOR GIG AND PLATFORM WORKERS TO SUPPLEMENT NATIONAL LABOUR REFORMS

Rajasthan enacted the Platform-Based Gig Workers (Registration and Welfare) Act, 2023, requiring worker and aggregator registration and a welfare fund. Karnataka, Bihar, and Jharkhand have passed or introduced similar bills focused on registration, social security, fair contracts, and welfare provisions. These state-level measures seek to fill gaps left by national labour codes by creating dedicated mechanisms for worker registration, welfare contributions, and dispute resolution. However, the extent to which these frameworks will translate into enforceable OSH protections for mobile and outdoor workers remains uncertain.

1.8. FORMAL RECOGNITION HAS NOT YET TRANSLATED INTO EXPLICIT, PREVENTIVE OSH STANDARDS TAILORED TO PLATFORM-MEDIATED WORK.

Under the Code on Social Security, 2020, accident insurance, health insurance and disability cover are to be delivered through government-notified social security schemes. These measures mark a shift away from voluntary or platform-discretionary coverage towards a more statutory approach. Yet, they largely address compensation after harm has occurred, rather than regulating the working conditions that generate risk, such as long working hours, unsafe road environments, exposure to violence, or lack of basic amenities and rest facilities. Studies and surveys of gig workers point to persistent gaps in health and accident insurance coverage, difficulties in making claims, and low confidence in platform grievance mechanisms (HeatWatch & Telangana Gig and Platform Workers Union, 2024; Srivastava, 2024). The platform's responsibility for risk reduction through safety training, protective equipment, or infrastructure is only weakly specified.

1.9. THERE IS A PERSISTENT MISMATCH BETWEEN OSH LAW AND THE REALITIES OF PLATFORM WORK, PARTICULARLY IN A WARMING CLIMATE.

The Occupational Safety, Health and Working Conditions Code, 2020, consolidates safety and health provisions across sectors but is primarily oriented towards fixed establishments, identifiable employers, and inspectable worksites. This architecture fits poorly with platform

delivery and transport work, which is mobile, algorithmically managed, and conducted largely in public spaces (Gayathri & Sangeetha, 2025; Ramya, 2025). Neither the OSHWC Code nor the Social Security Code explicitly integrates climate risk or extreme weather into OSH standards, despite growing evidence that outdoor workers in India face escalating heat stress, erratic rainfall, and poor air quality (Krishnamurthy et al., 2017; Srinivasan et al., 2016; Venugopal et al., 2016; Varshney, 2025). As a result, platform workers are increasingly exposed to intersecting risks, including traffic hazards, violence, health strain, inadequate infrastructure, and climate extremes, without a comprehensive regulatory framework that recognises public space as a workplace and prioritises prevention.

2. LITERATURE REVIEW

Occupational Safety and Health (OSH) Risks in Platform Work

2.1. PLATFORM DELIVERY AND TRANSPORT WORK EXPOSE WORKERS TO STRUCTURALLY HIGH PHYSICAL HEALTH.

Empirical evidence on platform work in India has focused primarily on delivery workers, who spend long hours on two-wheelers navigating congested roads and narrow lanes. Medical and occupational health studies across Indian cities consistently document a high burden of work-related musculoskeletal disorders among e-commerce and food delivery workers. A cross-sectional study in Chennai found widespread reports of low back pain, headaches, eye irritation, and road injuries, linking these outcomes to prolonged riding, traffic exposure, repetitive lifting, and poor ergonomics (Kallu & Sushmitha, 2025). Similar patterns have been documented in Bengaluru, where musculoskeletal pain was significantly higher among workers logging more than eight hours per day (Srinivasan et al., 2023), and in Kolkata, where discomfort scores rose with repetitive handling and awkward postures among online delivery executives (Mukherjee et al., 2025). These findings align with broader OSH research in India, which associates continuous exposure to heat, noise, and vibration with cumulative physical strain and reduced productivity (Krishnamurthy et al., 2017; Venugopal et al., 2016).



2.2. ROAD SAFETY RISKS ARE CENTRAL TO PLATFORM WORK

Road safety risks are central to platform work, particularly for two-wheeler-based

45% of India's road traffic fatalities now involve two-wheeler riders.

delivery and transport workers operating in congested, poorly designed urban

environments. National road safety data analysed by Salve (2025) show that with deaths per hour for this group nearly doubling over the last decade; experts link this trend to the sheer volume of two-wheelers, inadequate road design, and weak enforcement of safety norms (Salve, 2025). Reports on gig and quick-commerce workers highlight frequent crashes, near-miss incidents, and falls linked to potholes, waterlogging, and poorly lit roads, often under pressure to meet tight delivery timelines (Gupta, 2025; Times of India, 2025). Media and advocacy accounts underscore that many platform workers rely on personal two-wheelers for work, bearing heightened exposure to unsafe road infrastructure, dense traffic, and limited trauma care, while facing difficulties in accessing insurance or post-accident support (Gul, 2024).

2.3. LONG WORKING HOURS, TASK-BASED PAY, AND THE ABSENCE OF ENABLING INFRASTRUCTURE INTENSIFY HEALTH RISKS.

Across studies, adverse health outcomes are closely associated with work intensity and the organisation of work, rather than individual worker characteristics. Survey data from Tamil Nadu indicate that nearly half of app-based food delivery riders report lower back pain, with dehydration and skipped meals emerging as significant correlates (Samal et al., 2025a). Piece-rate incentives, surge pricing, and performance-linked bonuses encourage continuous log-ins and discourage rest, reinforcing fatigue and cumulative physical strain (Kallu & Sushmitha, 2025; Srinivasan et al., 2023).

At the same time, workers often lack access to basic amenities that would mitigate these risks. Evidence from union-led audits of dark stores and warehouses in Delhi-NCR shows that many locations either do not provide toilets for delivery workers or restrict access, with some facilities found to be unhygienic and lacking running water (Shankar, 2025). Workers report having to purchase drinking water during shifts, wait in unshaded areas exposed to heat and rain, and rest on pavements or in parking lots between orders (HeatWatch &

Telangana Gig and Platform Workers Union, 2024; Das & Bhat, 2025). These infrastructural deficits translate directly into occupational risks: inadequate hydration and toilet access are linked to urinary tract infections, gastrointestinal problems, and heat-related illnesses, while the lack of safe rest areas undermines recovery during long shifts.

2.4. MENTAL HEALTH RISKS, VIOLENCE, AND HARASSMENT ARE EMERGING BUT UNDER-RECOGNISED OSH CONCERNS

Beyond physical injuries, platform work is associated with substantial mental health burdens. A cross-sectional study of app-based riders in Tamil Nadu reported moderate-to-severe depression in 16% of respondents and anxiety in 13%, with higher prevalence among workers dependent on delivery work as their primary income source (Samal et al., 2025b). Psychological research during the COVID-19 period highlighted stress, insecurity, and emotional exhaustion linked to algorithmic control, fluctuating demand, and income volatility among food delivery personnel (Kumar & Sharma, 2022).

Parallel strands of evidence point to routine exposure to violence, abuse, and harassment at work. Survey-based reporting indicates that

40% of cab drivers and delivery persons have experienced some form of violence on the job

with many workers stating that companies provided little or no support when such incidents occurred (Srivastava, 2024). Qualitative investigations and human rights reporting describe cases of robbery, assault, gender-based violence, and attacks by customers' pets, with limited accountability mechanisms or compensation for affected workers (Business & Human Rights Resource Centre, 2023; Shashidhar et al., 2024). Gig workers also describe routine verbal abuse, discrimination in residential complexes, and degrading treatment in commercial spaces, which further erode their sense of security and dignity at work (Das & Bhat, 2025).

2.5. FORMAL RECOGNITION OF GIG WORKERS HAS NOT YET TRANSLATED INTO ROBUST, PREVENTIVE OSH PROTECTION

Legal analyses highlight that while social security provisions have been conceptually extended to gig and platform workers, OSH protections remain weakly specified for mobile and platform-mediated work (Gayathri & Sangeetha, 2025; Ramya, 2025). The OSHWC Code

is structured around physical establishments, occupiers, and inspectors, creating ambiguity when applied to workers who operate in public spaces and whose work is coordinated digitally. Unlike factory or construction workers, platform workers typically lack site-based inspections, mandated rest facilities, or clear standards on working hours and breaks. Questions remain unresolved regarding whether platforms can be treated as “employers” or “occupiers” for the purpose of OSH obligations, and how duties related to safety training, medical examinations, and hazard prevention can be enforced in algorithmically managed labour. As a result, responsibility for managing occupational risk is largely individualised, and access to insurance or compensation is often contingent, fragmented, and difficult to claim (HeatWatch & Telangana Gig and Platform Workers Union, 2024).

Platform Work, Climate Change and Compounded Vulnerability

2.6. CLIMATE CHANGE ACTS AS A RISK MULTIPLIER IN PLATFORM-MEDIATED WORK

Legal and policy scholarship conceptualises climate change as a “wicked multiplier” that amplifies existing precarity in the gig economy (Gayathri & Sangeetha, 2025). Platform workers already experience income insecurity, weak bargaining power, and limited social protection; climate extremes intensify these vulnerabilities by increasing health risks while constraining workers' ability to refuse unsafe work. OSH research in India documents that outdoor workers in sectors such as construction and manufacturing face significant heat stress, with measurable declines in work capacity and heightened risks of heat exhaustion, dehydration, and cardiovascular strain (Krishnamurthy et al., 2017; Srinivasan et al., 2016; Venugopal et al., 2016).

Recent grey literature extends these concerns to gig and platform workers. Union-led surveys and advocacy reports from Telangana and other states show that a majority of gig workers report fatigue, dehydration, dizziness, and nausea during peak summer months. Additionally, they often report no access to paid leave, health insurance, or employer-provided cooling measures (HeatWatch & Telangana Gig and Platform Workers Union, 2024; Varshney, 2025). These accounts emphasise that platform workers spend prolonged hours outdoors in high temperatures, frequently navigating asphalt roads and concrete-dominated urban landscapes that exacerbate the urban heat island effect.

2.7. PLATFORM INCENTIVES AND URBAN GOVERNANCE UNDERMINE WORKERS' CAPACITY TO ADAPT TO EXTREME WEATHER.

Unlike salaried employees, platform workers' earnings are tightly linked to continuous availability and rapid task completion. Qualitative and legal analyses note that algorithmic penalties, rating systems, and fear of deactivation discourage workers from logging off during heatwaves, heavy rain, or flooding, even when local authorities advise limiting outdoor activity (Gayathri & Sangeetha, 2025; Ge et al., 2024). Evidence from an on-demand food delivery platform in China shows that during periods classified as “dangerous” or “extremely dangerous” for outdoor activity, couriers experienced higher order volumes and longer working hours but also more delivery delays and elevated health risks. They found that modest income gains did not compensate for the estimated health costs of heat exposure (Ge et al., 2024).

In India, advisory measures issued by bodies such as the National Disaster Management Authority encourage employers and local governments to restrict outdoor work in peak heat, ensure shaded rest areas, and provide water and first-aid facilities. Yet reporting from multiple cities highlights patchy implementation and weak enforcement, with workers continuing to labour during the hottest hours to meet targets and sustain incomes (Pandey, 2025). The absence of mandated cooling breaks, shaded waiting areas, or compensation for

2.8. CLIMATE-RELATED OSH RISKS REMAIN INSTITUTIONALLY UNADDRESSED IN LABOUR REGULATION

Neither the Social Security Code nor the OSHWC Code explicitly integrates climate risk or extreme weather into OSH standards. There are no binding guidelines for how platforms should manage heat stress, air pollution, or extreme rainfall for outdoor workers such as delivery riders and ride-hailing drivers (Gayathri & Sangeetha, 2025; Varshney, 2025). Climate considerations tend to be addressed, if at all, through general environmental or disaster management policies, rather than through labour law and OSH enforcement. This regulatory gap leaves platform workers at the frontline of climate risk without commensurate protections, even as urban heatwaves become more frequent and intense.

Implications for OSH Governance of Platform Work

2.9. A GROWING ZONE OF VULNERABILITY

Platform delivery and transport workers occupy a distinct and growing zone of vulnerability at the intersection of informality, digital management, and climate risk.

The literature demonstrates that platform-based gig workers face intersecting physical, mental, and climate-related OSH risks produced by long working hours, algorithmic management, weak regulatory oversight, and inadequate urban infrastructure (Kallu & Sushmitha, 2025; Mukherjee et al., 2025; Samal et al., 2025a, 2025b; Srinivasan et al., 2023). At the same time, union-led audits and advocacy reports reveal significant gaps in access to toilets, safe drinking water, shaded rest areas, and health coverage (HeatWatch & Telangana Gig and Platform Workers Union, 2024; Shankar, 2025), alongside high levels of occupational violence and harassment with limited platform support (Business & Human Rights Resource Centre, 2023; Srivastava, 2024).

3. SIGNIFICANCE OF THE STUDY

3.1. RESEARCH GAPS IN EXISTING LITERATURE

The literature on the occupational health and safety risks in platform work points to three key gaps that motivated the present study's focus.

■ First, existing empirical work on OSH in platform work is geographically scattered and often limited to single cities or specific types of platform workers, making it difficult to build a comprehensive national picture of workers' exposure to occupational risks.

■ Second, while there is growing recognition of climate change as a driver of occupational heat stress, few studies connect climate exposure with everyday working conditions, access to basic amenities, and institutional responses in platform work.

■ Third, legal and policy analyses underscore the misalignment between current labour codes and the realities of mobile, climate-exposed work, but there is limited empirical evidence detailing how this misalignment plays out in workers' daily lives and interactions with platforms and public infrastructure (Gayathri & Sangeetha, 2025; Ramya, 2025).

The above gaps underscore the need for systematic, multi-city evidence on occupational safety, health, and environmental risks in platform work, particularly in relation to extreme weather, basic amenities, and the effectiveness of current OSH and social protection mechanisms, which this survey attempted to fulfil. Such evidence is essential to inform climate-sensitive OSH standards, platform accountability, and public policy interventions that recognise public spaces as workplaces and treat platform workers as rights-bearing workers rather than disposable intermediaries.

4. METHODOLOGY

4.1. STUDY DESIGN AND OBJECTIVES

The objective of this study was to generate systematic, worker-centred evidence on the general status of occupational safety and health in the platform economy in India, as well as on how environmental conditions intersect with platform-based gig work to shape safety, health, and dignity at work. The research employed a cross-sectional survey design, with a semi-structured questionnaire administered via face-to-face interviews. The study prioritised workers' lived experiences and perceptions, recognising that OSH risks in platform work are best understood from the standpoint of those directly exposed to them.

4.2. STUDY AREA AND SAMPLE

The survey was conducted across 10 Indian cities (Delhi, Mumbai, Kolkata, Bengaluru, Hyderabad, Bhopal, Agra, Lucknow, Jaipur, Patna) selected to represent diverse urban contexts and major hubs of platform activity. A total of 1,000 platform workers were surveyed, with 100 respondents per city. The study focused on workers engaged in the following key observed segments of the location-based platform sector:

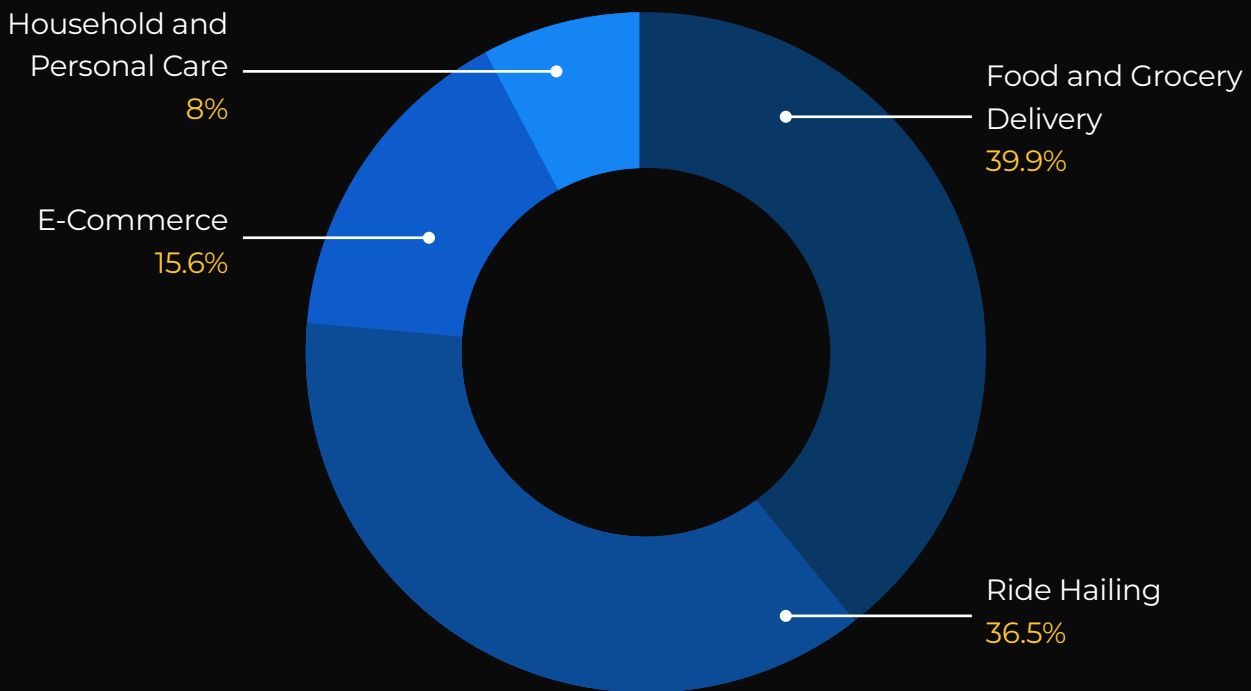


Figure 1: Distribution of respondents across different platform segment

4.3. SAMPLING STRATEGY

A purposive and quota-based sampling design was adopted for this study. Respondents were selected based on their engagement in platform work at the time of the survey. Given the absence of a comprehensive sampling frame for gig workers in India, probability sampling was not feasible. The adopted approach prioritised coverage, as much platform segment diversity as possible, and feasibility, while maintaining consistency across cities. Although the sample is not statistically representative of all platform workers in India, it provides a robust and meaningful snapshot of OSH and climate-related risks across major location-based platform work segments.

4.4. SURVEY INSTRUMENT

Data were collected using a semi-structured Google Form questionnaire comprising of both open and closed-ended questions. The questionnaire was developed in consultation with

worker representatives to ensure relevance, clarity, and contextual appropriateness and to capture information across the following domains:

- Worker profile and work characteristics
- Occupational safety risks and incidents
- Occupational health symptoms and medical access
- Access to workplace amenities
- Exposure to extreme weather and heat
- Impact of climate conditions on health and work performance
- Protective measures and platform support

4.5. DATA COLLECTION

Data were collected through face-to-face interviews conducted by trained surveyors selected from among platform workers affiliated with Janpahal in each city. This approach was adopted to improve respondents' comprehension of survey questions, enable the inclusion of workers with limited literacy, and enhance the overall reliability of responses.

To ensure that the survey captured the lived realities and key concerns of location-based platform workers, a preliminary consultation was held in November 2025 via Zoom with 10 representative gig workers from the identified cities affiliated with Janpahal. Their inputs informed the initial questionnaire design. Subsequently, a pilot survey was conducted across the 10 selected cities (10 participants per city) to test the questionnaire's structure, clarity, and relevance. Following the pilot, a feedback meeting with representative workers was organised, and the survey instrument was further refined.

The final questionnaire consisted of 36 questions, administered through Google Forms and made available in English and Hindi. The survey was launched on 15 November 2025 and remained open until 30 December 2025. Interviews were conducted at locations convenient for workers, including public spaces, delivery hubs, and resting points, while ensuring voluntary participation and confidentiality. Informed consent was obtained from all respondents prior to participation, and no personal identifiers were collected.



4.6. DATA ANALYSIS

Quantitative data were coded and analysed using descriptive and inferential statistical methods. Frequency distributions, cross-tabulations, and association measures were used to identify patterns across platform type, gender, amenity access, safety exposure, and climate impacts. Qualitative responses were thematically reviewed to supplement and contextualise quantitative findings.

5. LIMITATIONS

As with all field-based surveys among informal and mobile workforces, certain limitations must be acknowledged. The non-probability sampling design limits the generalisability of the results, and self-reported data may be subject to recall bias or personal interpretation. Nevertheless, the consistency of responses across cities and platform segments strengthens the credibility of the findings. With respect to regional representation, the survey coverage was uneven: six of the ten cities were located in North India, with no representation from the Northeast, and the study focused only on workers in Tier 1 and Tier 2 cities. In addition, women workers were underrepresented in the sample, constituting only a small proportion of respondents, reflecting both their lower participation in location-based platform work and the structural barriers that limit women's entry into these sectors. As a result, gender-disaggregated findings, particularly within specific platform categories, should be interpreted with caution due to small subgroup sizes.

6. FINDINGS

6.1. Profile of Workers

6.1.1. To assess the demographic profile of platform workers across the ten selected cities, respondents were asked to indicate their age group, gender identity, education level, the type of platform work they were engaged in, the number of working hours per week, the duration of working as a platform worker and whether they were registered on the e-Shram portal. About 89.5% of the 1000 respondents surveyed were

male, and 10.5% were female. As shown in Figure 2, the largest group, 59.5% of respondents, belonged to the 25-39 years age category. The 19-24 years age group was the second-largest, accounting for 20.4% of responses. This indicates that the platform workforce is predominantly young and male, with a concentration of working-age adults.

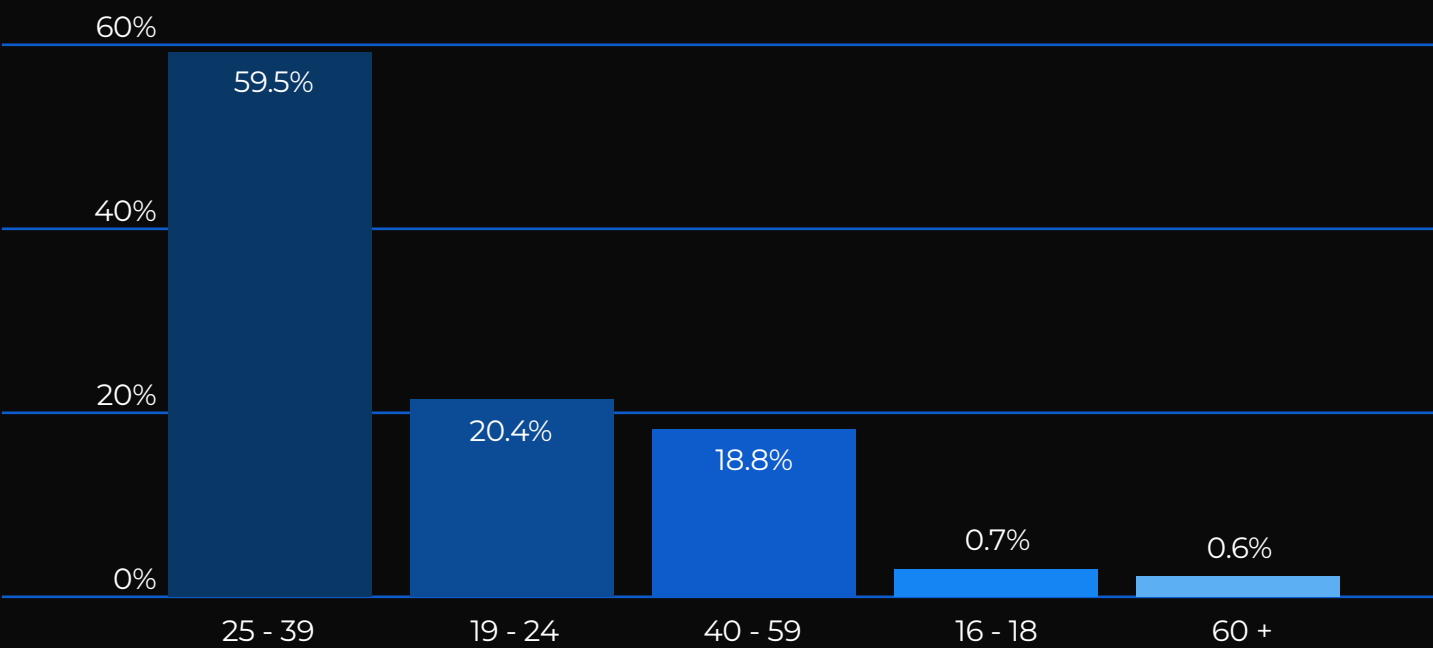


Figure 2: Age profile of respondents

6.1.2. As presented in Table 1, a substantial portion (51.5%) of workers possess higher secondary education (10th to 12th grade), and a notable 19% reported completing graduation. Despite this, workers remain concentrated in physically demanding and insecure platform jobs, reflecting the limited availability of stable employment opportunities.

Education level	% Share
Below 10th	13.1%
10 - 12th	51.5%
Diploma	15.5%
Graduate	19.1%
Postgraduate	0.8%

6.1.3. One of the most crucial findings in the study is concerning the working hours reported by respondents, which highlights the full-time nature of platform work as opposed to the notion of it being a part-time gig. Over 57% of respondents reported

working more than 49 hours per week, with nearly one-fourth (23.4%) working over 70 hours per week (Figure 3). Such work intensity is comparable to, and often exceeds, formal-sector employment norms (The Factories Act, 1948, and the Occupational Safety, Health and Working Conditions Code, 2020 set standard working hours at 48 hours per week). These findings stand in stark contrast to the narrative promoted by major platform companies, which frequently characterise gig work as flexible, supplementary, and part-time in nature. Instead, the data suggests that a significant proportion of platform workers depend on these jobs as their primary source of livelihood, working hours that mirror or exceed full-time employment. This discrepancy raises important questions about the framing of gig work and the realities of labour conditions experienced by workers on the ground.

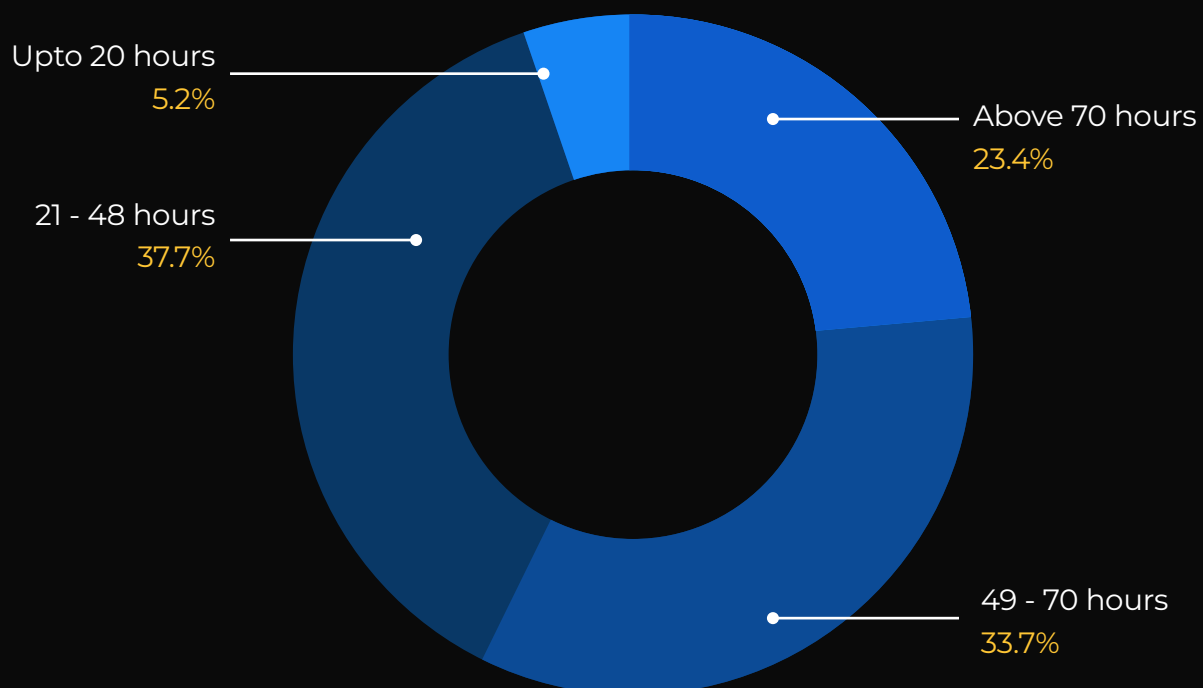


Figure 3: Number of hours worked per week

The reported working hours and tenure of employment as a platform worker, moreover, show that gig work is neither a part-time job nor temporary. As shown in

Figure 4, the majority of respondents have been working in the platform sector for over 1 year (72.3%), nearly two-fifths for over 2 years (38.4%) and 18.4% for more than 5 years. This means that, for many, platform work has become a medium to long-term livelihood, not just a stopgap.

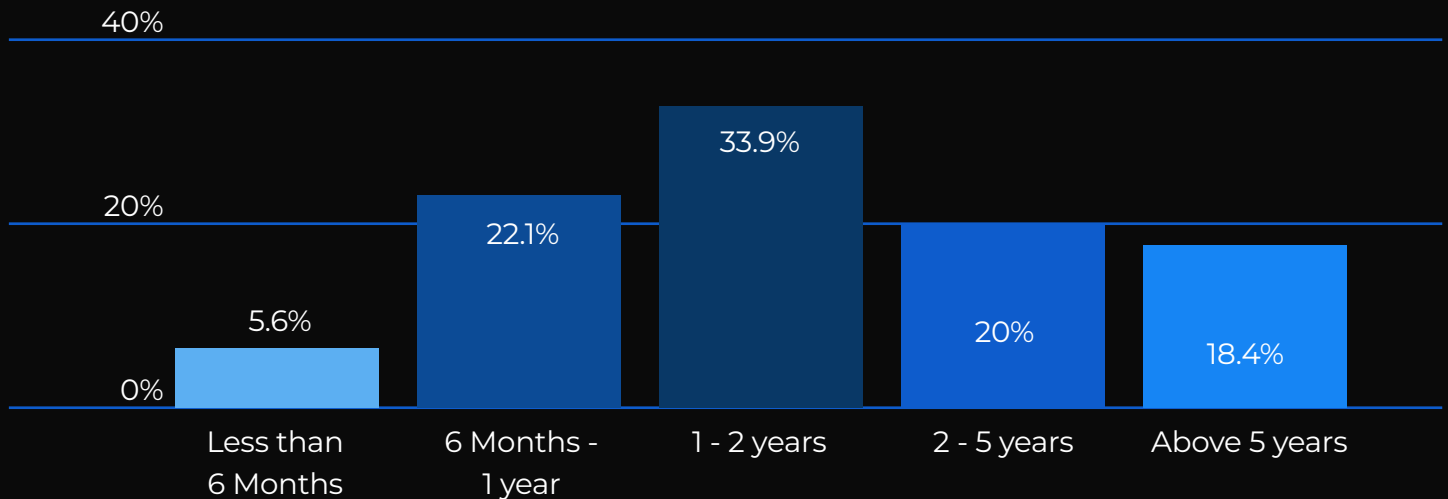


Figure 4: Duration/Tenure of platform work

6.1.4. Half of the respondents (50%) reported not being registered on the e-Shram portal as platform workers.

A substantial section of platform workers, therefore, are missing out on formal recognition and access to crucial social security benefits, such as health insurance under the Pradhan Mantri Jan Arogya Yojana (PMJAY) and accident insurance under the PM Suraksha Bima Yojana (PMSBY). Beyond these, non-registration also limits access to a wider range of protections envisioned under the Code on Social Security, 2020, which now explicitly includes gig and platform workers within its ambit. These include potential entitlements to life and disability cover, old-age protection, maternity benefits and welfare schemes to be financed through dedicated social security funds. Registration on the e-Shram portal is intended to serve as a foundational database to facilitate the delivery of such benefits; hence, exclusion from it risks leaving workers outside the reach of both existing and future welfare measures. This gap not only undermines the intent of extending social protection to informal and platform workers but also perpetuates their vulnerability in terms of income security, health risks, and social safety nets.

6.2. Occupational Safety

6.2.1. The Occupational Safety section of this study assesses the type and frequency of safety-related incidents encountered by platform workers while on the job, the provision of platform training and safety-related support, workers' access to accident insurance, and the ease of claiming that insurance. A significant portion (31.7%) of

respondents reported frequently or very frequently encountering unsafe working conditions

(18.3% + 13.4%), while 26.6% reported occasionally encountering them. Only a small minority (8%) reported never facing unsafe conditions, which demonstrates that occupational risk is routine rather than exceptional in gig work (Figure 5).

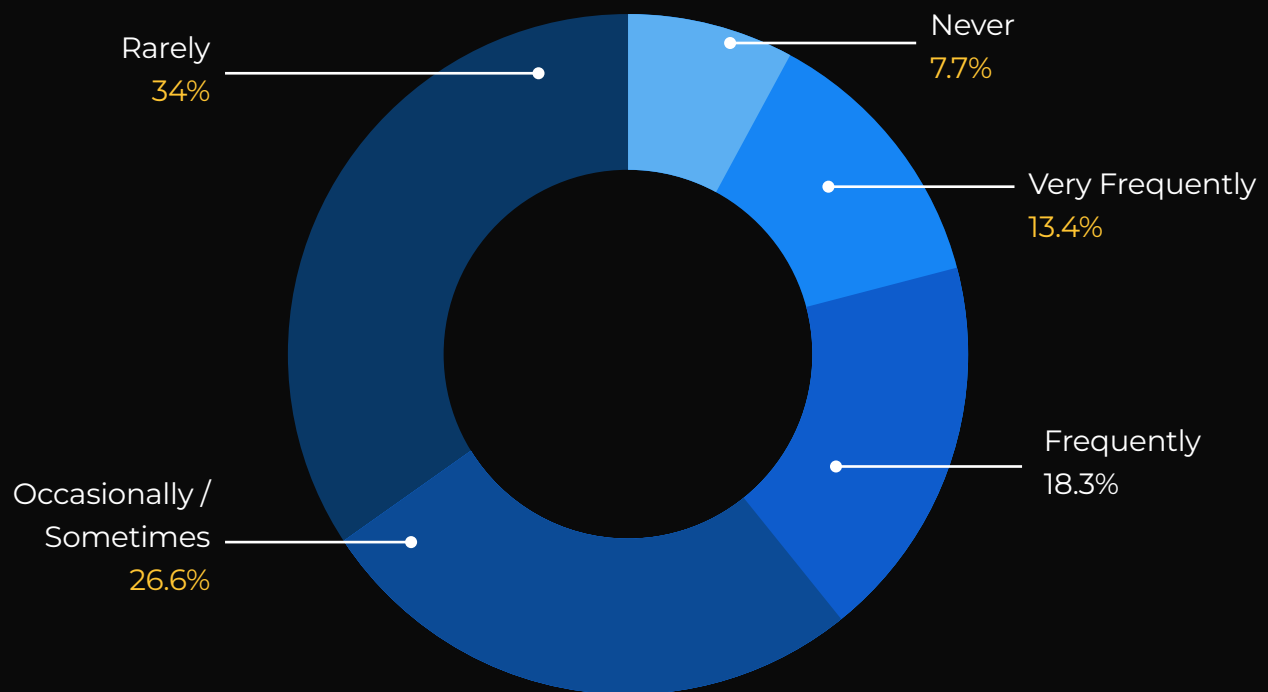


Figure 5: Frequency of unsafe conditions experienced at work

6.2.2. The most common safety incidents reported were related to encountering road-based hazards while working.

As shown in Figure 6, among those who reported safety incidents ($n=777$), 62.2% experienced a near-miss with a vehicle, making it by far the most common safety incident. This indicates the high frequency with which platform workers are exposed to potentially fatal situations in the course of routine work. Injury due to road conditions was the second-most-frequently reported incident, affecting 38% of respondents, highlighting the role of poor public infrastructure in directly contributing to occupational injury. Furthermore, 27.5% of respondents reported being involved in a traffic accident, underscoring the inherent risks of the road environment. Although recent government directives have prompted some platforms to roll back explicit 10-minute delivery claims (Peerzada Abrar et al., 2026), this step alone is insufficient to reduce occupational risk. The deeper structural pressures remain intact. Workers continue to face strict delivery targets, shifting incentive structures, penalties and the constant threat of account blocking or reduced visibility on the app. Most importantly, workers' incomes remain directly tied to the number of orders completed per day, creating a powerful economic compulsion to prioritise speed over safety, regardless of official delivery-time labels.

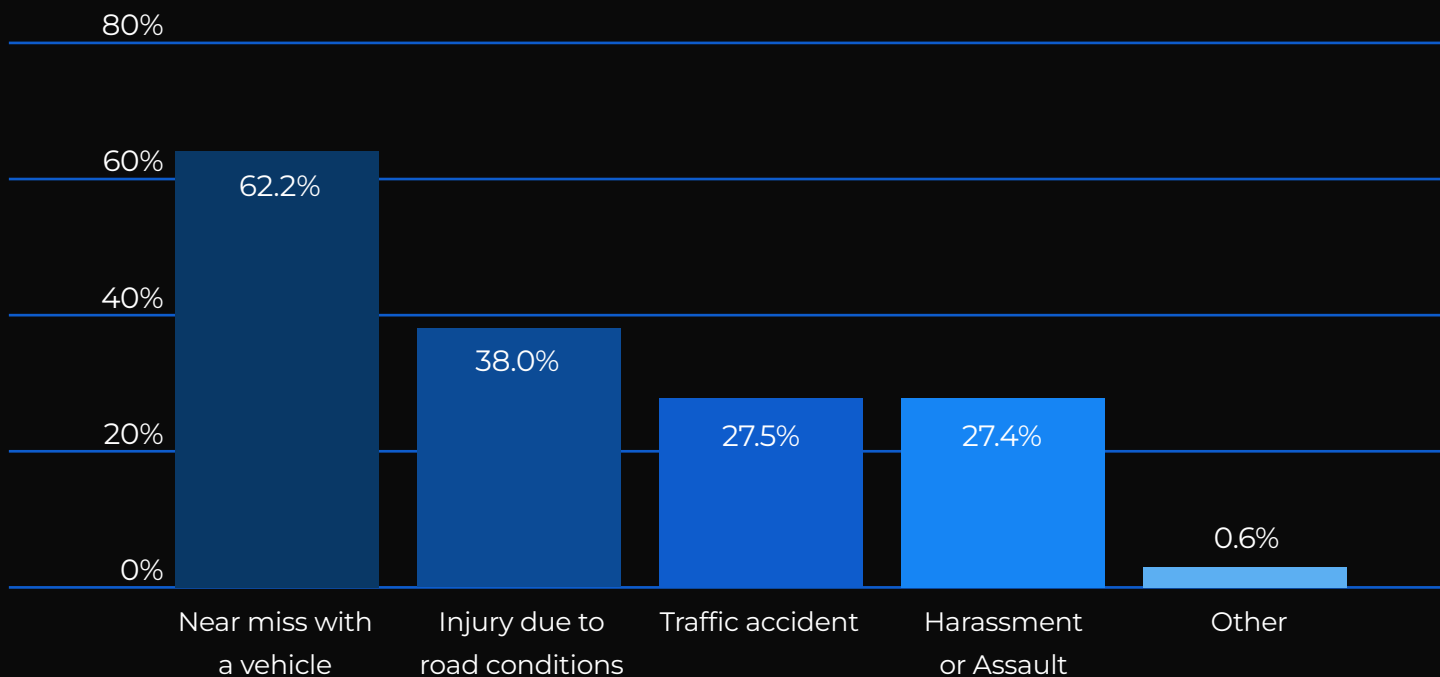


Figure 6: Types of unsafe work incidents experienced (*This was a multi-select question, so workers could report multiple incidents)

The importance of these findings is further amplified by the fact that nearly two-thirds of respondents rely on two-wheelers for their work (Table 2). Two-wheelers provide minimal physical protection in a traffic environment characterised by congestion, uneven roads, and weak enforcement of traffic rules (WHO, 2022). This combination of time pressure, inadequate infrastructure, vulnerable transport modes, and algorithmic control creates a structurally dangerous occupational setting. Road safety incidents among platform workers, therefore, cannot be viewed as isolated accidents or individual lapses, but must be understood as systemic outcomes of the platform delivery model itself.

Transportation	% Share
Own scooter / motorcycle	66.4%
Own Car	18.1%
Own Bicycle	4.5%
Use Public transport (e.g. buses, metro, railways)	3.2%
Use ride-hailing services (e.g. Ola, Uber, Rapido)	3.1%
Intermediate public transport (Rickshaws and taxis)	2.7%
Other	2.0%

Table 2: Mode of Transportation for Work

6.2.3. Taking into account the number of respondents who reported road-based safety incidents, as well as the high usage of two-wheeler vehicles for work, it is crucial that all workers have access to accident insurance that is not difficult to claim. However, as shown in Figure 7, nearly half of respondents (44.2%) reported not having accident insurance, and among those with insurance who had interacted with the claims process (13.9% total), over 80% found it difficult (11.4%) compared to easy (2.5%).

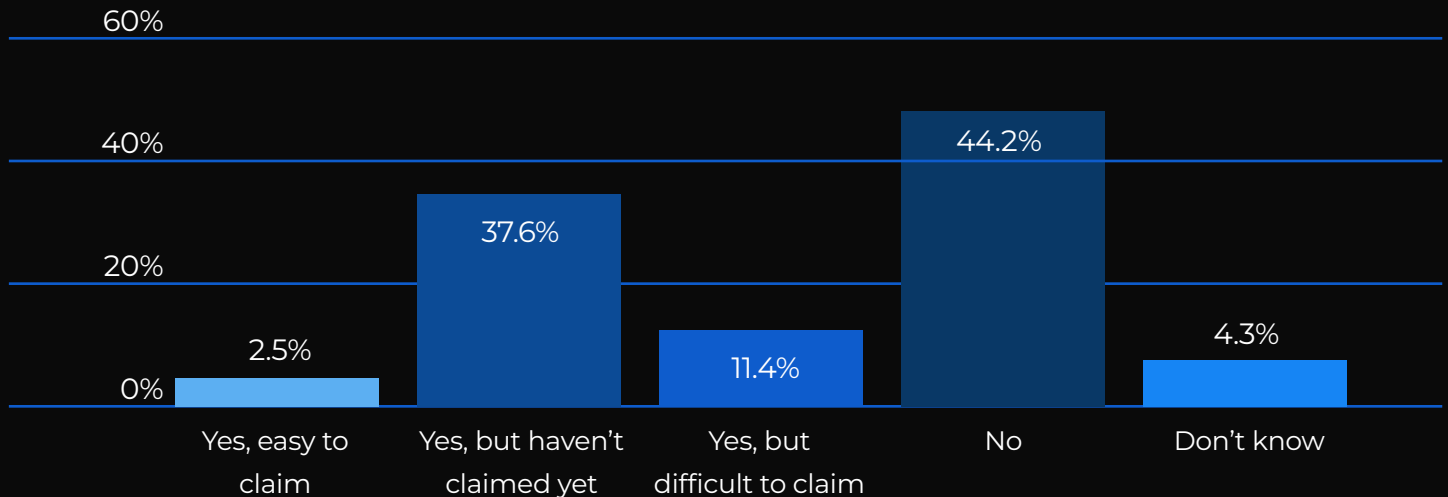


Figure 7: Access to and ease of claiming Accident Insurance

6.2.4. Another concerning finding vis-à-vis occupational safety has been the high exposure to violence that platform workers face while at work. A significant portion of the respondents reported having either personally experienced harassment, abuse, or violence (34.1%) while working or having witnessed it happen to another worker (26.6%). A majority of platform workers (60.7%) therefore have encountered harassment, abuse, or violence at work either directly or indirectly, which has serious implications for their well-being (Figure 8).

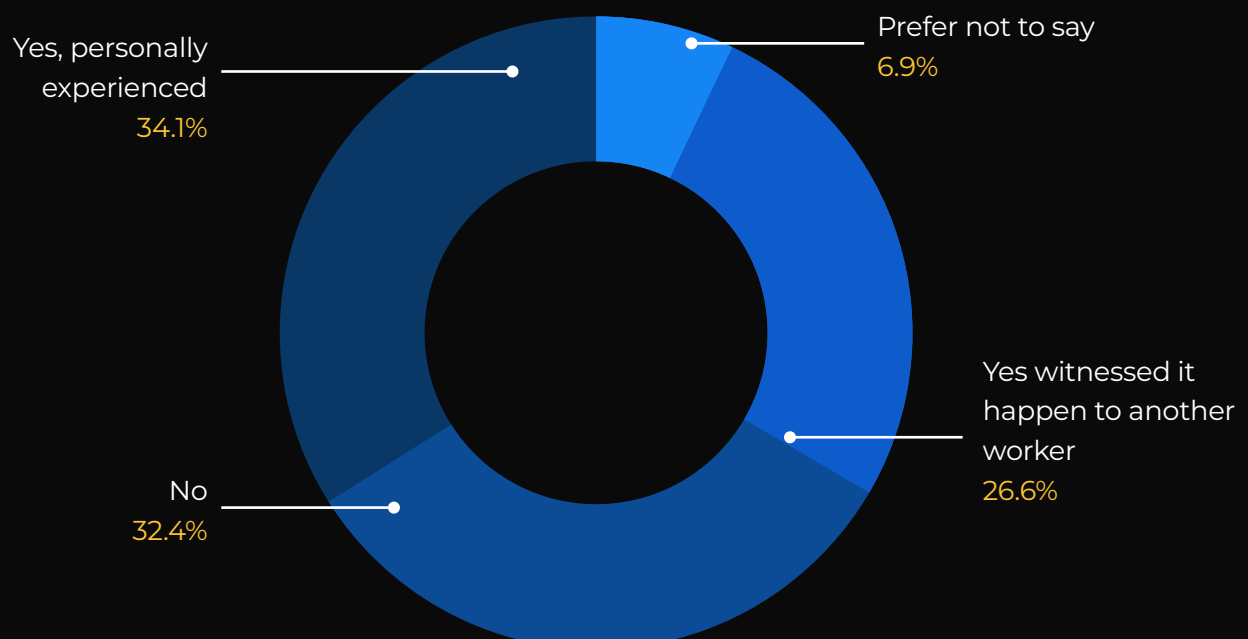


Figure 8: Experienced Harassment, Abuse or Violence While working

6.2.5. With respect to safety-related support or resources given by platforms, as represented in Figure 9, an overwhelming 82.7% of respondents reported that their platform provided no safety training (59.3%) or that the training or resources provided were insufficient (23.4%). Only 7.5% of respondents reported that platforms provided comprehensive safety training and resources, indicating a severe lack of platform support or concern for workers' safety.

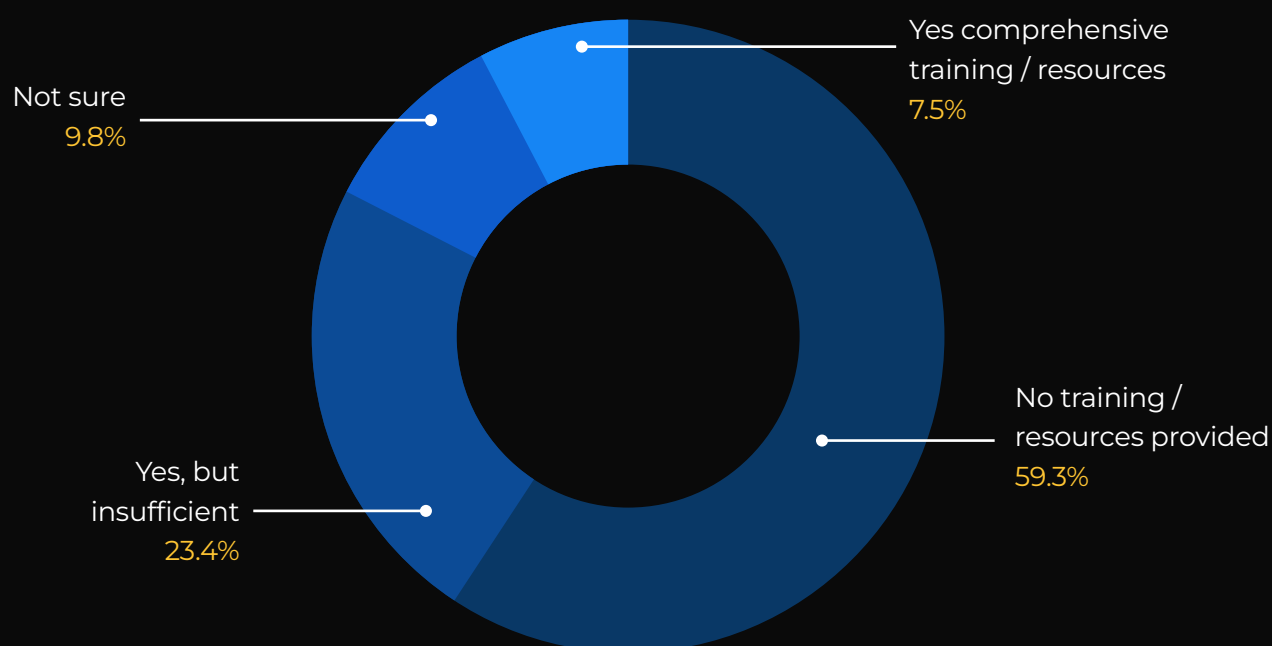


Figure 9: Platform safety training or resources for working on roads/streets

This lack of platform support is also reflected in respondents' low confidence that their platforms provide effective channels for reporting safety issues. 56.8% of workers were not confident that their platform provided effective channels for reporting safety issues and for taking follow-up action, and only a miniscule 4.4% reported being very confident in their platform in this regard (Table 3).

Platform Confidence Level	% Share
Not confident	56.8%
Somewhat confident	24.4%
Very confident	4.4%
Unsure	14.4%

Table 3: Confidence in the Platform for Reporting Safety Concerns & for taking Follow-up Action



6.3. Occupational Health

6.3.1. The Occupational Health section of the survey covers questions assessing the health issues related to work experienced by platform workers, health-related support available, and the status of and accessibility to the basic amenities and health infrastructure required for dignified work.

As presented in Table 4, Fatigue and sleep disruption, reported by 64.5% of respondents, were the most frequently experienced work-related health issues. 47.4% of respondents reported Musculoskeletal problems such as back and neck pain, suggesting that prolonged sitting, riding, and carrying loads contribute to widespread chronic pain and injury. Over two-fifths (41.1%) of workers reported experiencing mental health issues such as stress and anxiety due to work, highlighting that the nature of platform labour imposes a serious psychological as well as physical burden. Eye strain or vision issues (reported by 30%) and Respiratory problems (reported by 26.5%) further point to the health consequences of the intense visual focus required for navigation and app-based work, as well as prolonged exposure to traffic, pollution, and dust. These findings are particularly concerning in the context of persistently high Air Quality Index (AQI) levels in Delhi and several parts of North India, where air pollution frequently reaches hazardous or severe levels (Dey, 2025). Platform workers, who spend long hours outdoors in traffic-dense environments, are continuously exposed to toxic air without protective equipment or institutional safeguards. Unlike office or factory workers who may have access to indoor or controlled environments, gig workers remain directly exposed to ambient pollution throughout their working day (Sekar et al., 2023). The reported respiratory issues, therefore, reflect not only occupational strain but also the broader failure to integrate environmental health risks into occupational health and safety protections for platform workers.

Work-related health issues	% Share
Fatigue or Sleep disruption	64.52%
Musculoskeletal problems (back/neck pain, sciatica)	47.42%
Mental health issues (anxiety, stress)	41.08%
Eye strain or vision issues (from prolonged focus)	30.00%
Respiratory problems (rom pollution, dust, asthma)	26.45%
Cardiovascular strain (high blood pressure from stress)	9.89%
Other	0.11%

Table 4: Work-related health issues experienced by platform workers

6.3.2. Despite the high incidence of physical and mental health issues experienced by platform workers due to their work, a vast majority reported receiving no health-related (68.4%) or minimal health-related (13.1%) support from their platform (Figure 10). Only 6.2% report receiving comprehensive support, which shows a severe lack of platform support or concern for workers' health.

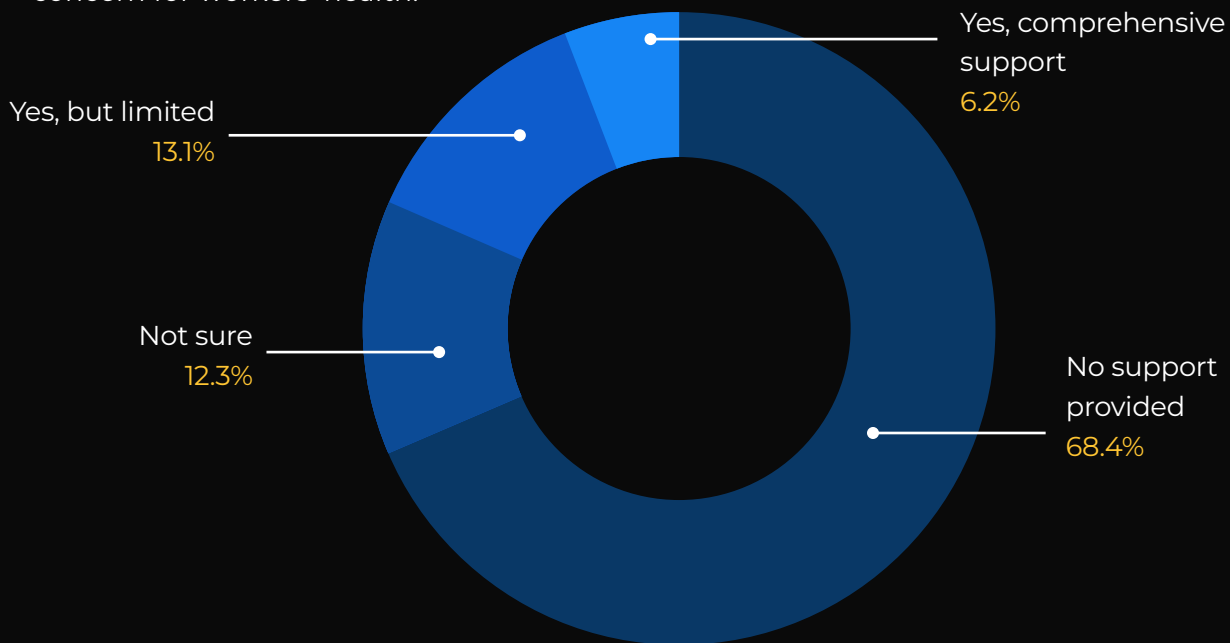


Figure 10: Health-related support provided by the platform

6.3.3. Given the burden of work on the physical and mental health of platform workers, it is also concerning that the majority of the respondents (62.3%) reported not having health insurance (Figure 11). Among those who reported having health insurance and having interacted with the claims process (9.9% total), the majority found the process difficult (7.8%), which is more than double the rate of those who found it easy (2.1%), suggesting a high barrier to accessing insurance benefits when needed.

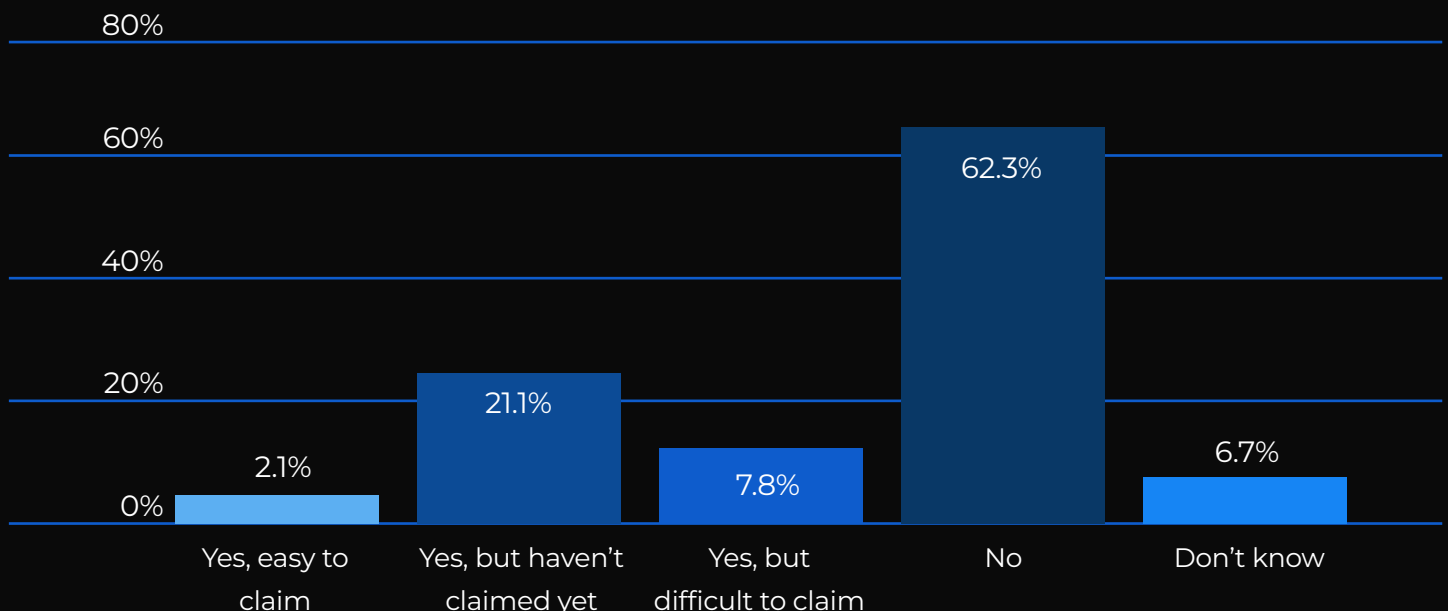


Figure 7: Access to and Ease of Claiming Accident Insurance

6.3.4. Access to basic workplace amenities such as toilets, drinking water, and safe rest areas is a fundamental requirement for dignified work, yet for platform workers whose workplace is the city, the responsibility for providing and ensuring these facilities remains largely undefined and unfulfilled. Regarding access to toilets, the

largest share of respondents (43.9%) reported using paid public facilities, indicating that access to sanitation is largely dependent on workers' own expenditure. Overall, 55.4% of respondents rely on either paid public toilets or informal access at restaurants or customers' homes, demonstrating that toilet access is neither guaranteed nor institutionally supported. Alarming, 15.9% of workers reported that toilet facilities are not accessible during working hours (Table 5), underscoring a serious deficit in basic sanitation and hygiene provision for a substantial section of the platform workforce.

Toilet Facility Status	% Share
Accessible, public toilet, paid	43.9%
Accessible, public toilet, free	27.8%
Accessible, private (at restaurants, customers' homes)	11.3%
Not accessible	15.9%
Toilet facility at the hub	0.9%
Other	0.2%

Table 5: Access to and Type of Toilet used while Working

Regarding the frequency of toilet use during working hours, nearly half of the respondents (48.0%) reported "rarely" or "never" using toilet facilities while working, with 45.4% selecting rarely and 2.6% selecting never (Figure 12). A further 38.8% reported using toilets only occasionally. This high level of infrequent use strongly suggests that workers are either consciously restricting fluid intake or enduring prolonged discomfort due to poor access to sanitation facilities. Such practices pose serious occupational health risks, including dehydration, urinary tract infections, and long-term kidney problems (Flouris et al., 2024). The findings indicate that limited sanitation access does not merely reflect inconvenience, but represents a structural health hazard embedded within the organisation of platform work.

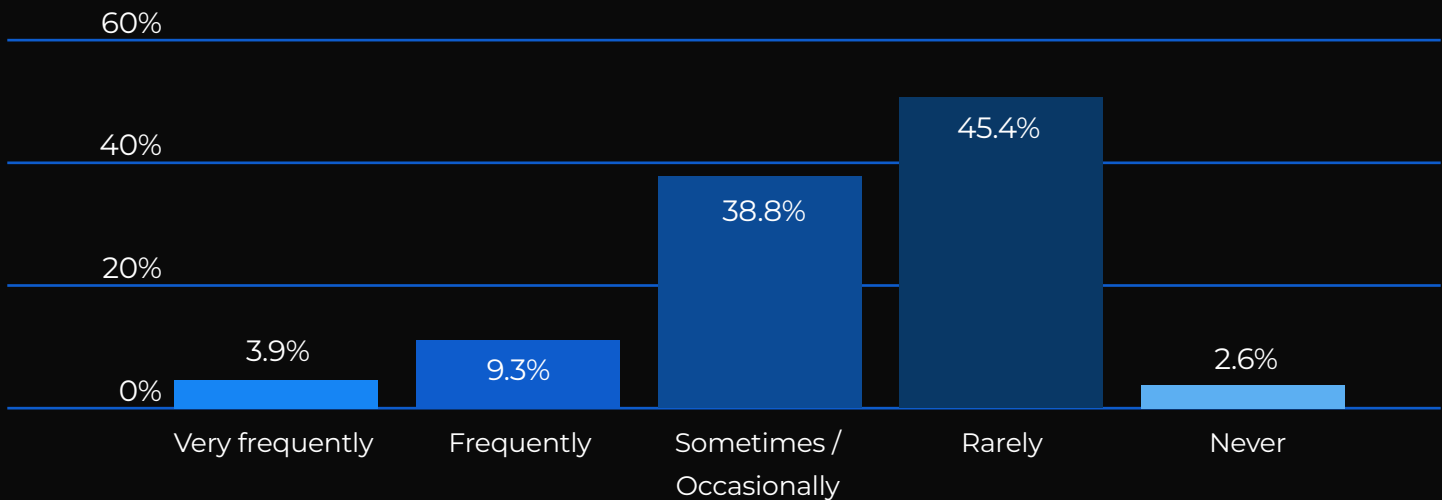


Figure 12: Frequency of toilet usage during working hours

6.3.5. Access to drinking water during working hours remains similarly inadequate for platform workers.

As shown in Figure 13, a majority of respondents (53.8%) reported purchasing their own drinking water, indicating that hydration during work is treated as a personal responsibility rather than a basic workplace necessity. When combined with those relying on private access at restaurants (14.2%) or public water sources (19.8%), it becomes evident that access to drinking water is largely informal, uncertain, and dependent on workers' own resources rather than being systematically ensured through the work environment.

Of particular concern is the finding that 11.5% of workers reported that drinking water is not accessible during working hours. This represents a serious occupational health risk, especially in the context of long working hours and high temperatures (Flouris et al., 2024). Inadequate hydration increases the risk of fatigue, heat exhaustion, reduced concentration, and long-term health complications (Ebi et al., 2021). Much like access to sanitation, the lack of reliable drinking water provision reflects the broader absence of basic workplace infrastructure for platform workers and highlights how even the most fundamental conditions for safe and dignified work remain unmet.

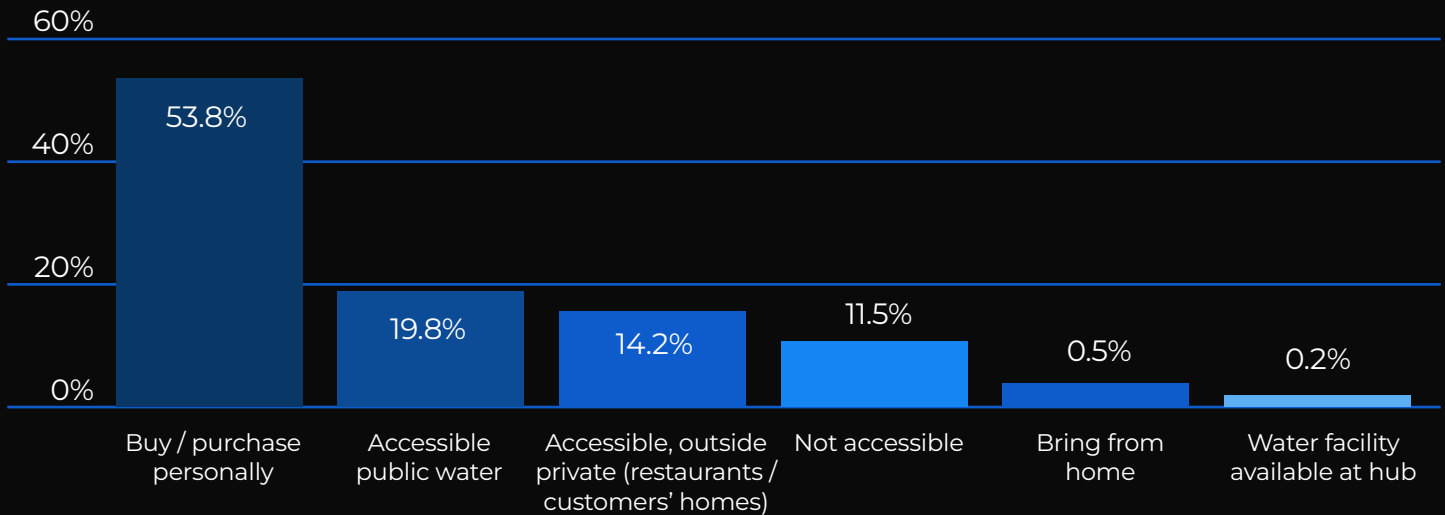


Figure 13: Access to and Type of Drinking Water Facilities available during Working Hours

6.3.6. Access to rest areas and the ability to take breaks during working hours are also severely limited for platform workers. Nearly two-thirds of respondents (66.2%) reported that they are rarely or never able to take breaks, with 43.5% selecting “rarely” and 22.7% selecting “never” (Figure 14).

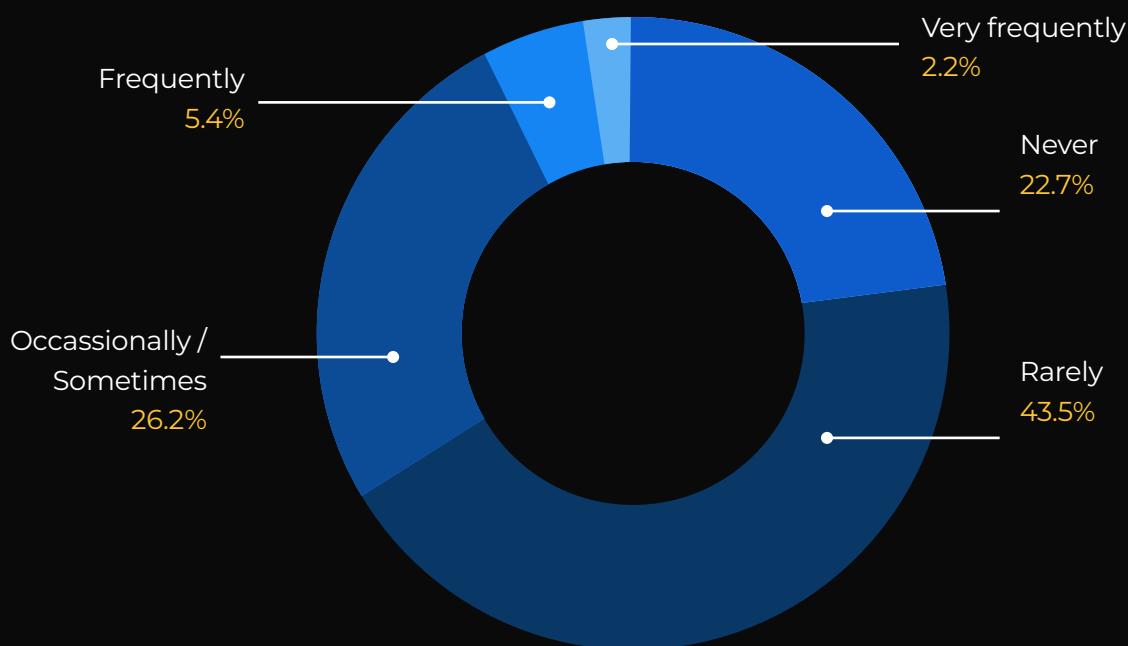


Figure 14: Frequency of Breaks taken during working hours

At the same time, a large majority (74.6%) reported that no designated rest areas or resting spots are available to them while working (Figure 15). This combination of limited break opportunities and the absence of rest infrastructure could significantly increase fatigue, physical strain, and accident risk (Cunningham et al., 2022), underscoring the lack of even minimal workplace support systems for the recovery and well-being of platform-based workers.

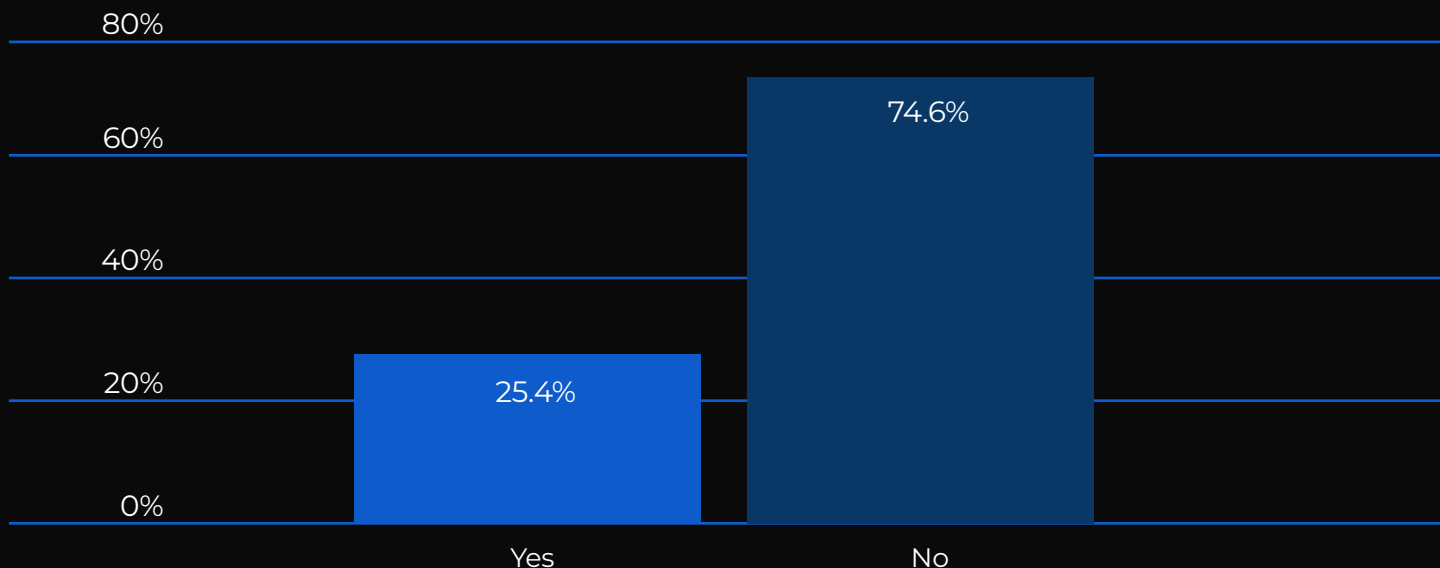


Figure 15: Availability of rest areas/spots during working hours

6.4. Effect of Extreme weather on Platform Workers

6.4.1. The questions in the Extreme Weather section of the study assess the prevalence of working in extreme weather, its impact on platform workers, protective measures taken in such conditions and the platform support provided.

A significant majority of respondents (78.8%) reported working in extreme weather, indicating that it is a common part of platform workers' working experience. Of respondents who reported working in extreme weather, 84.64% reported working under extreme heat, making it the most commonly experienced severe environmental condition (Table 6). Extreme cold was reported by 68.40% of workers, while 55.20% indicated working during heavy rain or thunderstorms, demonstrating that a majority routinely contend with multiple forms of severe weather. This confirms that exposure to extreme weather is not an occasional occurrence but an inherent part of everyday platform labour.

Types of Extreme Weather Experienced while Working	% of answered
Extreme heat	84.64%
Extreme cold	68.40%
Heavy rain or thunderstorms	55.20%
High winds	43.53%
Fog or low visibility	28.68%
Snow or ice/hail	5.96%

Table 6: Types of Extreme Weather experienced when working

6.4.2. Extreme weather also has a substantial impact on workers’ ability to perform their jobs safely.

As shown in Figure 16, a large majority of respondents (77.9%) reported that extreme weather has a moderate to severe impact on their work, with 11.2% identifying the impact as severe and 34.5% as major, making it the single largest response category. This indicates that extreme weather does not merely cause inconvenience but significantly compromises safety, efficiency, and physical endurance. The findings reinforce that environmental exposure is a core occupational risk for platform workers and must be treated as an integral component of occupational health and safety planning.

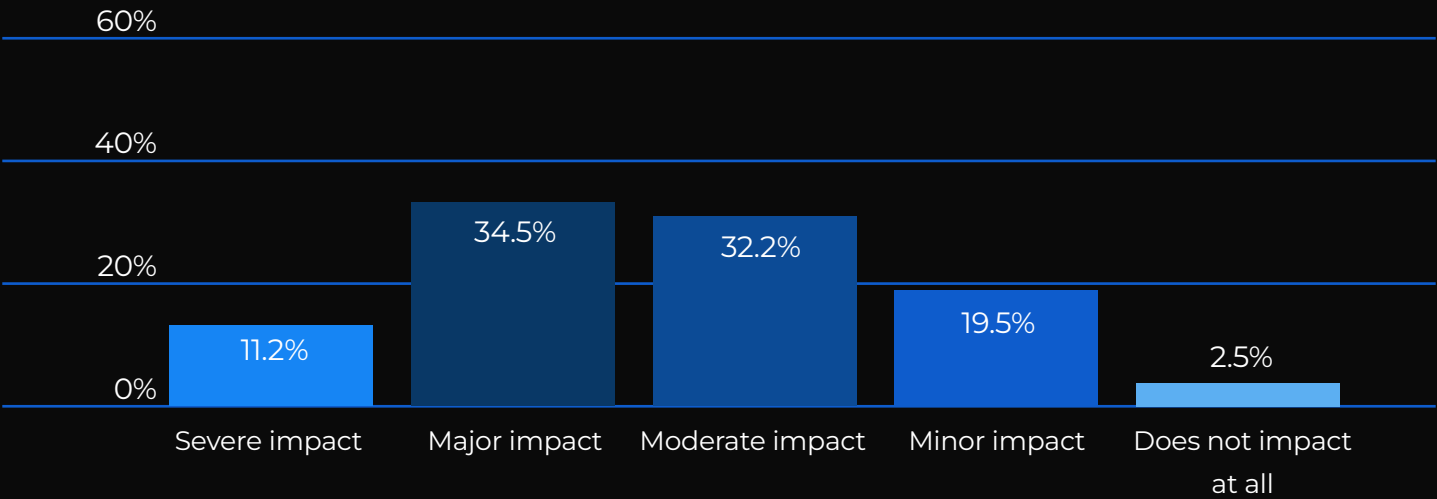


Figure 16: The Impact of extreme weather on work

6.4.3. In response to extreme weather conditions, workers primarily rely on self-initiated protective measures.

As shown in Table 7, the most common strategy, reported by a majority of respondents (70.2%), is the use of weather-appropriate clothing or gear, such as raincoats or thermal wear. Nearly half (49.5%) reported adjusting their routes to avoid hazardous areas, reflecting the need for constant risk assessment while navigating unsafe environments. 58.9% stated that they reduce their working hours during extreme weather, while 15.6% reported stopping work entirely. While these measures may reduce immediate exposure to danger, they also directly affect workers’ earnings, highlighting that the responsibility for balancing safety and income is borne almost entirely by workers themselves, rather than supported by institutional or platform-based protections.

Protective Measures_Extreme Weather	% of answered
Use weather-appropriate clothing (raincoat, thermal clothing)	70.2%
Reduce working hours	58.9%
Adjust routes to avoid hazardous areas	49.5%
Stop working entirely	15.6%

Table 7: Protective measures taken while working in extreme weather

6.4.4. Platform support during extreme weather remains largely absent. A substantial majority of respondents (74.87%) reported that their platforms provide no policies or guidelines for working during extreme weather conditions. Only 5.08% felt that existing policies were clear and helpful (Figure 17). This lack of institutional guidance leaves workers to navigate hazardous environmental conditions independently, reinforcing the broader pattern in which occupational risks are systematically shifted onto workers while platforms retain operational control without corresponding responsibility.

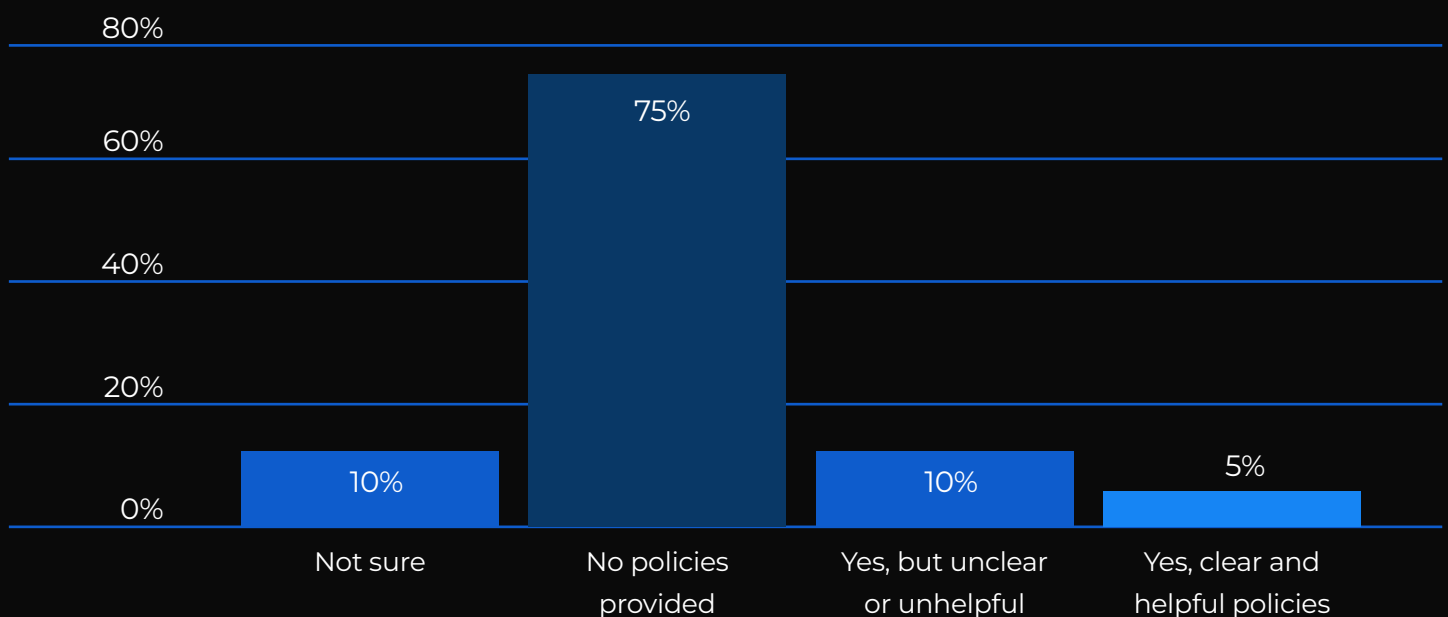


Figure 17: Platform Guidance or Policies provided for Working in Extreme Weather

6.5. Effect of Extreme Heat on Platform Workers

6.5.1. The section on Extreme Heat evaluates the reported impact of heat on platform workers' productivity or ability to perform their job, heat-related health symptoms experienced by them and the association between access to workplace amenities and the reported impact of heat. The data, as shown in Table 8, indicates that extreme heat

has a significant impact on platform workers' ability to perform their jobs. The largest single response category was "major impact," reported by 35.03% of respondents, with 7.23% respondents reporting severe impact. This indicates that heat exposure severely disrupts work performance for almost half of the workers. Overall, an overwhelming 96.57% of respondents reported that heat affects their productivity to some degree. Notably, 75.51% reported a moderate-to-severe reduction in productivity due to heat exposure, demonstrating that heat is not a mere inconvenience but a central occupational constraint. These findings highlight extreme heat as one of the most significant environmental risks undermining both worker health and work efficiency in platform-based employment

Heat's Impact on work	% of answered
Severe Impact	7.23%
Major Impact	35.03%
Moderate impact	33.25%
Minor impact	21.07%
Does not impact at all	3.43%

Table 8: Reported impact of heat on work

6.5.2. Workers reported a wide range of heat-related health symptoms. Of those who reported heat-related health issues, the most commonly experienced conditions were heat exhaustion (61.8%), dehydration (50.4%), and heat stroke or severe overheating (49%), indicating that a large proportion of workers face significant heat stress while working. Skin

irritation was reported by 41.3%, reflecting prolonged exposure to sunlight, sweat, and pollution (Figure 18). Together, these findings demonstrate that extreme heat is not only reducing productivity but also posing serious health risks for platform workers.

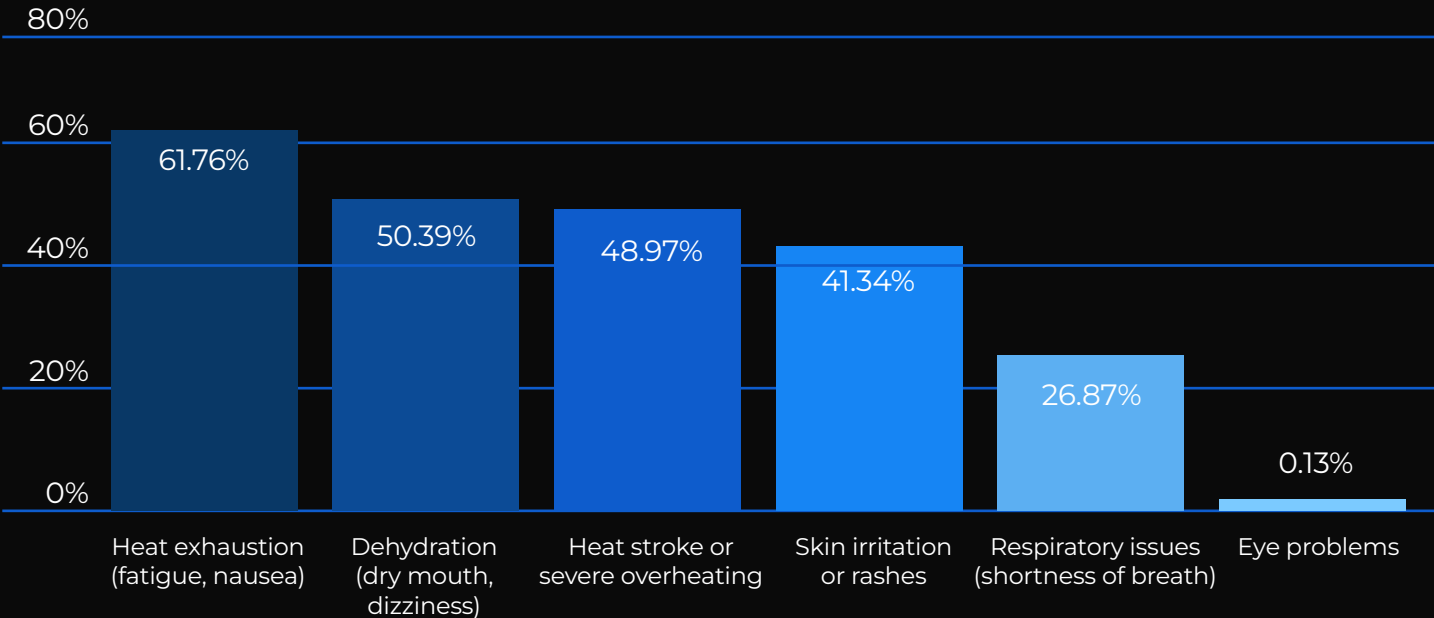


Figure 18: Heat-related Health Symptoms experienced by Workers

6.5.3. An important and concerning finding also emerges from the relationship between the reported impact of extreme heat on work and access to basic workplace amenities. The analysis shows a consistent and statistically significant association between the extent to which heat affects workers' productivity and their access to key workplace facilities (n=788).

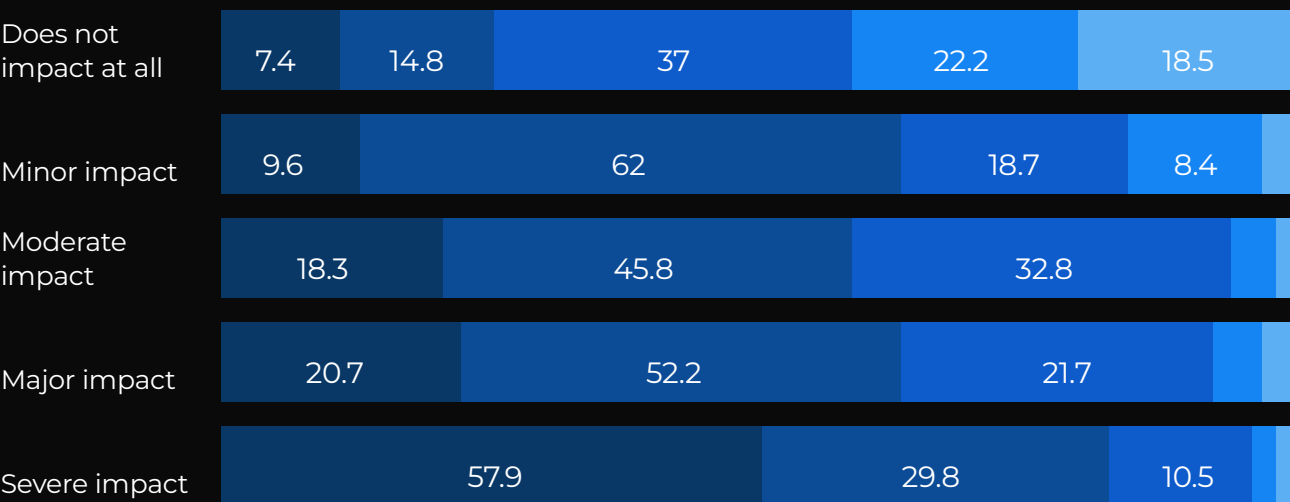
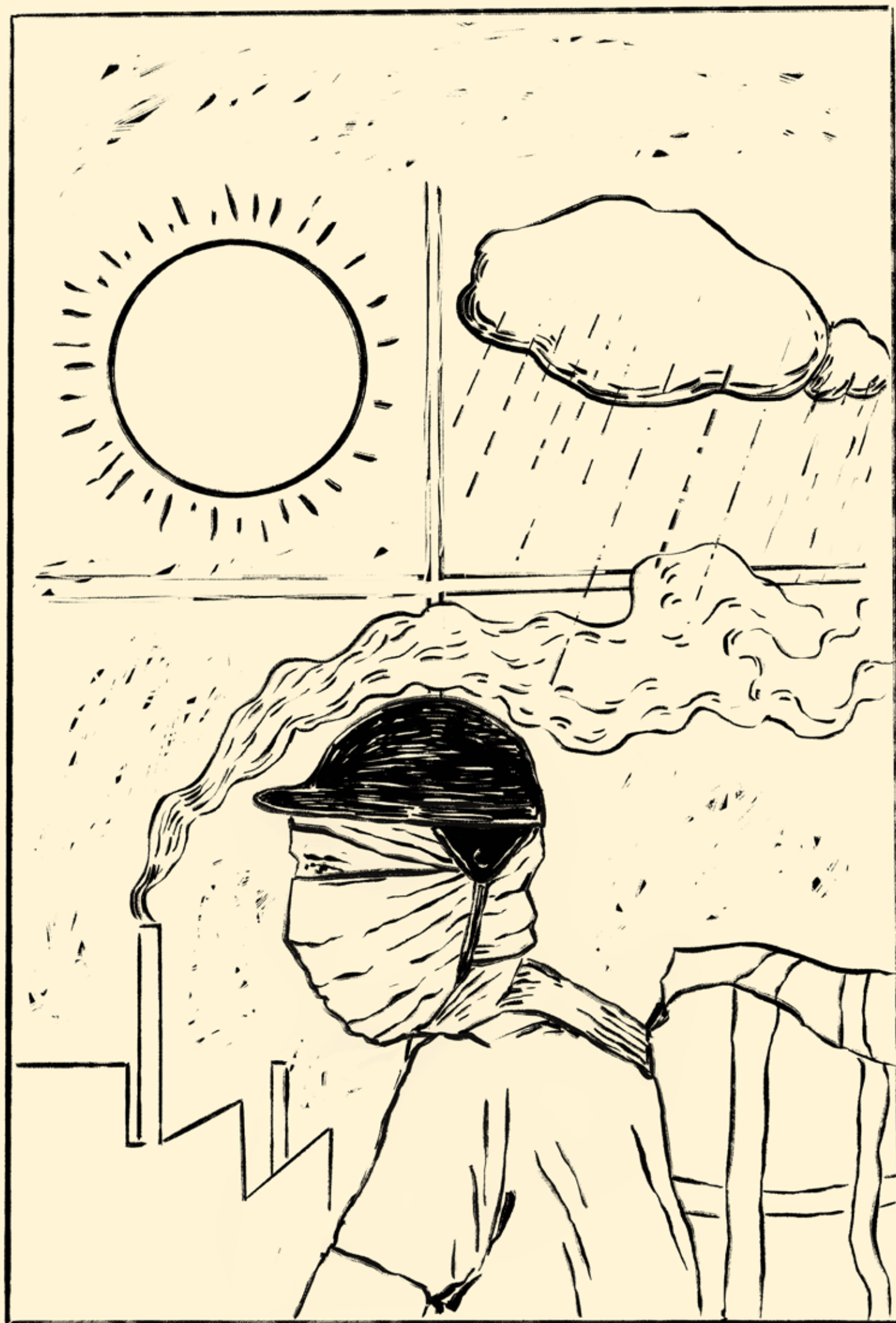


Figure 19: Heat's Effect on Work x Frequency of Breaks

[Key Takeaway: Workers reporting greater heat-related productivity/work effects are much more likely to take breaks "rarely" or "never." Among those saying heat "severely impacts" productivity, nearly 90% report taking breaks "never" or "rarely" (Cramer's $V = 0.231$, $p < 0.001$)]



The strongest association is observed with the frequency of breaks taken during working hours (Heat impact x Breaks, Cramer's $V = 0.231$, $p < 0.001$), followed by the availability of rest areas (Heat impact x Rest Areas, $V = 0.206$, $p < 0.001$). These results indicate that workers who report greater productivity loss due to heat are disproportionately those who are unable to take regular breaks and who lack places to rest during work. Significant associations are also observed for toilet access ($V = 0.192$, $p < 0.001$) and drinking water access ($V = 0.171$, $p < 0.001$), reinforcing that heat-related work impacts are closely linked to constrained access to basic amenities.

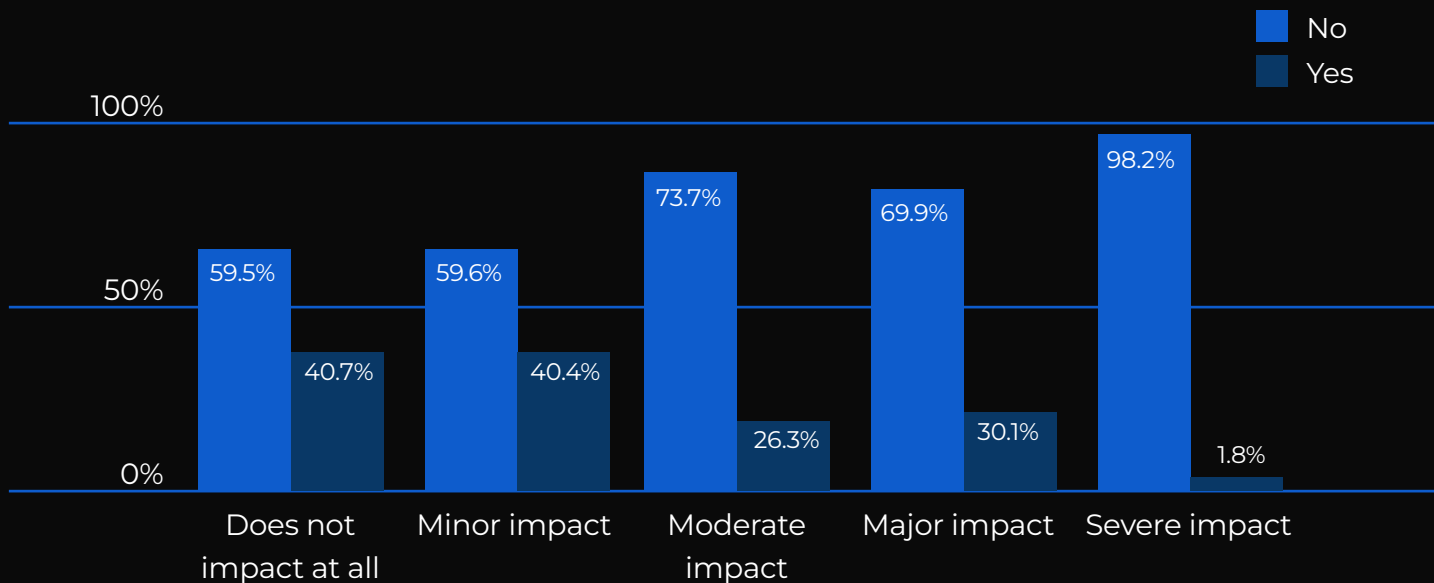


Figure 20: Heat's Effect on Work x Availability of Rest Areas

[Key Takeaway: Among those reporting heat severely impacts their work, almost all report no rest areas available ($V = 0.206$, $p < 0.001$)]

Although the effect sizes are small to moderate, they are statistically robust, demonstrating that access to workplace amenities is not randomly distributed but systematically patterned by workers' exposure to heat-related work difficulties. In practical terms, this means that the workers most affected by extreme heat are also those least supported by basic infrastructure.

These findings highlight the urgent need for platform companies and authorities to mandate and enforce paid cooling breaks, shaded rest areas, free drinking water, and accessible toilet facilities along delivery/work routes. Without such measures, extreme heat will continue to undermine both worker health and productivity, placing the burden of climate risk squarely on the most vulnerable workers.

6.5.6. When experiencing heat-related health problems, 40.7% of the respondents, as shown in Figure 21, reported that they sought medical support by visiting a doctor or

clinic. However, 26.4% stated they needed medical attention but did not seek it, indicating significant barriers to accessing timely healthcare. Notably, only 7.9% reported contacting platform support for medical assistance, highlighting the limited role platforms play in facilitating health care for workers. These findings point to a critical gap between health needs and institutional support, leaving workers to manage serious heat-related illnesses largely on their own.

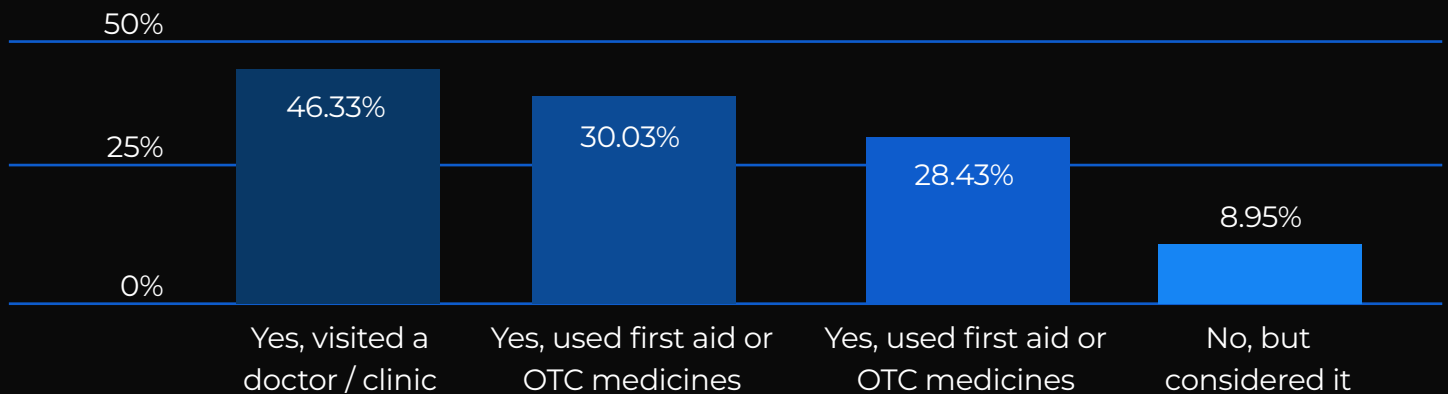


Figure 21: Medical support sought for heat-related health issues

6.6. Women Workers

6.6.1. Although women constituted only 10.5% of the surveyed workforce, several findings reveal clear gender-specific patterns, particularly in platform segmentation, access to workplace amenities, safety conditions, and experiences of harassment. Across the various platform types, women workers were concentrated in Household and Personal care (43.8%) and Food and Grocery delivery (36.2%), with a much lower presence in Ride-hailing and E-commerce (Figure 22). Whereas men had a strong presence in Ride-hailing (39.3%), Food and Grocery delivery (40.3%), and E-commerce (16.5%), with very few engaged in Household and Personal care (3.8%). This suggests a pattern of gender-based occupational division in the platform economy, with women clustered primarily in care-related work.

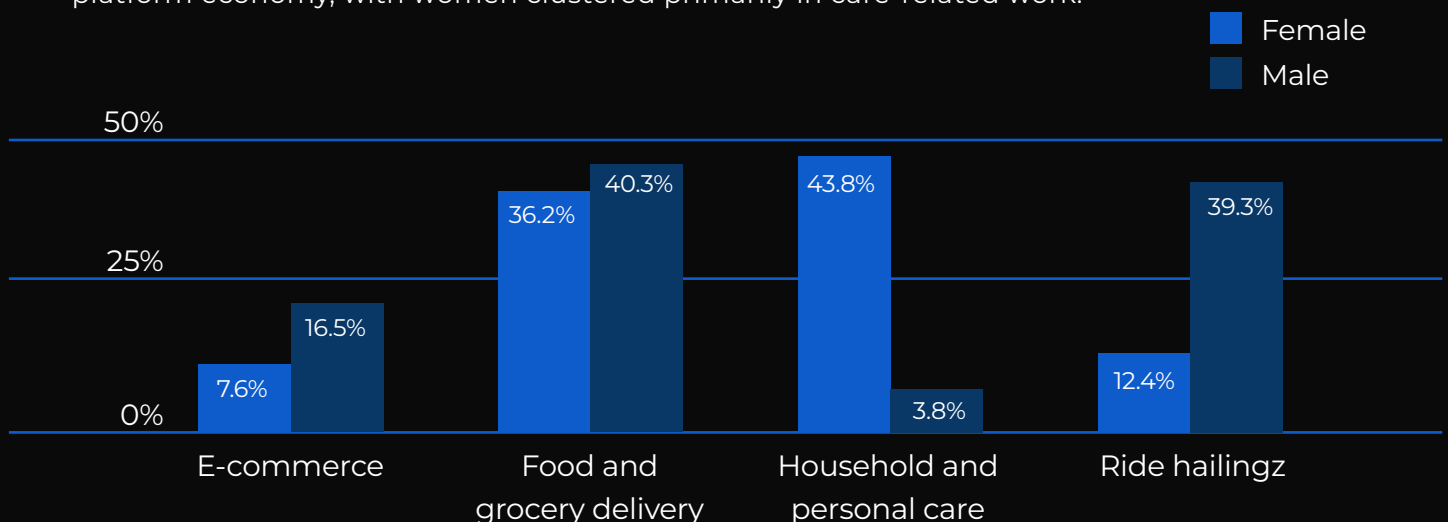


Figure 22: Type of platform x Gender

6.6.2. One of the key findings concerning occupational safety, as represented in Table 9, is that safety and harassment outcomes for platform workers differ by gender. To

distinguish overall platform composition effects from within-segment variation, results for women and men were analysed separately within each platform type. Because some platform-gender subgroups are small [notably women in E-commerce (n=8) and women in ride-hailing (n=13)], subgroup percentages are presented alongside counts and should be interpreted as indicative rather than precise estimates since a difference of one or two respondents can materially shift the percentage in these groups. With that caveat, the pattern in this sample suggests that women reported a higher prevalence of frequent unsafe work conditions than men in Food and grocery delivery [(30/38) 78.9% women vs 35.2% men (127/361)] and Household and personal care [(24/46) 52.2% women vs 23.5% men (8/34)]. For harassment, abuse, or violence, women in Food and grocery delivery overwhelmingly reported exposure through either personal experience or witnessing [(38/38) 100% women vs 57.1% men (206/361)] and women in Household and personal care also reported high exposure [(37/46) 80.4% women vs 64.7% men (22/34)]. In ride-hailing, the apparent gender gap should be treated with particular caution because women constitute a very small subgroup in this sample; therefore, the platform-specific comparison is less stable and should not be over-interpreted.

Platform	Variable	n_women workers	n_men workers	Women %	Men %v
E-commerce	Unsafe work conditions (frequent/very frequent)	8	148	87.5% (7)	29.7% (44)
E-commerce	Harassment, abuse, violence (experienced or witnessed)			100% (8)	67.6% (100)
Food & Grocery delivery	Unsafe work conditions (frequent/very frequent)	38	361	78.9% (30)	35.2% (127)
Food & Grocery delivery	Harassment, abuse, violence (experienced or witnessed)			100% (38)	57.1% (206)
Household & Personal Care	Unsafe work conditions (frequent/very frequent)	46	34	52.2% (24)	23.5% (8)
Household & Personal Care	Harassment, abuse, violence (experienced or witnessed)			80.4% (37)	64.7% (22)
Ride-hailing	Unsafe work conditions (frequent/very frequent)	13	352	23.1% (3)	21% (74)
Ride-hailing	Harassment, abuse, violence (experienced or witnessed)			53.8% (7)	53.7% (189)

Table 9: Within-platform gender comparison (Unsafe work conditions and Experiencing harassment, abuse, or violence)

6.6.3. Access to basic workplace amenities such as toilets and drinking water also shows clear gendered differences across platform types (Table 10).

Across multiple segments, women were more likely than men to rely on private access through restaurants or customers' homes, while men were more likely to use paid public toilets or purchase water personally. In Food and grocery delivery, 42.1% of women reported having private access to toilets, compared with men's most common reliance on paid public toilets (41.6%). For drinking water in the same segment, women again primarily relied on private access (44.7%), whereas men most commonly purchased water themselves (51.2%). In Ride-hailing, both women and men most frequently relied on paid public toilets, though reliance was markedly higher among women (76.9%) than among men (55.7%). For drinking water, purchasing water personally was the most common option for both groups, but remained higher among men (67.6%) than women (53.8%). In Household and personal care services, the gender contrast was the most pronounced. A majority of women relied on private access to toilets (56.5%), compared with only 29.4% of men. For drinking water, 65.2% of women depended on private access, while men most commonly relied on public water sources (35.3%).

These patterns indicate that women's access to basic amenities is more closely tied to customer spaces and informal arrangements, increasing their dependence on private environments and potentially exposing them to greater vulnerability and discomfort. Men, in contrast, rely more heavily on paid or public facilities, reflecting different mobility patterns and risk exposures. The findings highlight that amenity access in platform work is not only inadequate overall, but also unevenly structured along gender lines.

Platform Type	Amenity	Women – Top Access Category	Men – Top Access Category
E-commerce	Toilet	Private access (restaurants/ customers' homes) -75.0%	Free public toilet - 44.6%
	Drinking water	Private access (restaurants/ customers' homes) -50.0%	Purchase personally - 49.3%
Food & Grocery Delivery	Toilet	Private access - 42.1%	Paid public toilet - 41.6%
	Drinking water	Private access - 44.7%	Purchase personally - 51.2%
Household & Personal Care	Toilet	Private access - 56.5%	Private access -29.4%
	Drinking water	Private access - 65.2%	Public water - 35.3%
Ride-hailing	Toilet	Paid public toilet -76.9%	Paid public toilet -55.7%
	Drinking water	Purchase personally -53.8%	Purchase personally - 67.6%

Table 9: Within-platform gender comparison (Access to Amenities: Toilet and Drinking Water)



7. DISCUSSION AND RECOMMENDATIONS

7.1 PLATFORM WORK AS A CLIMATE-EXPOSED AND STRUCTURALLY HIGH-RISK OCCUPATION

The findings of this study establish that platform-based gig work in India must be understood not merely as digitally mediated service work, but as a structurally high-risk and climate-exposed occupation. While extreme heat emerges as one of the most visible and immediate threats, it operates within a broader occupational risk environment characterised by long working hours, sustained exposure to traffic hazards, air pollution, violence and harassment and the absence of basic workplace infrastructure.

Platform workers perform labour across fragmented urban spaces such as roads, marketplaces, residential complexes, and private homes, without these spaces being formally recognised as workplaces in regulatory practice. This spatial fragmentation enables a system in which platforms exercise significant control over work allocation, performance metrics, and income flows, while responsibility for occupational risk remains diffused. The evidence suggests that occupational hazards in platform work are neither incidental nor episodic, but routine and structurally embedded within the organisation of work itself.

7.2 WORKING TIME, ECONOMIC DEPENDENCE, AND THE EROSION OF LABOUR STANDARDS

The study clearly demonstrates that platform work is predominantly full-time in practice, despite being framed as flexible or supplementary. A majority of workers report working beyond 48 hours per week, with a substantial proportion exceeding 70 hours. Combined with evidence of long-term engagement in platform work, this indicates sustained economic dependence rather than intermittent participation. These patterns exceed the standard working-time benchmarks set out in Indian labour laws. While gig workers are formally positioned outside conventional employment relationships, the empirical reality

reflects characteristics typically associated with full-time employment.

Importantly, working time in platform labour is not solely determined by worker choice. It is shaped by incentive structures, dynamic pricing, and rating systems, which create indirect pressures to remain continuously active. As a result, fatigue, sleep disruption, and overwork emerge not as individual outcomes, but as systemic features of platform-mediated labour.

7.3 ROAD SAFETY, TWO-WHEELER DEPENDENCY, AND ALGORITHMIC RISK

Road-based risks constitute the most immediate and frequent occupational hazard for platform workers. High rates of near-misses, injuries, and accidents reflect the convergence of multiple structural factors such as dependence on two-wheelers, congested urban infrastructure, and time-sensitive delivery expectations. These risks are further shaped by algorithmic management systems that link income directly to order completion rates. Even where explicit delivery-time guarantees are withdrawn, performance pressures persist through incentives, penalties, and other mechanisms embedded within platform design.

As a result, road safety risks cannot be understood as isolated traffic incidents or individual lapses. Instead, they emerge from the interaction between urban infrastructure constraints and digitally mediated work organisation, where speed is economically incentivised, and safety remains externally borne.

7.4 OCCUPATIONAL HEALTH: CUMULATIVE PHYSICAL, ENVIRONMENTAL, AND PSYCHOSOCIAL BURDENS

The findings reveal that platform work imposes multi-dimensional health burdens. High levels of fatigue, musculoskeletal disorders, stress, anxiety, and respiratory problems reflect the cumulative effects of prolonged physical exertion, repetitive strain, and constant navigation demands. These health risks are compounded by environmental exposure. Workers operate for extended periods in high-pollution environments and in extreme weather, particularly in cities such as Delhi, without protective measures or institutional recognition of pollution or heat as an occupational hazard.

In addition, psychosocial stress emerges as a critical dimension of occupational health. Income volatility, opaque account deactivation decisions, and rating pressures contribute to persistent anxiety and insecurity. Together, these findings indicate that platform work produces not only acute risks but also long-term health vulnerabilities that remain largely unaddressed within existing occupational health frameworks.

7.5 INFRASTRUCTURE DEFICITS, URBAN WORKSPACES, AND UNEQUAL ACCESS

A central finding of this study is the absence of basic workplace infrastructure for platform workers. Limited access to toilets, drinking water, rest areas, and breaks reflects a structural gap in recognising the city as a workplace. Workers rely heavily on informal arrangements, paid facilities, or personal expenditure to meet basic needs. This lack of institutional provision results in practices such as restricting water intake or avoiding breaks, which have direct health consequences.

These deficits are not evenly distributed. Gendered patterns of access reveal that women workers are more dependent on private spaces for sanitation and hydration, which may increase vulnerability and discomfort. This highlights that infrastructural inadequacy is not only a matter of absence, but also of unequal access shaped by gender and work type.

7.6 CLIMATE EXPOSURE AND THE INTENSIFICATION OF OCCUPATIONAL RISK

The findings establish that extreme weather conditions, particularly heat, are a routine and integral part of platform work. A majority of workers report significant impacts on productivity and health, with heat-related symptoms such as dehydration, exhaustion, and heat stroke widely prevalent. Importantly, the impact of extreme heat is closely associated with access to basic amenities. Workers who report greater productivity loss due to heat are also those with limited access to rest, water, and sanitation. This demonstrates that climate vulnerability is not evenly experienced but is systematically shaped by infrastructural deficits.

Despite this, institutional support remains minimal, and workers largely rely on self-managed coping strategies that often reduce income. This indicates that climate risk is effectively externalised onto workers, even as it becomes a defining feature of their working conditions.

7.7. RECOMMENDATIONS FOR REGULATORS

7.7.1 Universal Registration and Social Security Delivery

Regulatory efforts must prioritise universal registration of platform workers and the effective delivery of social security benefits. Platform companies should be mandated to share verified worker data with designated authorities to enable automatic inclusion of all workers in the e-Shram database. This is essential for operationalising entitlements under the Code on Social Security, 2020.

However, the current approach, where gig workers are formally recognised but primarily considered only for selective scheme delivery, requires revision. The State must assume responsibility as the principal guarantor of social protection and ensure comprehensive coverage. In line with national laws and international standards, particularly the ILO Convention No. 102 on Social Security (Minimum Standards), social protection must cover core contingencies such as retirement, healthcare, disability, childcare, gratuity and provident fund and insurance programs. Ensuring access to these protections would align domestic frameworks with global social protection norms and reduce the vulnerability of platform workers.

7.7.2 Recognition of Platform Workers within Labour Law Frameworks

Legal definitions across labour statutes should be harmonised to recognise platform workers as “workers” for the purposes of occupational safety, health, and social security protections. This requires convergence between the Code on Social Security, 2020 and the Occupational Safety, Health and Working Conditions Code, 2020, to ensure that protections are not undermined by classification gaps. Such alignment is necessary to move beyond formal recognition and enable the effective application of labour standards to platform-based work.

7.7.3 Extension of Occupational Safety and Health Protections

Occupational safety frameworks must be explicitly extended to platform work by recognising roads, public spaces, and customer premises as legitimate workplaces under the Occupational Safety, Health and Working Conditions Code, 2020. Regulatory authorities should define enforceable responsibilities for platforms in relation to risk mitigation, safety standards, and reporting of occupational injuries. This includes integrating climate risks, road safety, and public-space hazards into OSH frameworks.

7.7.4 Regulation of Vehicle Use and Insurance Coverage

There is a need to align transport and insurance frameworks with the realities of platform work. Provisions under the Motor Vehicles Act, 1988, should be updated to permit and regulate the commercial use of two-wheelers in platform-based services. At the same time, the Insurance Regulatory and Development Authority of India must mandate standardised insurance products that adequately cover platform workers and prevent claim denials arising from technical classifications of vehicle use. Regulatory clarity is essential to close existing protection gaps.

7.7.5 Climate and Heat Protection Measures

Extreme heat and adverse weather conditions must be formally recognised as occupational hazards within labour and disaster governance frameworks. The scope of the Disaster Management Act, 2005, should be expanded to include heatwaves as notified disasters.

Regulatory standards should mandate enforceable work-rest cycles, provision of paid cooling breaks, and the suspension of penalties during officially declared extreme weather conditions. Early warning systems must be integrated into platform applications to provide real-time alerts. In addition, the State should invest in awareness programmes to build workers' capacity as first responders in extreme weather conditions, including training on heat stress, dehydration, and emergency response.

7.7.6 Urban Infrastructure as Workplace Infrastructure

The recognition of the city as a workplace requires corresponding investment in urban infrastructure. Urban local bodies must ensure universal, non-discriminatory access to toilets, drinking water, and shaded rest areas along high-density work corridors. These provisions should be incorporated into licensing conditions for commercial establishments, ensuring that platform-based gig workers are not denied access to basic amenities. Regulatory frameworks must also address access in private spaces, recognising that customer premises function as workplaces.

Given the importance of women's participation in the platform economy, infrastructure planning must adopt a gender-responsive approach to ensure safe and equitable access to public amenities. Expanding such access is critical to realising the demographic and economic potential of women workers.

7.7.7 Institutional Mechanisms and Worker Representation

Statutory tripartite welfare boards comprising government, platform companies, and worker representatives should be established to oversee both welfare delivery and regulatory functions. These boards can draw on existing institutional models such as the Building and Other Construction Workers' Welfare Boards and the framework under the Street Vendors (Protection of Livelihood and Regulation of Street Vending) Act, 2014, both of which emphasise worker participation and decentralised governance. In addition, the experience of the Hamal Panchayat model in Maharashtra provides an important example of worker-led welfare governance, where collective organisation has enabled access to social security, dispute resolution, and improved working conditions for head-load workers in the informal economy.

The proposed boards should not be limited to welfare distribution but must also be empowered with regulatory authority to monitor working conditions, ensure fair practices, and address grievances. Worker representation is central to their effectiveness and should be ensured through democratic processes, including direct election mechanisms, as reflected in the Street Vendors Act.

Collectivisation of platform workers should be actively facilitated, recognising its critical role in strengthening accountability, improving governance outcomes, and ensuring that workers have a meaningful voice in shaping the conditions under which they work.

7.7.8 Gender-Responsive Regulatory Frameworks

Regulatory frameworks must incorporate gender-responsive provisions to address the specific risks faced by women platform workers. Protections under the Sexual Harassment of Women at Workplace Act, 2013, should be extended to platform-mediated workspaces, including customer premises. Similarly, the Maternity Benefit Act, 1961, should be adapted to include platform workers. Urban childcare systems, including creche facilities, must be redesigned to accommodate the temporal and spatial nature of gig work.

Additional protections should include mandatory customer verification (KYC), strengthened emergency response systems, police sensitisation, and mechanisms to identify and restrict unsafe customers. Layered safety protocols are essential given the increasing role of private homes as workplaces.

7.8. RECOMMENDATIONS FOR PLATFORMS

7.8.1 Algorithmic Transparency and Accountability

Platform companies operate within a regulatory space that affords them significant flexibility in designing business models and technological systems. This freedom, however, must be exercised responsibly. Algorithmic systems governing work allocation, ratings, incentives, and deactivation must be transparent, fair, and accountable. Workers' concerns regarding opaque penalties, arbitrary account deactivation, and income volatility must be addressed through internal regulatory mechanisms. This regulatory freedom should not be misused. Platforms must proactively ensure fair and ethical design of digital systems rather than waiting for state intervention.

7.8.2 Redesign of Incentive and Performance Systems

Incentive structures should be redesigned to prioritise safety and well-being. Current systems that encourage continuous work without adequate breaks contribute to fatigue and risk. Workers should not be penalised for logging out, declining tasks, or reducing work during extreme weather conditions. Performance systems must account for environmental and infrastructural constraints.

7.8.3 Comprehensive Safety Training and Skill Development

Platforms should institutionalise mandatory and recurring training programmes covering road safety, extreme-weather response, first aid, and risk management. An annual training cycle should be established, alongside opportunities for skill development and upward mobility, to address workers' concerns about insufficient training and long-term growth.

7.8.4 Universal Insurance and Emergency Support Systems

Platforms must ensure universal access to comprehensive accident and health insurance. Claims processes should be simplified and time-bound. Emergency response systems must be strengthened to provide immediate assistance during accidents and work-related health incidents.

7.8.5 Human-Centred Grievance Redressal Mechanisms

Grievance redressal systems should not rely solely on automated processes.

Over-dependence on AI and chatbot-based systems risks alienating workers. Human oversight must be integrated into grievance mechanisms to ensure timely resolution, transparency, and accountability.

7.8.6 Occupational Health and Public Health Integration

Platforms should facilitate workers' access to public and private healthcare systems, including government schemes. Given the mobile nature of platform work, public health infrastructure should function as a distributed system of care. The State and platforms should ensure convergence of available health services and improve awareness of entitlements. Public health systems must also be strengthened to address occupational health concerns.

7.8.7 Gender-Sensitive Platform Design and Safety Protocols

Platforms must implement gender-sensitive safety measures, including robust customer verification, monitoring and blacklisting of unsafe users, and effective emergency response systems. Additional measures should include safety training, support for accompanied work, improved reporting mechanisms, and design features that allow workers to make informed decisions about assignments. Platforms must also enable systems to flag problematic customers and ensure accountability.

7.8.8 Consumer Responsibility

Consumers must also be recognised as stakeholders in ensuring safe working conditions. Platform interfaces should incorporate guidelines that encourage respectful behaviour and non-discriminatory access to basic amenities, such as water and sanitation. Customers should not deny access to essential facilities where their premises function as workplaces. Awareness campaigns can play an important role in shaping responsible consumer behaviour.



CONCLUSION

This study demonstrates that platform work in India has evolved into a full-time, economically essential form of labour, yet continues to operate outside the institutional protections traditionally associated with employment. The findings show that workers routinely experience long working hours, sustained exposure to occupational hazards, limited access to basic infrastructure, and increasing vulnerability to climate risks. These conditions are not incidental; rather, they are structurally embedded within the organisation of platform-mediated work.

A defining feature of this system is the growing reliance on algorithmic management, through which platforms exercise significant control over work allocation, performance evaluation, and income flows. Incentive structures, rating systems, and dynamic pricing mechanisms create continuous pressure on workers to remain active, often at the cost of their safety and well-being. While this creates an appearance of flexibility, the evidence suggests that worker autonomy is constrained in practice, with risk effectively transferred onto workers.

The absence of a clearly defined workplace further enables a diffusion of responsibility. Platform work takes place across roads, markets, and private homes, yet these spaces remain inadequately recognised within regulatory frameworks. This fragmentation has resulted in significant gaps in access to sanitation, rest, healthcare, and social protection. Climate change intensifies these vulnerabilities. Extreme heat and environmental exposure are now central determinants of working conditions, yet institutional responses remain limited. The findings demonstrate that climate risks are closely linked to infrastructural deficits, reinforcing the need for integrated approaches that combine labour regulation, urban planning, and public health systems. Importantly, risks are not uniformly experienced. Women workers face layered and heightened vulnerabilities, reflecting gendered patterns of work, access, and safety. Addressing platform work, therefore, requires both universal protections and targeted, gender-responsive interventions.

The recommendations outlined in this report provide a comprehensive framework to address these challenges. They call for universal social protection aligned with international standards, including the extension of social security benefits and the principles of occupational safety, health and decent work recognised across ILO frameworks, alongside stronger implementation of the Code on Social Security, 2020. They emphasise the need to extend occupational safety frameworks to platform workspaces, regulate insurance and vehicle use, and recognise climate risks within labour and disaster governance systems.

A central pillar of reform is the establishment of tripartite institutional mechanisms, drawing on models such as welfare boards, the Street Vendors Act, and the Hamal Panchayat, to ensure that workers have a meaningful role in governance. At the same time, the report underscores the need for platforms to exercise their regulatory freedom responsibly by ensuring transparency, fairness, and accountability in algorithmic systems and work allocation practices.

The recommendations also highlight the importance of recognising the city as a workplace, requiring investment in public infrastructure and the inclusion of both commercial establishments and private households within accountability frameworks. Gender-responsive measures, including safety protocols, childcare systems, and access to amenities, are essential to expanding equitable participation in the platform economy. Ultimately, the future of platform work in India cannot be built on a trade-off between innovation and labour rights. The policy space currently afforded to platform companies must be accompanied by clear responsibilities and regulatory oversight. Sustainable growth in the platform economy will depend on embedding safety, dignity, social protection, and accountability at its core. Without such a shift, the expansion of platform work risks entrenching a model of labour that is flexible for platforms but precarious for workers. The pathway forward lies in recognising platform work as a legitimate and regulated form of labour, supported by institutions that balance innovation with the fundamental rights and well-being of workers.

REFERENCES

Anwar, M., Malik, M., & Rahman, S. (2024). Algorithmic management and worker autonomy in the gig economy. *Indian Journal of Labour Economics*, 67(1), 45–63.

Athreya, V. (2021). The algorithmic boss: Control and resistance in app-based delivery work. *Economic and Political Weekly*, 56(32), 27–34.

Business & Human Rights Resource Centre. (2023, November 9). India: Gig workers at risk of injuries & death amid attacks, incl. customer violence against Uber, Swiggy & Flipkart workers.

<https://www.business-humanrights.org/en/latest-news/india-gig-workers-at-risk-of-injuries-death-amid-attacks-incl-customer-violence-against-uber-swiggy-flipkart-workers-incl-cos-response-and-non-responses/>

Bharadkar, K., Medappa, K., Mani, M., Taduri, P., and Tiwari, S. (2021). Is platform work decent work? A case of food delivery workers in Karnataka. National Law School of India University.

Cunningham, T. R., Guerin, R. J., Ferguson, J., & Cavallari, J. (2022). Work-related fatigue: a Hazard for Workers Experiencing Disproportionate Occupational Risks. *American Journal of Industrial Medicine*, 65(11), 913–925. <https://doi.org/10.1002/ajim.23325>

Devadharshini, M., Kumar, R. S., Patel, T., & Singh, A. (2026). Work-related musculoskeletal disorder and stress among online food delivery workers in India. *National Journal of Community Medicine*, 17(1), 1–7.

Dey, A. (2025, December 15). Delhi air pollution: India imposes new measures as AQI worsens. BBC. <https://www.bbc.com/news/articles/c04v39dk053o>

Ebi, K. L., Capon, A., Berry, P., Broderick, C., de Dear, R., Havenith, G., Honda, Y., Kovats, R. S., Ma, W., Malik, A., Morris, N. B., Nybo, L., Seneviratne, S. I., Vanos, J., & Jay, O. (2021). Hot weather and heat extremes: health risks. *The Lancet*, 398(10301), 698–708. [https://doi.org/10.1016/s0140-6736\(21\)01208-3](https://doi.org/10.1016/s0140-6736(21)01208-3)

Flouris, A., Azzi, M., Graczyk, H., Nafradi, B., and Scott, N. (2024). Heat at Work: Implications for Safety and Health. A Global Review of the Science, Policy and Practice. ILO.

Mahapatra, S. K., Padhan, P. C., & Majhi, M. (2025, November 24). Riders in the heat: India's gig workforce at boiling point. Down To Earth.

<https://www.downtoearth.org.in/climate-change/riders-in-the-heat-indias-gig-workforce-at-boiling-point>

Ponnathpur, R. S. and Ramachandran, R. (2023). The financial lives of platform workers: A diaries study. Dvara Research.

Gayathri, M. R., & Sangeetha, S. (2025). Gig workers on the frontline: Navigating climate challenges in a precarious economy. *Journal of Law and Legal Research Development*, 2(2), 13–17.

Ge, R., Lu, S. F., & Mao, W. (2024). The impact of heat hazard on gig economy workers: Evidence from an on-demand food delivery platform. SSRN.

<https://ssrn.com/abstract=4993644>

Ghosh, J., Chandy, T., & Mathew, A. (2022). Precarious promises: Platform work and the illusion of flexibility in urban India. *Indian Journal of Human Development*, 16(2), 167–186.

Gupta, A. (2025, April 18). Non-stop work, life at risk: The untold hardships of India's gig workers. ETV Bharat.

<https://www.etvbharat.com/en/!bharat/gig-workers-digital-economy-food-delivery-apps-travel-car-riding-enn25041904505>

HeatWatch & Telangana Gig and Platform Workers Union. (2024). Impact of extreme heat on gig workers: A survey report. HeatWatch.

India Development Review. (2026, January 19). What the data reveals about India's gig workers.

<https://idronline.org/article/livelihoods/what-the-data-reveals-about-indias-gig-workers/>

Peerzada Abrar, Udisha Srivastav, & Mukherjee, A. (2026, January 13). Blinkit drops 10-minute delivery promise after labour ministry nudge. @Bsindia; Business Standard.

https://www.business-standard.com/industry/news/qcom-firms-rethink-10-minute-delivery-branding-after-labour-ministry-push-126011301129_1.html

Salve, P and India Spend. (2025, November 9). More two-wheelers, gig workers under pressure: In India, 9 bike riders die every hour. Newslaundry.

<https://www.newslaundry.com/2025/11/10/more-two-wheelers-gig-workers-under-pressure-in-india-9-bike-riders-die-every-hour>

Shashidhar, E. S., Kumar, V. H., and Srikanth, K. (2024). A study on the types of abuses faced by food delivery workers and its impact on them in Bangalore. *International Journal of Indian Psychology*, 12(1), 1–15.

International Labour Organisation. (2022). A safe and healthy working environment is a fundamental principle and right at work.

https://www.ilo.org/sites/default/files/wcmsp5/groups/public/%40ed_dialogue/%40lab_admin/documents/publication/wcms_850673.pdf

Kallu, S. K., & Sushmitha, T. (2025). Prevalence of occupational health problems among e-commerce and food delivery workers in Chennai: A cross-sectional study. *Perspectives in Medical Research*, 13(1), 7–11.

Kasliwal, R. (2020). Gender and invisibility in India's platform economy. *Indian Journal of Gender Studies*, 27(3), 331–352.

Krishnamurthy, M., Ramalingam, P., Perumal, K., Kamalakannan, L. P., Venugopal, V., & Kjellstrom, T. (2017). Occupational heat stress impacts on health and productivity in a steel industry in southern India. *Safety and Health at Work*, 8(1), 99–104.

Kumar, S., & Sharma, R. (2022). A study of psychological aspects of food delivery personnel during COVID times. *Journal of Business, Ethics and Society*, 2(1), 104–124.

Pandey, K. (2025, August 4). Gig work heats up, disaster body steps in with advisory. <https://india.mongabay.com/2025/08/gig-work-heats-up-disaster-body-steps-in-with-advisory/>

Mukherjee, D., Bandyopadhyay, A., & Das, T. (2025). Evaluation of work-related musculoskeletal disorders among online delivery executives of Kolkata, West Bengal. *Indian Journal of Occupational and Environmental Medicine*, 29(3), 233–239.

Nair, M. (2023). Digital platforms and employment narratives in India. *Social Change*, 53(4), 512–530.

NITI Aayog. (2022). India's booming gig and platform economy: Perspectives and

recommendations on the future of work. Government of India.

Sekar, A., Binoy, B. V., Dheeraj Alshetty, Manoj Kumar N, George Kuttiparichel Varghese, & Varma, R. (2023). Health risk associated with exposure to particulate matter and volatile organic compounds among two-wheeler delivery personnel in Ghaziabad, India. *Atmospheric Pollution Research*, 14(7), 101806–101806. <https://doi.org/10.1016/j.apr.2023.101806>

Srivastava, S. (2024, March 11). Workplace violence affects nearly half of cab and delivery drivers: Survey. *People Matters*. <https://www.peoplesmatters.in/news/performance-management/workplace-violence-affects-nearly-half-of-cab-and-delivery-drivers-survey-40539>

Das, N. K., & Bhat, A. (2025, April 17). Placing platform workers in the city's urban imagination. *Question of Cities*. <https://questionofcities.org/placing-platform-workers-in-the-citys-urban-imagination/>

Shankar, A. (2025). The dark side of dark stores: An audit of working conditions in Delhi-NCR's quick-commerce warehouses. *The Federal*. <https://thefederal.com/category/states/north/delhi/delhi-gig-workers-plight-no-toilets-no-drinking-water-and-more-survey-200430>

Ramya, S. (2025). Gig workers and India's labour codes: Mapping recognition without protection. *Indian Journal of Labour Law*, 9(1), 21–44.

Samal, J., Sathiyarajeswaran, N. S., Radhakrishnan, R., Abdul Gaffoor, A., Krupalakshme, M., & Benson Thomas, M. (2025a). Factors and prevalence of musculoskeletal pain among app-based food delivery riders in Tamil Nadu. *Journal of Occupational Health Research*, 14(1), 23–31.

Samal, J., Sathiyarajeswaran, N. S., Radhakrishnan, R., Abdul Gaffoor, A., Krupalakshme, M., & Benson Thomas, M. (2025b). Prevalence and factors of anxiety, depression, and burnout among app-based food delivery riders in Tamil Nadu: A cross-sectional study. *Indian Journal of Occupational and Environmental Medicine*, 29(2), 96–101.

Gul. (2024). From risk to resilience: Protecting India's gig drivers. *Sentiance*. <https://sentiance.com/from-risk-to-resilience-protecting-indias-gig-drivers>

Shyamini, R., & Rejuna, P. (2025). Ratings, routes and risk: Algorithmic control in urban platform logistics. *Urban Studies Review*, 12(1), 59–81.

Srinivasan, K., Maruthy, K. N., Venugopal, V., & Ramaswamy, P. (2016). Research in occupational heat stress in India: Challenges and opportunities. *Indian Journal of Occupational and Environmental Medicine*, 20(2), 73–78.

Srinivasan, R., Reza, A., & Vijay Krishna Kumar, A. K. (2023). Prevalence of musculoskeletal disorders in delivery personnel. *International Journal of Community Medicine and Public Health*, 10(5), 1861–1866.

Kothari, P. (2025, July 19). 'On-time' trend hides hazards: Delivery agents struggle to get insurance claims for accidents on the job. *The Times of India*.

<https://timesofindia.indiatimes.com/city/pune/on-time-trend-hides-hazards-delivery-agents-struggle-to-get-insurance-claims-for-accidents-on-the-job/articleshow/122790017.cms>

zVarshney, A. (2025, August 17). Rising temperatures pose a huge risk for gig workers. *India Development Review*.

<https://idronline.org/article/climate-emergency/rising-temperatures-pose-a-huge-risk-for-gig-workers/>

Venugopal, V., Chinnadurai, J. S., Lucas, R. A. I., & Kjellstrom, T. (2016). Occupational heat stress profiles in selected workplaces in India. *International Journal of Environmental Research and Public Health*, 13(1), 89.

World Health Organization. (2022). Powered two-and three-wheeler safety: A road safety manual for decision-makers and practitioners.

<https://www.who.int/publications/i/item/9789240060562>

ANNEXURE 1: QUESTIONNAIRE

Occupational Safety and Health of Platform-based Gig Workers in India: Understanding Safety, Health, and Environmental Risks in Platform Work

All India Survey by Janpahal

*All questions were designed to be single-select questions unless indicated to be otherwise.

NAME OF THE SURVEYOR

MOBILE NUMBER OF THE SURVEYOR (OPTIONAL)

NAME OF THE CITY

- ☐ Delhi
- ☐ Hyderabad
- ☐ Mumbai
- ☐ Kolkata
- ☐ Bengaluru
- ☐ Patna
- ☐ Agra
- ☐ Jaipur
- ☐ Bhopal
- ☐ Lucknow

DEMOGRAPHIC INFORMATION

1. Age:

- ☐ 16-18
- ☐ 19-24
- ☐ 25-39
- ☐ 40-59
- ☐ 60+

2. Gender:

- Male
- Female
- Other

3. Education Level:

- Below 10th
- 10-12th
- Diploma
- Graduate
- Postgraduate

4. Type of gig work:

- Food delivery (e.g., delivery drivers for platforms like Zomato & Swiggy)
- Grocery delivery (e.g., delivery drivers for platforms like Swiggy Instamart, Blinkit, Zepto)
- E-commerce (e.g., delivery drivers for platforms like Amazon & Flipkart)
- Ride-hailing (e.g., cab & auto drivers, two-wheeler drivers)
- Care work (e.g., elderly & patient care, household care, childcare)
- Personal care (e.g., salon & spa services like haircut, waxing, makeup)
- Home cleaning, maintenance and repairs (e.g., electricians, plumbing, pest control)
- Other (Please mention the details)

5. Which platform do you work for? (Select any that apply)

- Amazon Flex
- Blinkit
- Flipkart
- Ola
- Uber
- In-Drive
- E-Kart
- Big Basket
- Dunzo
- Swiggy
- Zomato
- Porter

- Rapido
- Urban Company
- Housejoy
- Zepto
- Other (Please mention details)

6. How many hours do you typically work per week as a gig/platform worker?

- upto 20 hours
- 21-48 hours
- 49-70 hours
- Above 70 hours

7. What mode of transportation do you primarily use for your gig work?

- Own Bicycle
- Own scooter/motorcycle
- Own Car
- Walk/On foot
- Use public transport (e.g. buses and rail systems like metro and suburban railways)
- Use intermediate public transport (e.g. auto-rickshaws, rickshaws and taxis)
- Use ride-hailing services (e.g. Ola, Uber, Rapido)
- Other (Please mention details)

8. How long have you been working as a gig/platform worker?

- Less than 6 months
- 6 months to 1 year
- 1-2 years
- 2-5 years
- Above 5 years

9. Are you registered on the e-Shram portal as a platform worker?

(e-Shram is a national database of unorganised workers to facilitate welfare benefits and social security measures.)

- Yes
- No

OCCUPATIONAL SAFETY

(This section addresses questions about road safety and other safety concerns related to work activities.)

10. How frequently do you encounter unsafe conditions while working?

(e.g., lifting very heavy weights, unsafe client environments, road safety issues or poorly maintained tools/equipment?)

- ☐ Very Frequently
- ☐ Frequently
- ☐ Occasionally/Sometimes
- ☐ Rarely
- ☐ Never

11. Can you describe any of the unsafe conditions that you have experienced while working?

12. Have you ever experienced or witnessed harassment, abuse, or violence during your work?

(From customers, co-workers, employers or members of the public)

- ☐ Yes, personally experienced
- ☐ Yes, witnessed it happen to another worker
- ☐ No
- ☐ Prefer not to say

13. How confident are you that your platform provides effective channels to report safety issues and takes follow-up action?

- ☐ Very confident
- ☐ Somewhat confident
- ☐ Not confident
- ☐ Not sure

14. How unsafe do you feel while travelling on roads, streets, or alleys?

(Consider risks such as bad traffic, harassment, fear of violence, stray dog menace and poor road conditions in your city)

- ☐ Very safe
- ☐ Safe
- ☐ Neutral (Neither safe nor unsafe)
- ☐ Unsafe

15. Have you ever experienced any of the following safety incidents while working on roads, streets, or alleys? (Select all that apply)

- ☐ Traffic accident
- ☐ Near-miss with a vehicle
- ☐ Harassment or assault
- ☐ Theft or damage to equipment/vehicle
- ☐ Injury due to road conditions
- ☐ Other (Please mention details)
- ☐ None

16. What safety equipment do you use while working? (Select all that apply)

- ☐ Helmet
- ☐ Reflective clothing/vest
- ☐ Lights (e.g., bike lights, headlamps)
- ☐ Protective gear (e.g., gloves, knee pads)
- ☐ Seat belt
- ☐ Other (Please mention details)
- ☐ None

17. Does your platform provide adequate safety training or resources for working on roads/streets?

(e.g., safety videos, guidelines, or equipment subsidies.)

- ☐ Yes, comprehensive training/resources
- ☐ Yes, but insufficient
- ☐ No training/resources provided
- ☐ Not sure

18. Do you have accident insurance? If claimed, was the claiming process easy?

- ☐ Yes, easy to claim
- ☐ Yes, but difficult to claim
- ☐ Yes, but haven't claimed yet
- ☐ No
- ☐ Don't know

OCCUPATIONAL HEALTH

(This section is about the impact of work conditions on health, as well as the availability of health-related support and infrastructure.)

19. Over the past year, have you experienced any health issues that are work-related? (Select all that apply)

- ☐ Musculoskeletal injuries (e.g., back/neck pain, sciatica)
- ☐ Respiratory problems (e.g., from pollution or dust, like asthma)
- ☐ Mental health issues (e.g., stress, anxiety from long hours)
- ☐ Cardiovascular strain (e.g., high blood pressure from stress)
- ☐ Fatigue or sleep disruption
- ☐ Eye strain or vision issues (from prolonged focus or excessive screen viewing due to work)
- ☐ Other (Please mention details)
- ☐ None

20. Does your platform provide health-related support (e.g., medical resources, access to doctors, mental health guidance/counselling, health insurance)?

- ☐ Yes, comprehensive support
- ☐ Yes, but limited
- ☐ No support provided
- ☐ Not sure

21. Do you have access to toilet facilities during working hours? What kind of facilities are available to you?

- ☐ Accessible, public toilet, free
- ☐ Accessible, public toilet, paid
- ☐ Accessible, private (at restaurants and customers' homes)
- ☐ Not accessible
- ☐ Other (Please mention details)

22. Do you have health insurance? If claimed, was the process of claiming easy?

- ☐ Yes, easy to claim
- ☐ Yes, but difficult to claim
- ☐ Yes, but haven't claimed yet
- ☐ No
- ☐ Don't know

23. How often do you use toilet facilities during working hours?

- ☐ Very Frequently
- ☐ Frequently
- ☐ Occasionally/Sometimes
- ☐ Rarely
- ☐ Never

23. How often do you use toilet facilities during working hours?

- ☐ Accessible, public water
- ☐ Buy/purchase personally
- ☐ Accessible, outside, private (at restaurants and customers' homes)
- ☐ Not accessible
- ☐ Other (Please mention details)

25. Are any rest areas/spots available to you during working hours?

- ☐ Yes
- ☐ No

26. How often are you able to take breaks during your workday?

- ☐ Very Frequently
- ☐ Frequently
- ☐ Occasionally/Sometimes
- ☐ Rarely
- ☐ Never

WORKING CONDITIONS DURING EXTREME WEATHER EVENTS

(This section asks about working in extreme weather conditions in India, including health impacts)

27. Have you worked in extreme weather events as a gig/platform worker?

(Consider events like Delhi's heatwaves or Mumbai's monsoons)

- ☐ Yes
- ☐ No

28. Which extreme weather events have you worked in as a gig/platform worker? (Select all that apply)

- ☐ Heavy rain or thunderstorms
- ☐ Extreme heat
- ☐ Extreme cold
- ☐ High winds
- ☐ Fog or low visibility
- ☐ Snow or ice/hail (if applicable)
- ☐ Other (Please mention details)
- ☐ None

29. To what extent do extreme weather events impact your ability to work safely?

- ☐ Does not impact at all
- ☐ Minor impact
- ☐ Moderate impact
- ☐ Major impact
- ☐ Severe Impact

30. Does your platform provide guidance or policies for working during extreme weather events?

(e.g., instructions to pause work during NDMA red alerts or safety protocols)

- ☐ Yes, clear and helpful policies
- ☐ Yes, but unclear or unhelpful
- ☐ No policies provided
- ☐ Not sure

31. Does your platform offer incentives or penalties that encourage you to work during extreme weather?

(e.g., surge pricing as an incentive during heatwaves, reduced ratings or the risk of account deactivation as a penalty)

- ☐ Yes, incentives
- ☐ Yes, penalties
- ☐ Both incentives and penalties
- ☐ Neither
- ☐ Not sure

**32. What protective measures do you take during extreme weather events?
(Select all that apply)**

- ☐ Use weather-appropriate clothing/gear (e.g., raincoat, thermal clothing)
- ☐ Adjust routes to avoid hazardous areas
- ☐ Reduce working hours
- ☐ Stop working entirely
- ☐ None
- ☐ Other (Please mention details)

HEALTH IMPACTS OF EXTREME HEAT

(This subsection focuses specifically on the heat-related health effects or symptoms experienced by platform workers.)

33. During extreme heat events, have you experienced any of the following health symptoms or effects? (Select all that apply)

- ☐ Dehydration (e.g., dry mouth, dizziness)
- ☐ Heat exhaustion (e.g., fatigue, nausea)
- ☐ Heat stroke or severe overheating
- ☐ Skin irritation or rashes
- ☐ Respiratory issues (e.g., shortness of breath)
- ☐ None
- ☐ Other (Please mention details)

34. How frequently have you experienced heat-related health symptoms (e.g., dehydration, exhaustion) while working?

- ☐ Very Frequently
- ☐ Frequently
- ☐ Occasionally/Sometimes
- ☐ Rarely
- ☐ Never

35. To what extent has heat exposure affected your productivity or work performance (e.g., reduced speed, more breaks)?

- ☐ Does not impact at all
- ☐ Minor impact
- ☐ Moderate impact
- ☐ Major impact
- ☐ Severe impact

36. Have you sought medical attention or support for heat-related health issues while working as a gig/platform worker? (Select all that apply)

- ☐ Yes, visited a doctor
- ☐ Yes, used first aid or over-the-counter remedies
- ☐ Yes, contacted platform support
- ☐ No, but considered it
- ☐ None
- ☐ Other (Please mention details)

FOLLOW-UP

(Optional)

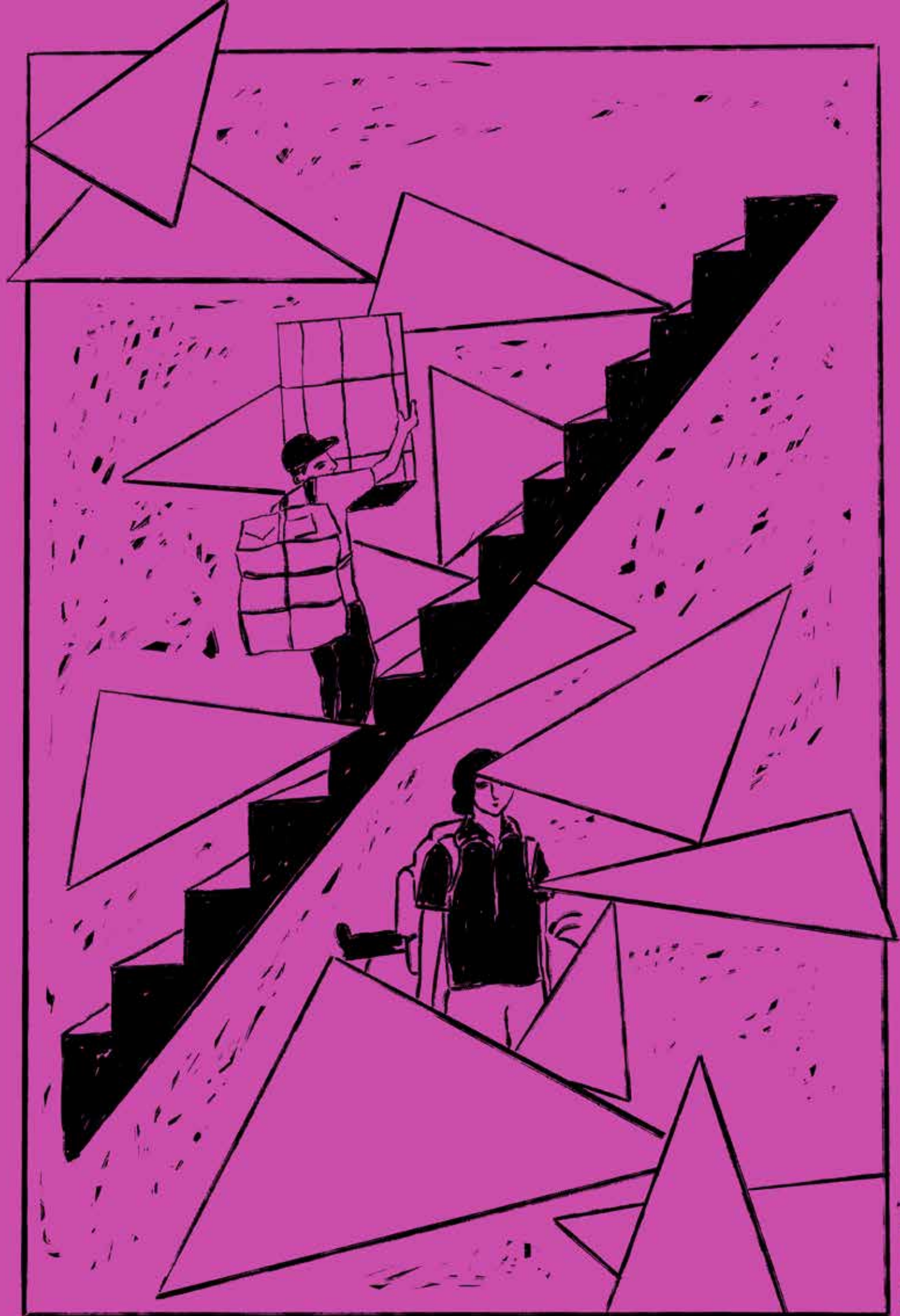
Would you be interested in participating in a follow-up discussion or interview about gig workers' safety and health?

(Your contact number will not be linked to other responses; Janpahal may contact you for advocacy)

- ☐ Yes
- ☐ No

Please provide your phone number for follow-up.

(Your phone number will be stored separately and not linked to other responses as per the DPDP Act.)





Janpahal is a Delhi-based non-profit organisation founded in 2005, working across India to strengthen the livelihoods, social security, and climate resilience of workers in the distribution services sector. Its work focuses on informal and platform-based gig workers, street vendors, and warehouse workers through research, knowledge generation, and community engagement.

Janpahal engages on issues of occupational safety and health, heat stress, and environmental risks affecting workers in the platform and informal economy. Operating in over 35 cities across 23 states and Union Territories, it collaborates with worker collectives, civil society organisations, researchers, and public institutions to advance dignity, safety, and sustainable work in the context of climate change.



website: www.janpahal.com
email: janpahal@gmail.com
Instagram: [janpahal_ngo](https://www.instagram.com/janpahal_ngo)

Facebook: [Janpahal.ngo](https://www.facebook.com/Janpahal.ngo)
LinkedIn: [Janpahal](https://www.linkedin.com/company/janpahal)
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